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CONFERENCE PROCEEDINGS

Research, Education, and Innovation for Development High Quality and Humane People

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The 4th
International Conference On
Educational Research and Innovation

Research, Education, and Innovation for Development High Quality and Humane People

RISTEKDIKTI LIPI ACER AMINEF American Indonesian Exchange Foundation

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Institute of Research and Community Services Yogyakarta State University
May, 11-12, 2016

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MESSAGE FROM THE RECTOR OF YOGYAKARTA STATE UNIVERSITY

Assalamu'alaikum warahmatullah wabarakatuh.
May peace and God's blessings be upon you all

Welcome to Yogyakarta, Indonesia!

It is a great honor and pleasure for me to welcome you all to the 4th International Conference on Educational Research and Innovation held in Yogyakarta, Indonesia. On behalf of Yogyakarta State University and the committee, let me extend my warmest greetings and appreciation to all speakers and participants who have traveled hundreds or even thousands of miles by various transportation means to come to Yogyakarta to attend this conference. It is my strong belief that your safe journey has been due to the blessings granted by God the Almighty and the Most Merciful to Whom we without any further due have to express our gratitude and praise.

It is indeed a privilege for Yogyakarta State University to have the opportunity to organise this very important conference in which educational researchers and practitioners get together to share ideas, experiences, expectations, and research findings. This conference is held as one of the items in the agenda of Yogyakarta State University to celebrate its 52nd anniversary.

Research is one of the activities among the academic members of a university. It is a systematic effort to solve the problems or answer the questions by collecting data, formulating the generalities based on the data, then finding and developing organized knowledge by scientific method. It is expected that from research activities valuable empirical facts can be obtained to improve and develop the theory and practice to bring a better quality of education.

In line with it, the advancement of science and technology, sport, languages, and art should be dedicated to not only facilitate the human life, but also to educate human beings themselves with values to be high quality beings, good citizens, and more humble people to God. If we produce a gun, it may kill people; if we make insecticide, it may kill insects. However, in the hands of good people, the gun may be used to protect them from a maniac; bioinsecticide can be used to protect crops from harmful insects. The quality of human beings is the key to using or applying the advancement of science, technology, languages, sport, and art.

The fourth International Conference on Educational Research and Innovation (ICERI) aims at bringing together researchers, educators, scientists, engineers, and scholar students to exchange and share their experiences, new ideas, and research findings about all aspects of education, research and innovation, and discuss the practical challenges encountered and the solutions adopted to develop humanity and the quality of human life. In response to this, in this year to support the roles of the Institute of Research and Community Services of Yogyakarta State University in encouraging researchers to conduct high-quality researches, an International Conference on Educational Research and Innovation (ICERI) is held under the umbrella theme of "Research, Education, and Innovation for Developing High Quality and Humane People." It provides teachers/lecturers, education practitioners, college students, and policy makers the opportunity to share their knowledge, experiences, and research findings which are innovative and relevant to develop the educational practices focusing on the process and product.

This fourth conference is aimed at discussing the papers on the research findings related to Educational research for human quality development, Character educational research for building humanity, research, education, and innovation on science and technology, sport, economics, social sciences, language and arts for improving human life. It is expected that this conference will reach its declared objectives succeesfully as a strategic forum to yield recommendations on the improving the human life through research, education, and innovation.

To conclude, let me wish you a fruitful discussion during the conference and an enjoyable stay in Yogyakarta.

Thank you very much for your attention.

Wassalamu'alaikum warrahmatullah wabarakatuh.
May peace and God's blessings be upon you all

Yogyakarta, 11 May 2016
Rector,

Prof. Dr. Rochmat Wahab, M.Pd., M.A.

MESSAGE FROM THE ORGANIZING COMMITTEE

His Excellency General Director of Research & Development, Ministry of Research and Technology and Higher Education,
Rector of Yogyakarta State University,
Vice Rectors and Deans of all faculties,
Honourable Heads of Institutes of Research and Community Service of the surrounding universities,
Distinguished all invited speakers and all other speakers,
Distinguished guests,
All participants,
Ladies and gentlemen,

Assalamu'alaikum warrahmatullah wabarakatuh.
May peace and God's blessings be upon you all.
Good morning.

First of all allow me to extend my warmest greetings and welcome to you all to the 4th International Conference on Educational Research and Innovation, held by Yogyakarta State to celebrate its 52nd anniversary.
Raising the theme – Research, Education, and Innovation for Developing High Quality and Humane People - this conference is designed to discuss the papers on the research findings related to aspects of education, research and innovation, and discuss the practical challenges encountered and the solutions adopted to develop humanity and the quality of human life.. Hopefully, all discussions in this conference can be inspiring and useful for us to improve the quality of education and educational research.

Ladies and gentlemen,
For your information, we will proudly present one keynote speech, four plenary presentation sessions and four parallel presentation sessions. Eight outstanding speakers in the field of character education and educational research have been invited. They are Dr. Ir. Muhammad Dimyati, M. Sc., General Director of Research & Development, Ministry of Research and Technology and Higher Education as the keynote speaker, Rachel Parker, Ph.D. from Australian Council of Educational Research (ACER), Derek W. Patton, Ph.D. from Asia Pacific Network for Moral Education (APNME), Prof. Drs. Toho Cholik Thohir, Mutohir, M.A., Ph.D. from IKIP Mataram, Prof. Suwarsih Madya, M.A., Ph.D. from Yogyakarta State University, Hardi Julendra, S.Pt, M.Sc., from Research Centre for Technology of Natural Materials, Ana R. Otero, Ph. D. From AMINEF, USA, and **Megat Ahmad Kamaluddin Megat Daud, Ph.D. from University of Malaya, Malaysia.**

Ladies and gentlemen,
We have done our best to prepare for this conference. So, my highest appreciation and heartfelt thanks to all committee members. As to err is human, shortcomings may occur here and there. On behalf of the committee, I would therefore like you all to accept our apologies.

At the end of my speech, I would like to kindly request the Rector of Yogyakarta State University to officially open the conference.

To conclude, let me wish you a productive discussion and a fruitful conference.
Thank you very much for your attention.

Wassalamu'alaikum warrahmatullah wabarakatuh.
May peace and God's blessings be upon you all

Yogyakarta, 11 May, 2016
Head of Research Institute and Community
Service of Yogyakarta State University

Dr. Suyanta, M.Si.

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AT RISK AND VULNERABLE CHILDREN IN SCHOOL: TOWARDS SOLUTIONS

Derek Patton
Psychologist

In Australia, 22.0 % of "children enrolled in their first year of formal fulltime school are developmentally vulnerable" [1]. "Vulnerable" means students are already developing either internalising disorders (shy, withdrawn, depressed) or externalising disorders (bullying, aggression, obstinacy) and have failed to develop socially acceptable cooperative behaviours. In these reports "vulnerable" is the most challenged category in the bottom 0 – 10 percentile, while those "at risk" are children in the 10 – 25 percentile By the end of school or soon after, the situation has deteriorated, with 26.4% of young Australians aged 16–24 years having a mental disorder [2], which includes substance and alcohol abuse. Children can be less than ideally supported at home during their school experience by having parents who are struggling with their own mental health issues (15%), fair to poor health (12%) or disabilities (17%) [3]. A relationship outside the family with at least one caring adult, often a teacher, can be "the single most important element in protecting young people who have multiple risks in their lives" (Sabol & Pianta, 2012). Plainly, teachers and schools need additional strategies to deal with these challenges.

The Virtues Project ™ provides teachers with the insight to identify which children are vulnerable (high-risk) and struggling and also the strategies with which to bring out their strengths and help them build resilience to meet these challenges. This has helped turn around challenging behaviours in a Kindergarten to Year 12 school specifically catering for Aboriginal and Torres Strait Islander students where "[t]he whole experience with the Virtues Project has been very positive for the college in turning around behaviour" [4], in a low SES school [5] struggling with persistent problems of bullying, violence and disenchantment [6], a South Australia primary school [7] where the key was whole school culture change, and other schools [8].

New Zealand research in a preschool [9] showed how teachers applied these strategies to eliminate the problematic behaviours in the most at-risk children who were in the clinical range for either internalising or externalising disorders. In addition and without prompting, these teachers then trained parents in the same strategies. Teachers love to teach and parents with young children are receptive to advice from them. There are reportedly 70 schools in New Zealand using project [10], and a number of them have been the subject of research that has shown dramatic improvements in student behaviour [11].

In Canada, at Parry Sound High School (2009; Skinner, 2008) with 50% First Nations and where there were intercultural and behaviour problems, the students took it upon themselves to visit the feeder primary schools and train them in the virtues system so they arrived prepared for the positive empowering culture in the high school. These examples show not only the high social validity of The Virtues Project, but the likelihood of producing self-replicating change systems at no additional cost to the funders of the original intervention.

The Calgary School District (Canada) has nearly a quarter of schools in the district, or approximately 52 schools with 18,400 students using this project [12] with this report showing a significant drop in antisocial behaviour and an increase in student reported perceptions of safety.

1. Background information

What is needed now is to further examine the details of the language shift that are influenced by the Virtues Project training so that this systematic approach can be further refined. I propose to offer to do this in Indonesia. Following are some supporting ideas and research.

The ability to transform people and communities rapidly by subtle differences in how their potential strengths are acknowledged has been demonstrated repeatedly by Carol

Dweck's 30 years of research on praise (Dweck, 2002, 2009). Harvard Professor Ellen Langer's 30 years of research on mindfulness shows small changes in the language of noticing possibilities in others improves virtually every aspect of well-being (Langer, 2009). Even when

virtue words of politeness are subtly inserted into a person's environment without this noticing, Yale researchers have shown a large influence on college student's patience (Bargh, Chen, & Burrows, 1996). A more systematic approach, according to Harvard's Project Zero (Ritchhart & Perkins, 2008), is to create cultures where individual and a group's collective thinking is valued, visible, and actively promoted as part of the regular, day-to-day experience of all group members. After a decade of a nation-wide attempt to create values in schools in Australia, the final report states that: "[i]f there is no common values language, if the values within the school are neither owned nor shared by the school community, there can be no basis for implementing effective, planned and systematic values education" (Commonwealth of Australia, 2008, p. 9). Later in the same document Dr Thomas Nielsen of ANU states that: "Having a shared language seems to be at the centre of developing deeper understandings of values, as it allows students to engage in discussions, clarify their thinking and develop socially constructed connections to values" (p. 25). In a previous report (Commonwealth of Australia, 2003) of 50 case studies in 69 schools, three schools adopted an existing program called The Virtues Project (Popov, 2000), that explicitly teaches a "language of the virtues". Djarragun College, a Kindergarten to Year 12 (K – 12) Anglican school which specifically caters for Aboriginal and Torres Strait Islander students, had been experiencing significant management difficulties prior to 2001 which resulted in very poor student behaviour and high staff turnover, and ultimately led to a more interventionist approach with the report stating that: "[t]he whole experience with the

Virtues Project has been very positive for the college in turning around behaviour" (Commonwealth of Australia, 2003, pp. 96-97).

An investigation of school websites and other government documents accessible on the internet, by this author, found that the Virtues Project (VP) is currently being used in at least 50 schools and school volunteer training organisations in Australia. It was reported (Government of South Australia, 2005) that in 2003, Lonsdale Heights Primary School, with 180 students, 11% indigenous and 65% on school cards (an indication of low socioeconomic status – SES), was struggling with persistent problems of bullying, violence and disenchantment among some of the students. Teachers were challenged and felt disempowered by the constant disrespect for authority and the language being used towards staff and peers, as well as students' disengagement from learning. After using the VP language approach to restorative justice, the principal says this "marked the beginning of a theoretical shift from punitive-behaviourism to a more educative and humanistic approach to student social and emotional development…and through the implementing of restorative practices within a positive school culture we believe that our students and teachers have a better understanding of themselves and others" (Lang, 2005).

There are reportedly 70 schools in New Zealand using VP (Virtues Project Trust

Board, 2006), and a number of them have been the subject of research (Dixon, 2005; Patton, 2007b) that has shown dramatic improvements in student behaviour. The 52 schools with 18,400 students using VP in the Calgary School District, showed a drop in antisocial behaviour and an increase in student reported perceptions of safety (Calgary Board of Education, 5 June 2007). Another example from Canada is the

Parry Sound High School (2009; Skinner, 2008) with 800 students, 50% of whom are First Nations, where high levels of intercultural and behaviour problems were virtually eliminated and where the high school students then went into the feeder primary schools to change those cultures using the VP approach.

Research proposal

There would appear therefore to be sufficient evidence to indicate that schools, communities and parents would accept The Virtues Project in their schools as a useful tool for implementing "values education". It is unlikely that random sampling of schools and teacher language will find a school where all teachers use a consistent enough language in the naturally occurring variation of teacher talk to test the hypothesis that a common shared language of values will have had a measurable effect on student outcomes. It is also unlikely that one of the few schools that currently use either a common values language they have created or a school that has adopted the virtues language is doing nothing else to help the situation (i.e., the effect of the virtues language would be confounded by other factors). What would work is to find schools which have adopted neither a common values nor a virtues language and intervene only with the virtues language from VP, which can be studied before and after training. It can be made an even more extreme test by doing case studies of the children with the most problems rather than taking the mean

behaviour of the group. These are the children, in any event, who need the most help, often cause the majority of disruption and are likely to continue to do so in the future.

> "When the objective is to achieve the greatest possible amount of information on a given problem or phenomenon, a representative case or a random sample may not be the most appropriate strategy. This is because the typical or average case is often not the richest in information. In addition, from both an understanding-oriented and an action-oriented perspective, it is often more important to clarify the deeper causes behind a given problem and its consequences than to describe the symptoms of the problem and how frequently they occur. Random samples emphasizing representativeness will seldom be able to produce this kind of insight; it is more appropriate to select some few cases chosen for their validity" (Flyvbjerg, 2006, p. 229).

The Virtues Project emphasises using the language of the virtues in all interactions in a context and this, more than anything else, distinguishes the VP from "character education" programs more broadly. Some children have said they do not use the respectful language taught in moral education classrooms in other school activities because that way of talking is for that class, which James Paul Gee (2004, 2005) explains is simply part of a child learning specialised ways of talking and behaving in different classes, e.g., "situated" language, such as social studies language, sports class language, biology language and so on. To make a pervasive language change in all contexts, a new way of talking must be modelled and used in all activities.

Since its inception the Virtues Project has been taught in 90 countries as an intervention at home, school, businesses and prisons, and in 1993, during the

International Year of the Family, the United Nations Secretariat and World

Conference of Cities and Corporations listed it as a model global program for families of all cultures (The Virtues Project, 2007). There is anecdotal evidence from my private communications, from accessing training and school websites and through the VP facilitators email chat group, that the "language of the virtues" regardless of specific language does provide a common foundational conceptualisation that is acceptable to all groups and narrows the perceived "gap" between cultures.

My hypothesis is that when all teachers use the VP language, this creates a wholeschool culture shift through changing interpersonal interactions. Teachers notice virtuous behaviour in children, the children are acknowledged and the behaviours are reinforced, but even more important the children come to know they have these character traits within them and can use them when called upon which leads to using them on their own accord. If parents are trained as well, then virtually the entire world of the child is constructed to train a culture based on virtuous social interaction. This language-created culture appears to train cognitive, social and moral capacities in children at a faster rate and with a more complete cognitive schema of social interaction than would otherwise be the case.

It is therefore proposed that The Virtues Project's (VP) "language of the virtues" (Popov, Popov, & Kavelin, 1997) which is taught not as a curriculum, but as a pervasive language change used by all adults in the child's environment could act as a research tool to investigate the current anecdotal claims that a whole school language shift changes the culture of the school sufficiently to produce benefits for children's behaviour and moral development.

The advantage of using VP as a research tool is that it already has training materials in a variety of languages, trained facilitators and supporting systems widely dispersed around the world which we could use as our "test" language. It has high social validity and acceptance in multiple cultures and language systems. Using VP facilitators and materials, we could design research that includes schools and parents in multiple locations.

2. Potential Outcomes

The power of giving children rules of interaction in the form of language, at a time in life when they are rapidly acquiring language, developing their social skills, and acquiring their culture, not only helps them as individuals, but can affect a change in the whole culture if enough children adopt the new rules. Systems theory (Anderson & Sabatelli, 2003) and meme theory and its derivatives (Boyd & Richerson, 2000; du Preez, 1996; Shichijo & Kobayashi, 2002) provide one way of understanding the rapid changes in behavior reported by some schools using The Virtues Project and provide support for the idea that interventions to create a more

effective environment for moral development of children would likely be a whole-school/home culture change that includes language and interactional behaviour changes that are based on historically recognisable social constructs and values contained in concepts and social practices of the virtues common to all cultures.

Indigenous evidence

In Jean Liedloff's *Continuum concept* (1977) it is recounted that after many years of visiting the isolated Yequana Indians in South America, only one child was ever observed to have what we would call conduct disorder or even difficult to manage behaviour of any sort. This child's parents were also the only Yequana who also spoke Spanish. Because the child was born and raised purely within the isolated Yequana village and careful observation by Liedloff did not detect any parenting differences from other Yequana, one could suggest that these parents acquired some subtle culture practice or attitude at the same time they learned Spanish, which would account for their child's unique (within Yequana culture) behaviour. Although Liedloff has not published her work in journals, one author providing strategies for parents to help with crying and sleep problems in infants, recommends parenting practices of the Yequana (St James-Roberts, 2007) and another follows these indigenous approaches in psychological discussions about mother's body language (Sansone, 2004). These practices have to do with close contact between mother and infant and are similar to mother/child mutually responsive orientation (MRO).

Indigenous versus European language differences in states of being

For an ecological, transactional and/or systems model of social change to succeed, people need to be freed from the constraints of linear causality which, in Western languages, is especially locked into our thinking by the verb "to be" and its associated idea of static states of being (Plas, 1986). There are several uses of the verb "to be" in this sense that are unique to Indo-European languages (Brown, 1994; Kahn, 1986). "The challenge of creating strategies for forcing ourselves away from linear view and toward recursive thinking looms large. A good place to begin is with the language. The verbs 'to be' and 'to have' lock us into looking at things in terms of straight lines. They force us to isolate a part of a living system and then to treat it as if it were an independent whole, which exclusively possesses characteristics and is the sole owner of behaviors" (Plas, 1986, pp. 64-65). Native American languages cannot label children, or anything else for that matter, in a static state of being, because there is no way to say this in their languages. A stick is "being pushed up on by the water" (an accurate description from the science of physics) rather than "floating" in English, which is a static state. Even nouns in Cherokee, for example, have verb cores. A horse is "he who carries heavy burdens". A flag is "a place to be defended". California is "place where white men get money" (Holmes & Smith, 1977). If we assist children to change the way they speak and think about themselves and each other as developing spiritual beings engaged in an ever-advancing path of helpful and caring social interactions, then they may, in fact, be the ones to progress the ever-evolving English language into new forms. Ann Senghas, explaining recently published research in the journal *Science*, which studied the emergence of a child-invented sign language in Nicaragua (Senghas, Kita, & Özyürek, 2004) said in an interview regarding this research: "It seems, it is children who drive the evolution of language…this process can be seen when a small child learns to talk and 'breaks' the rules of grammar. She'll start out trying to make her own rules…by the time she is an adult, she'll talk a lot like you. But not exactly like you" (Fox, 2004).

3. Interventions

Improving interventions

When language's contributions to both coercive systems and healthy systems of human interaction are understood, then interventions can be designed to specifically take advantage of the power of language in shaping culture. According to Michael Halliday (1990) when interventionists plan a change in language, they are creating an active systemic change that can shape people's consciousness, and are therefore not forging an ideologically neutral instrument. It is therefore important that language change that accompanies school intervention is based on the highest desired ethical standards, clear and established theoretical perspectives, and is discussed thoroughly by stakeholders.

Essential village culture reinforced in modern culture

What are the essential missing cultural elements from peaceful isolated village cultures that can be realistically reinserted or reinforced in modern cultures where up to 20% of preschool

children have been identified with emotional or behavioural problems at moderate to clinically significant levels (Lavigne et al., 1996)? Stability of these problems into later childhood is well established and is confirmed by recent evidence from a group of 33 children's doctors, research scientists, and mental health and youth service professionals (The Commission on Children at Risk, 2003), where it is reported that 21% of US children ages 9 to17 had a diagnosable mental or addictive disorder associated with at least minimum impairment and that 20% of students reported having seriously considered suicide in that year. This report is entitled "Hardwired to connect: The new scientific case for authoritative communities" and argues that the genetically underpinned need to be connected to community is best satisfied in structured and orderly but loving environments of social institutions, where young people can establish close connections to other people, and deep connections to moral and spiritual meaning.

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RESEARCH AND DEVELOPMENT ON THE QUALITY OF PHYSICAL EDUCATION AND SPORT FOR IMPROVING HEALTH AND WELL-BEING

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Abstract

This paper is concerned with problems relating to the improvement of the quality of physical education and sport (PES) in Indonesia. It is an attempt to review the present condition of PES and exercise the factors influencing the quality of physical education. It is also an attempt to put forward the concept of developing the high quality of physical education based on global standards in order to minimize the erosion of the quality of life resulted from the crisis of physical education and sport. It suggests some strategies for future directions in regard to improving the quality of physical education in an Indonesian context. In line with the Government policy, in order to implement the new national curriculum of education 2013 (K13) especially in PES, it is recommended that the "daily physical activity"(DPA) program, should be included. The DPA encourages all students must take part in 30 minutes of physical activity per day.

Key words: physical education and sport, physical activity, quality of physical education, daily quality of physical activity, health and well-being

1. Introduction

The World Summit on Physical Education held in Berlin, Germany, November 3-5, 1999 indicated that physical education in the world scene is under crisis. The World-Wide survey of the State and Status of School Physical Education (Hardman, K. and Marshal, J.J., 2000), with the support of International Council of Sport Science and Physical Education and other international and regional agencies, affirmed that physical education has been pushed into a defensive situation, suffering from decreased time allocation, budgetary constraints, low academic status, and under-valuation by authorities (cf. Talbot, 2010). The writer who was attending and participating in the world summit in Berlin 1999 tends to agree in the conclusion illustrating the unhappy condition of physical education throughout the world. The current state and status of PES has indicated by Talbot (2010): "The "reality check" reveals several areas of continuing concern. These areas embrace: physical education not being delivered or delivered without quality, insufficient time allocation, lack of competent qualified and/or inadequacy trained teachers, inadequate provision of facilities and equipment and teaching materials, large class sizes and funding cuts and, in some countries, inadequate provision or awareness of pathway links to wider community programs and facilities outside of schools. Whilst improvements in inclusion can be identified since the Berlin Physical Education Summit, barriers to equal provision and access for all still remain." Until recently, for example the condition of physical education has been unsatisfactory in the United States. National Association for Sport and Physical Education and American Heart Association (2006) stated: "budgetary constraints and increasing pressure to improve standardized test scores have caused school officials to question the value of PES and other physical activity programs. This has led to a substantial reduction in the time available for PES, and in some cases, school-based physical activity programs have been completely eliminated."

Physical education and sports (PES) plays an important role for the development of children to become all-rounded people who have knowledge, attitudes, and capabilities of being smart and competitive. Recognizing the importance values of physical education and sports and its vital role in individuals and societal development, the "International Year of Sport and Physical Education", proclaimed for 2005 by the United Nations General Assembly in

November 2003. The fundamental values such as cooperation, fair-play, responsibility, and respect for rules have much in common with those embodied within UN Charter. It has been scientifically justified that physical activity is an important aspect of human life. It has also been generally recognized that physical education and sports (PES) is an integral part of the process of education in general. Up until the present time, the importance and status of physical education in schools throughout the world has been challenged and criticized for being ineffective and under crisis. Is it true that the PES program has kept its promises to achieve its objectives? What is the present condition of PES and what factors are influencing the quality of PES in Indonesia? And what is the future direction in regard to improving the quality of physical education in an Indonesian context.

2. The Existing Condition of Physical Education and Sport

In Indonesia, physical education is an integral part of the process of education. Physical education and sport (PES) is a compulsory subject to be taught in schools to contribute to the development of all rounded people of Indonesia. According to Education Law Number 20, 2003, Article 3, education shall develop abilities and build character in a civilized nation, within the framework to enlighten *(mencerdaskan*) the life of the nation. The education process should be oriented toward the development of children's potentials to become men/women who have the characteristics: belief in God the Almighty, good morale, healthiness, knowledgeable, competent, creative, independent, and become democratic and responsible citizens.

Up until now physical education is in a critical condition in an Indonesian setting. Earlier studies carried out by researchers around twenty years ago including Mutohir (1990, 1994, 1995) indicated that the existing condition of physical education in Indonesia is unsatisfactory. This condition is caused by various factors; among others are the limited ability of physical education teachers and the limited availability of resources to support the teaching process of physical education. The quality of physical education teachers in elementary and secondary schools has been inadequate. They lack the capabilities of carrying out their responsibilities to educate children in a systematic way through physical movement in order to develop children's abilities and skills in terms of physical, mental, intellectual and social. It is true until today that most physical education teachers, especially in primary schools, are classroom teachers who normally have limited competence and experience in the field of physical education (cf. Mutohir, 2002). It is anticipated that this problem will continue to erode the physical well-being and health of children/adolescents, resulting in adequate levels of physical fitness to engage in life's functions, increasing incidences of obesity, unnecessary illness, and premature deaths (cf. ICHPER SD, 2001).

The picture of in the world-scene is also reflected in the present condition in Indonesia. One of the consequences resulting from the unhappy condition of physical education is that there are some problems which are arising in societal life including health and fitness, moral disruptions especially among school children and youths. The data (2010) of physical fitness among school children (primary, junior and senior secondary schools) indicated that the majority of them (around 95%) come under the category of 'very low to moderate' level, only around 5% under the 'good' category, and none of them under the 'very good' category. In order to achieve the goal of physical education i.e., the all-rounded persons or physically educated person, there is a need to establish a quality daily physical education program.

3. Roles of Physical Education and Sport toward Academic and Sport Excellence

Physical education and sport as the core of education plays an important role for the development of children to become the all-rounded people who have knowledge, attitudes, and capabilities of being smart and competitive. It is important to recognize the value of physical education and sport and its vital role in individuals and societal development, the "International Year of Sport and Physical Education", as proclaimed for 2005 by the United Nations General Assembly in November 2003. The fundamental values such as cooperation, fair-play, responsibility, and respect for rules have much in common with those embodied with UN Charter. However, some writers criticized to the fact that PES programs have no direct impact on students' values development (cf. Crum, 2014).

The Government of Indonesia believes that everyone should have the opportunity to participate in physical education and sport. Encouraging school children to be actively involved in physical education and sport is especially vital as regular participation which can reduce obesity, improve fitness levels and, turn

improve concentration, self-esteem, help attendance, behavior and attainment. Furthermore, children who receive an appropriate amount (at least 120-150 minutes per week) of physical education and sport come to class "ready to learn" and demonstrate enhanced creativity, improved memory, and better task performance and problem solving skills; play better with others; and display better individual class behavior.

There has been ample evidence indicating that there is a strong association between physical activity and enhanced academic excellence. This evidence is strengthened by some related researches that found higher levels of physical fitness to be linked with improved academic performance among children and teens. In fact, children who are physically active and fit are likely to have stronger academic performances (cf. Shepard, 1997; Keays and Allison, 1995). There is evidence that an activity break (a daily 10-minute activity break) can improve cognitive performance and classroom behavior. Moreover, short activity breaks (a 15-minute physical activity session) during the school day can improve student's concentration skills and classroom behavior.

Many school systems, in the United States, Canada, Australia, as well as Indonesia have downsized or eliminated physical education and sport under the assumption that more classroom instructional time will improve academic performance and increased standardized test scores. The available evidence is contradictory. The evidence supports the view that by sacrificing physical education and sport for classroom time does not improve academic performance. Students whose time in physical education and sport or school based activity increased, maintained or improved their grades and scores on standardized achievement tests, even though they received less classroom instructional time than students in control groups (The ACS, ADA, and AHA, 2008). Studies in California suggest that children who are more physically fit perform better on standardized math and reading test scores (California School Boards Association (2006).

Trudeau and Shepard (2010) having reviewed several studies on the relationships between physical activities to brain health and academic performance of school children conclude that the introduction of PES into school curriculum has no striking effect on GPA. They indicated some evidence that the transfer of teaching time from academic subjects to physical activities was too small to anticipate any great effect on learning. There is evidence that the reduced time allocated to physical education, would not enhance performance in subjects such as mathematics or reading; moreover, increasing the time allocated to physical education is not detrimental to test scores for academic subjects. In the case of Indonesia, many people including headmasters believe that by reducing the time for PES it will enhance students academic achievement. There is common practices in schools in Indonesia that allocation time for PES has been being reduced even replaced totally by other subjects which are considered to be important like math's or other subjects which are included in the national examination. Base on their observations Trudeau and Shepard (2010) suggest that the physical activity," at least in primary school students, needed to optimize the healthy development of a child (an additional 60-90 minutes per day can be provided without jeopardizing academic performance". They also suggested that further research is needed to examine the impact of PES, and physical activity on the student's ultimate success in various types of careers and his or her brain health later in life. They reminded that "One cannot exclude the possibility that greater neurogenesis (induced by exercise begun early in life and continued over the life span) may enhance cognitive function later in life and offer protection against the neuropathology's of old age. But even if from the viewpoint of intellectual function physical activity is no more than an enrichment of the individual's life experience, its numerous more general health benefits warrant advocating an active lifestyle at all ages". A recent document issued by the Department of Sport and Recreation of Western Australian Goverment (2015) provides strong confirmation the importance of sport and physical activities as a brain boost that leads the enhancement of students' academic achievement.

The relationship between physical education and sport and excellence in sport performance may be examined by the arguments given by some experts. Digel (2002) based on his comparative study of competitive sport systems in eight selected countries indicated that variable of education, especially physical education, plays an important role providing a strong base for the development of high-performance sport. In the United States, for example, various competitions such as intramural sports, extramural sports, interscholastic sports and intercollegiate sports play a central role when estimating the contribution of the educational system of the high-performance sport (Digel, H., 2002). Experience from Australia (Pereira, 2014)

indicated that better physical education programs may have an impact in increasing the flexibility of students. Australian athletes tend to have little time to work out on their flexibility during their warming up session as a result of the effectiveness of PES programs in schools. In particular, the writer believes that physical education and sport offers general movement patterns and the positive attitude that provide strong orientation points and foundation leading to high-performance sport. The establishment of 'sport schools' can be found in European countries such as Russia, France and Germany, and Asian countries such as China, Thailand, and Malaysia. These sport schools serve as orientation points that leads to a solid foundation to high performance sport. These trends may be viewed also in an Indonesian setting, by establishing 'sport schools' like in Ragunan, Sidoarjo, and Palembang.

The studies of the impact of PES on character development have been reviewed by many writers including Crum (2009). Based on his paper presented in the international conference in Bandung, Indonesia, in 2009 he skeptically question whether the claim that sport is a paramount mean for character development is founded on empirical evidence or that this claim is rather a result of wishful thinking? He concluded that "There is no evidence for the validity of the transfer hypothesis. The idea that activities, such as gymnastics, sport games, and dance have an intrinsic potential for the education of character and for moral education, does not get empirical support." Mutohir (2010) based on his observation believes that character values can be taught and transferred to students, but only if physical educators dedicate themselves to achieving this specific goal. PES activities do not transform characters values automatically; they have to be designed specifically and implemented systematically to achieve the intended goal of developing the certain character values. Physical educator should enhance the PES experiences of students by focusing on teaching moral values and ensuring positive experiences. The present writer with his PhD students has carried out some studies attempting to design models of PES programs relevant to improve the quality of teaching-learning process viewed from students' learning especially character (affective) development. By using Research and Development (R & D) approaches, it can be concluded that the PES program when it is well planned and designed systematically may have contributed significantly to the development of students' values of honesty (Muhyi, 2011), social skills (Priyadi, 2013), fair play (Dimyati, 2013), and care values (Bernard Jawa, 2015).

Obesity is one of the most pressing health concerns for children, especially in developed countries like the United States, Canada, and Australia. In the United States, for example, more than one-third of children and teens, approximately 25 million, are overweight or obese—physical inactivity is a leading contributor to the epidemic. It has been recommended, therefore, the movement of "active education" where children should engage in 60 minutes of moderate activity most days of the week. The data indicate that only small proportions (3.8%) of elementary schools in the United States provide daily physical education (Burgeson, Fulton, and Spain, 2007).

It seems that it is very hard to find such data available concerning the number of children who are obese in Indonesia. However, considering the tendency of physically in-active life styles among children, one may speculate that the proportion of children under the category of obesity is fairly high (approximately 30%). The data indicated that 68 percent of the population of Indonesia is considered as being physically in-active. Among the population aged 15-19, the data indicated that only a tiny percent (3.2%) of them is considered as being physically active, while the majority of them (96,8%) are categorized as being physically in-active (national survey: Susenas 2004, cited in Depkes, 2008). This condition may be reflected in the fact that only a small proportion (7%) of school children have physical fitness under the 'good' category, while the majority of them have 'average' and 'low' levels of physical fitness (Depdiknas 2004, cited in Depkes 2008). This data advocates the need for improving the quality of PES in order to improve the physical fitness of students. Since PES programs in schools have been given limited time (90-120 minutes—once per week), it is recommended that a "daily physical activity program" (DPA), should be included in order the PES programs become more effective in developing the physical well-being and health of students. The DPA encourages all students to take part in some type of physical activities for at least 30 minutes per day. The objective of the DPA program is to provide students with the opportunity to be physically active and have a positive impact on their physical, mental, and social well-being.

4. The Quality Daily of Physical Education for Life-long Health and Well-being

Quality, daily physical education in the nation's schools is an important part of a student's comprehensive, well rounded education program and as a means of positively impacting life-long health and well being, excellence and friendly pupils. It is expected that the optimal physical education program will foster a lifetime commitment to physical activity as part of a healthy lifestyle. Regular physical activity is associated with a healthier, longer life and with a lower risk of heart disease, high blood pressure, diabetes, obesity, and some cancers (Center for Disease Control and Prevention, 2005). The concept of quality daily physical education (QDPE), as an example, has been introduced in Canada since 1988 in order to respond to the physical inactivity and obesity crisis among children and youths. QDPE is a well-planned school program of compulsory physical education provided for a minimum 30 minutes each day to all students (Kindergarten to grade 12) throughout the school year (PHE Canada, 2008). It is widely maintained that physical education and sport (PES) is essential to contribute to the development of young people's well-being in School.

Schools, as a place of education, serve an excellent venue to provide students with the opportunity for daily physical activity, to teach the importance of regular physical activity for health, and to build skills that support active lifestyles. Unfortunately, most children obtain little to no regular physical activity while in school. Current recommendations are for children to engage in at least 60 minutes of physical activity a day. Children spend over half their day in school, so it is reasonable to require that they should get at least 30 minutes of that time in school.

The quality daily physical education should be an important part of that requirement and does more that provide some minutes of moderate-vigorous activity. It also exposes students to lifetime activities and teaches students how to integrate exercise into their lives. This means that quality daily--physical education should provide meaningful school of life inculcating the necessary knowledge, attitude, and skills that are relevant to a future healthy life. This represents a high quality of physical education program that enhances the physical, mental, social/emotional development of every child and incorporates health and fitness education and assessment to help children understand, improve and/or maintain their physical well-being.

It is the writer's belief that a physical education program which is organized systematically based on the developmentally appropriate curriculum with an adequate amount of time, students tend to have more opportunity to be engaged actively in physical activities, to enable students to keep busy, happy and good mood of learning, This in turn resulted in increasing awareness of having a healthy life style. Moreover, modifying the school curricula that suited diverse racial, ethnic, and socioeconomic groups, among boys and girls within elementary and secondary students, and in urban and rural setting through intramural, extramural, and interscholastic activities, may encourage students to learn core values, such as fair-play, responsibility, respect, and cooperation to build health, excellence, well-being, and friendly pupils. Examples of physical education curriculum models that have been successfully implemented in other countries such as in Australia, Canada, Great Britain, or USA may be used as references for developing the curriculum framework that can be adopted in an Indonesian setting after being modified and suited to the Indonesian culture. In Australia, especially Western Australia, for example, PES in elementary education is carried out 150 minutes per week. In order to provide increased opportunities for inclusive participation in quality, safe, and fun structured physical activities, the school in collaboration with local sports club and local community to implement an After School Sport Program. It is a nationally funded program for primary school-aged children giving them access to free, physical activities in the after school timeslot of 3.00 - 5.30 pm. By adopting the principles of "fun, inclusive safe, high involvement" (FISH), this program has been carried out successfully in enhancing the quality of physical activities among school children (Pereira, 2008). Based upon the lesson learnt, the design of curriculum of high quality PE usually considers at least the following principles: (1) to enable all children, whatever their circumstances or ability, to take part in and enjoy PES activities; (2) to promote children's health, safety and well-being; and (3) to enable all children to improve and achieve their personal growth and development in line with their age and potential. To optimize the growth and development of children there is a need to improve the quality of PES by the adoption of daily physical activity programs.

5. The Adoption of Daily Physical Activities

In line with the Government policy, in order to implement the new curriculum of education 2013 (K13) especially in PES, it is necessary to be noted the "daily physical activity" (DPA) program, should be included. The new Minister of Education and Culture has announced recently that K13 will be implemented in limited schools and piloted in order to find suitable ways for better implementation. Within the structure of K13, PES is a compulsory subject to be taught in elementary schools (120 minutes/week), junior high schools (120 minutes/week), and senior high schools (135 minutes). In order to improve the quality of PES and enhance the MVPA which are essential for children' growth and development, there is a need additional the DPA to be integrated into the K13. The DPA encourages all students to take part in 30 minutes of physical activity per day. Regardless how schools implement this, all students must take part in some type of physical activity on a daily basis. The objective of the program is to provide students with the opportunity to be physically active and have a positive impact on their physical, mental and social well-being. It is expected that physical activity will impact student achievement, readiness to learn, behavior and self-esteem. Besides, with a positive experience at a young age, the foundation for a healthy productive life is built.

There is another aspect which captures the essence of what is a quality of PES program, namely physical literacy. It is expected that individuals who are physically literate move with competence and confidence in a wide variety of physical activities in multiple environments that benefit the healthy development of the whole person. Physical literacy may be defined as a disposition acquired by human individuals encompassing the motivation, confidence and physical competence that establishes purposeful physical activity as an integral part of their lifestyle"(in Kwanboonchan, 2014). Physical Literacy representing one of the outcomes of PES programs may be intended "to develop physical competence so that all children are able to move efficiently, effectively and safely and understand what they are doing. The outcome, physical literacy, along with numeracy and literacy is the essential basis for learners" (Association for PE –Manifesto for a World Class Physical Education system, 2008-- in Kwanboonchan, 2014)

To become physically literate children need to master the 13 fundamental movement skills. These skills can be classified into two broad categories, i.e (1) the locomotors and body skills, and (2) the receiving skills. The Locomotors and Body skills: walking, running, balance, skating/skiing, jumping, swimming, cycling, skipping, The Sending Skills, throwing, kicking, striking. The Receiving Skills: catching, trapping. These fundamental movement skills and fundamental sport skills may become the foundation for both participation and excellence in sport activities.

Although the DPA and physical literacy programs have been introduced in developed countries including Canada for almost thirty years, it seems that these best practices have not been fully developed and implemented in Indonesia. There have been scarce studies carried out in an Indonesian setting in regard to DPA. One study has been carried out by Suciati (2010) in elementary schools in Sidoarjo attempting to identify the impact of DPA on physical fitness, physical growth, nutritional status of children. Based on her 3 months experimental study she concluded that DPA has a significant impact on children's physical fitness, but not on physical growth and nutritional status. Although there is a need for further study in this area, the result of this study may provide an indication that DPA may be implemented in schools in Indonesia as an alternative program to supplement PES programs.

There are some hindering factors for the successful implementation of DPA that need to be anticipated. These include (1) limited qualified physical educators in terms of quality and quality and (2) scarcity of resources and support facilities. It is generally recognized that qualified teachers play an important role in improving the quality of PES. Since the qualifications of many teachers throughout Indonesia (around 1.5 million) including PES teachers is below the minimum standard (S-1), the Government took action by developing and implementing the upgrading or in-service training program called Program Peningkatan Kualifikasi S-1 bagi Guru dalam Jabatan (Program SKGJ) where the writer the Program Coordinator at the National level. According to the Teachers Law, the target is that by the year of 2015 all teachers should have S-1 degree.

Students need to be exposed to teachers that are qualified in the area of PES in order to make it fun and have students continue to take these classes throughout their academic career. The assumption is that if we have qualified teachers (having certificate/diploma) teaching physical education, then students will be exposed to proper instruction and techniques that will help them develop internal motivation for physical education, and as a consequence, increase the

enrolment at the high school level. Even so, some qualified physical educators may be ineffective and less effective physical educators seem to make no effort to establish rules and routines, which are necessary for increasing student activity and for learning of appropriate behaviors. It is the writer's believe that effective physical educators minimize the time of organization, waiting and transition while they increase the time of student active participation.

6. Some Considerations for the Development of High Quality of PES

6.1 International Standard of PES Curriculum

In response to the unhappy condition concerning physical education around the world, the International Council for Health, Physical Education, Recreation, Sport, and Dance (ICHPER-SD) in collaboration with United Nations Educational, Scientific, and Cultural Organization (UNESCO) had established a global standards enabling quality physical education curricula in schools, thus, helping to ensure that every child is physically educated—a fundamental human right (UN charter). According to National Association for Sport and Physical Education, AAHPERD (1992, in ICHPER-SD and UNESCO, 2001), a physically educated Person HAS learned skills necessary to perform a variety of physical activities, IS physically fit, DOES participate regularly in physical activity; KNOWS implications of and benefits from involvement in physical activities; and VALUES physical activity and its contributions to a healthful life style.

There are six standards that need to be considered for defining essential content to be learned by students, but must be organized in a curricular context within the school structure. Thus, it is necessary for each school entity to develop its curriculum suited to school needs. In Indonesia, this curriculum noted as *kurikulum tingkat satuan pendidikan: KTSP*. It has been implemented before the introduction of this new curriculum known as K13. Based upon the international standard of PES curriculum suggested by the ICHPER-SD, the intended standards of PES in Indonesia should be considered (7 standards).

a) Standard 1: Movement competency and proficiency – demonstrate competency in many movement forms and proficiency in a few movement forms.
b) Standard 2: Knowledge and applications of movement concepts – apply movement concepts and principles to the learning and development of motor skills.
c) Standard 3: Health enhancing fitness—achieve and maintain a health-enhancing level of fitness.
d) Standard 4: Physically active lifestyle—exhibit a physically lifestyle.
e) Standard 5: Personal and social behavior—demonstrate responsible personal and social behavior in physical activity settings.
f) Standard 6: Understanding and respect for individual—demonstrate understanding and respect for differences among people in physical activity settings.
g) Standard 7: Personal meanings derived from physical activity—understand that physical activities provide opportunities for enjoyment, challenge, self expression, and social interaction.

These standards need to be developed and implemented consistently to promote quality physical education and sport for school children, and they can be characterized as:

a) content standards with accompanying benchmarks;
b) reflecting disciplinary knowledge, skills, and behaviors inclusive of the psychomotor, cognitive, and affective domains;
c) supportive of process learning;
d) sequential;
e) culturally neutral;
f) school based; customizable (e.g. gender, culture, race, ability, disability); and
g) appropriate for age groups within the structure of the school entity (i.e. age 5-18).

To implement each of these standards, the three grade level designations of benchmarks are created based on the age classifications, namely: grade 3 (8-9 years), grade 6 (11-12 years), grade 9 (14-15 years), and grade 12 (17-18 years). The benchmarks reflect, to some degree, the extent of the content contained within each standard. The benchmarks, while they may not be all inclusive, serve to create a sense of sequential and essential content of the curricula. The documented curriculum contains at least five components, including:

a) written curriculum reflecting *sequential* learning;
b) individualized instruction for mastery learning;

c) multiple teaching styles/strategies to accommodate multiple intelligences, learning styles, abilities, and disabilities;
d) systematic and regular assessment of which results inform the prescription for further learning; and
e) documentation and articulation of student achievements.

The above general guidelines provided by the ICHER-SD can be useful means for designing curriculum for improving the quality of PES program. Moreover, Mutohir (2002) has suggested that the physical education and sport curriculum needs to be restructured and adapted to suit the children's culture and abilities in order to encourage regular involvement in physical activity.

6.2 Strategies—three keys strategies

There are three key strategies that need to be considered for the development of high quality of PES: implementation of well-designed curriculum, provision and supervision of teachers, and implementation of continuous evaluation. Each of these strategies should be carefully planned by using action or developmental research and involving various and relevant stakeholders including experts, parents, authorities, and communities.

a. Implement a well-designed curriculum

The PES new curriculum should be designed and based on national, state or local PES standards that describe what students should know and be able to do as a result of a high-quality PES program. The well-designed PES curriculum should have the following characteristics:

(1) It is designed to maximize physical activity during lessons and keep students moderately to vigorously active (MVPA) for at least 50% of class time;
(2) it includes student assessment protocols to determine if students are getting enough MVPA during PES and achieving learning objectives (affective, cognitive, and psychomotor) and standards; and
(3) it covers programs that increased students' time engaged in MVPA modified the PES curricula by (a) replacing games or activities that tended to provide lower levels of physical activity (e.g., softball) with activities that were inherently more active (e.g., aerobic dance, aerobic games, jump ropes), (b) adding fitness and circuit training stations to lesson plans, and (c) providing teachers with a menu of MVPA activities to help build more active lessons; and (d) emphasizing on affective or character development beside psychomotor, and cognitive development.

The quality of PES can help schools enhance the existing curriculum, modify and develop their own curriculum extended with DPA and physical literacy activities for the delivery of high-quality PES in schools.

b. Provide teachers with appropriate training and supervision

To implement the curriculum effectively, there is a need to improve the teachers' competencies. Improving the competencies of PES teachers requires appropriate training and supervision. Well-designed professional development can help PES teachers increase the amount of time students spend in MVPA and decrease the amount of time spent on administrative and classroom management tasks. There are some activities that relevant to be given in the professional development programs. These include:
(1) Specific training about how to implement the PES curriculum they will be using.
(2) Annual professional development opportunities to enhance their instructional skills and techniques.
(3) Feedback through supervision and mentoring from master PES teachers.
Moreover, to support the implementation of curriculum effectively there are two activities that need to be considered: (1) providing on-site consultation and regular feedback to teachers on their instructional strategies; and (2) training master PES teachers to teach and mentor other PES teachers about strategies for increasing MVPA during PES class.

c. Implement Evaluation

In general, continuous evaluation is necessary to be carried out In order to maintain and improve the high quality of PES program being administered according to the plan. Evaluation should be carried out by considering the following stages: (1) understanding the high quality of PES, (2) evaluating the students' achievement compared to the outcomes; (3) identifying priorities for improving the quality of PES; (4) taking action to bring about improvement; and (5) measuring the

effectiveness of the program. As a PES teacher, self evaluation of the quality of the PES program is important to be undertaken for reason of accountability. It is a significant component of any professional teacher for self development which is necessary for determining his/her status especially in terms of level competencies. Self evaluation may help school leaders to recognize students' achievement in a broader way rather than simply through exams and testing. It could help school sport partnership leaders to recognize the difference being made to the students and decide the most effective way to direct support, advice, and use resources. Additionally, it may also help the school leaders to provide information of how many students take part in at least two hours of high quality PES each week, both within and beyond the curriculum.

Self-evaluation needs to be a central part of ongoing planning, teaching and coaching for improvement. Those involved in the process of self-evaluation needs to satisfy of the following criteria: :

(1) agree on a set of outcomes that are worth achieving
(2) take notice of students by looking at what they do and listening to what they say;
(3) use time effectively, so that the process does not become too burden some;
(4) be open and honest about what they find out, and sensitive in the way they share and communicate it;
(5) recognize the full range of achievement;
(6) enable everyone to use what they find out; and
(7) take action to bring about improvement.

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On the other hand, self-evaluation is **not** effective if it is carried out based on the following criteria: (1) It is just seen as something that has to be done; (2) It focuses on filling in forms someone else has devised; and (3) It is not used to take action to bring about improvement.

There some expected positive impacts of the implementation of high quality of PES on the students' learning covering knowledge, attitudes and skills. In more operational terms, these include that:

(1) They understand the value of PES as an important part of a healthy, active lifestyle;
(2) They know and understand what they are trying to achieve;
(3) They have the confidence to get involved in PES;
(4) They willingly take part in a range of competence, creative and challenge type activities;
(5) They think about what they are doing and make appropriate decisions for themselves;
(6) They show a desire to improve and achieve in relation to their own abilities;
(7) They enjoy PES school and community sport;
(8) They are committed to PES and make them as a central part of their lives;
(9) They have skills and control that they need to take part in PES; and
(10) They have the physical fitness qualities that they need to be maintained and improved.

7. Continuing Professional Development of Teachers

In order to implement a high quality PES there is a need for qualified and competent teachers. These teachers will play an important role in the success of the implementation of PES, therefore teachers need to be kept abreast of new knowledge, skills, and attitudes by participating actively in continuing professional development programs carried out within or out of schools activities. There are five stages reflecting the action process used in the continuing professional development (CPD): (1) need assessment, (2) set specific objectives, (3) take a baseline, (4)implement strategies, and (5) measure the difference.

In line with the Government policy, in order to implement the new curriculum of education 2013 especially in PES, it is necessary to note that the "daily physical activity program" (DPA), should be included. The DPA encourages all students to take part in 30 minutes of physical activity per day. Regardless how schools implement this, all students must take part in some type of physical activity on a daily basis. The objective of the program is to provide students with the opportunity to be physically active and have a positive impact on their physical, mental and social well-being. We believe that physical activity will impact on student achievement, readiness to learn, behavior and self esteem. Besides, with a positive experience at a young age, the foundation for a healthy productive life is built.

Students need to be exposed to teachers that are qualified in this area in order to make it fun and have students continue to take these

classes throughout their academic career. The assumption is that if qualified teachers are available who are competent in teaching physical education, then students will be exposed to proper instruction and techniques that will help them develop internal motivation for physical education. However, there is some evidence indicating that teachers, who have completed their in-service programs for improving their qualification (*Program SKGJ)* or their certification program (*Program PLPG)* were not able to implement their knowledge and skills to be put into practices in schools as they have no support facilities from the head masters and their colleagues. Even so, some PES teachers who are categorized as qualified after having completed in-service training program may be considered as ineffective or less effective as they seem to make no effort to establish rules and routines, which are necessary for increasing student activity and for learning of appropriate behaviors. Based on this evidence, it is necessary therefore, that any in-service training for teachers should be followed by other support programs to enable teachers to implement their knowledge, skills, and attitude in their own schools having completed their in-service training.

8. Conclusion and Recommendation

1. Physical education and sport as an integral part of education play an important role in developing an all-rounded person in social settings and the learning environment. It is expected that physically active and educated children are more likely to thrive academically, socially, and emotionally.
2. Through daily quality physical education and sport programs, children learn how to incorporate physical literacy, safe and healthy activities into their lives. A high quality physical education and sport program enhances the physical, mental, and social/emotional development of every child and helps them understand, improve, and maintain physical well-being.
3. It is recommended that children engage in at least 60 minutes of physical activity a day. It is reasonable for them to have at least 30 minutes of that time in schools. The adoption of the quality daily physical education program may contribute to children's education and development and may provide the opportunity for them to meet the challenge of being healthy people of Indonesia.
4. It is suggested that according to Sport Law (Law Number 3, 2005) that the national standard for physical education and sport at least 120 minutes per week in elementary, middle and high schools. This regulation provides a policy guideline regarding the minimum standard time for the PES program. It is anticipated that the ultimate aim of this policy is to increase the percentage of school children who spend a minimum of two hours each week on high quality PES. Additionally, it is expected that every student should be actively involved in a daily work out (physical activities) programs at least 30 minutes a day during school time within and beyond the curriculum. For having a good impact, it is suggested that all children should be given access to at least four hours of high quality PES and physical activities programs per week.
5. The physical education and sport curriculum needs to be restructured according to the international standards and changed to suit the children's culture and abilities in order to encourage regular involvement in physical activity. The well-designed implementation of new PES curriculum and provision of appropriate training and supervision for PES teachers as well as support facilities are essential to be undertaken as a strategy for the success of improving the quality of PES programs.
6. Continuing professional development or in-service training for improving teachers' qualification and competence should be carried out systematically based on their needs. The well-designed in-service training programs should be followed up and accompanied by support facilities to enable teachers to implement their knowledge, skills, and attitude in their schools after having completed their in-service training programs.
7. For the success of development and implementation a high quality PES program, there are three key strategies to be systematically carried out: implementation of well-designed curriculum, provision and supervision of teachers, and implementation of continuous evaluation.
8. To promote the quality of PES there are some actions need to be undertaken:
    a. Improve the status of PES and implemented fully based on the national curriculum 2013 guidelines.
    b. maximize physical activity during lessons and keep students moderately to

vigorously active (MVPA) and implement daily physical activity (DPA) as part of students' life in and out of school time.

c. conduct self-evaluation focused on the daily quality PES and used the diagnostic feedback resulted from self-evaluation for improving the quality of PES programs.
d. Adopt a new system of evaluation (marking) by stressing not only on movement skills and knowledge rather on affective values including students' participation in the ultimate goal of PES, i.e. to promote a physical and healthy life style.
e. Implement the continuous professional development programs for improving the quality of PES teachers.
f. Provide adequate support facilities in every school according to the standard set by the Government to enable the quality of PES programs can be realized.

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SHYNES, PROSOCIALITY AND AGRESSION STABILITY IN CHILDREN AGE 6 TO 11 (A LONGITUDINAL STUDY WITH TURKISH SAMPLE)

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Abstract

The main aim of this study is to identify whether or not the social behaviors such Prosociality, Shyness and Aggression of children, living in a stable life period families, are stable from age 6 to age 11 in a sample of Turkish children. In total, 47 children participated in the study, of whom 24 male and 23 female lived in families in Muş Province, Turkey. Teacher Assessment of Social Behaviors Scale were applied to the same group four times (at ages 6,7,9,11) in five years. The children in this sample were assessed initially at the end of their final preschool year (age 6) and were reassessed at the end of the first (age 7), third (age 9) and fifth grade (age 11) of elementary school. All assessments were conducted in May. In conclusion, social behavior was found to be stable for 55% prosocial behaviors, 31% Shynese behavior and 79% for aggressive behavior as results of regression analysis. These findings support the argument that aggression and prosocial behaviors follows a stable course from age 6-11 age onwards.

Keywords: Aggression, shyness, prosocial behaviors, middle childhood

1. Introduction

During the past 20 years suggests that children who do not have a basic level of social competence by the age of 6 may have trouble with relationships when they are adults. Thus, all children should have enough positive social behaviours (Parker & Asher, 1987). The term "social competence" covers a broader domain than does the term "social behaviors". Social behaviors' characters are the strong aspect for observing social competence. Aggression, prosocial behavior and shyness are determinative social behaviors.

The question regarding the stability of aggression, shyness and prosocial behaviors in childhood seems not to be whether these social behaviors is stable or not stable. Regardless of whether social behaviors are examined in short-term or long-term studies, (Adams , Bukowski & Bagwell 2005; Armer, 2003) Here are some longitudinal studies' results about aggression, prosocial behavior and shyness: Asendorpf (1990), Degnan et. al. (2008), Prior et. al. (2000) and Roberts and del Vecchio (2000) reported low stability of shyness before middle childhood. In conterast for shyness, Adams, Bukowski & Bagwell (2005), Loeber, (1982), Loeber & Hay, (1997) and Olweus, (1979) found high stability about aggression. Similarly Knafo & Plomin, (2006) found middle level stability for prosocial behaviors.

Finally, there are limited long-term longitudinal studies about social behaviors for 6-11 years old children. In this respect, this study has attempted to answer the following questions:

Do aggression scores at age 6 significantly predict aggression scores at age 11?

Do shyness scores at age 6 significantly predict shyness scores at age 11?

Do prosiocial behavior scores at age 6 significantly predict prosocial behaviors scores at age 11?

2. Method

A longitudinal method was used in this study.

2.1 Participants

The participants were 47 preschoolers (23 girls and 24 boys) with normal development from six preschools in the region of Muş Province, Turkey. The children in this sample were assessed initially at the end of their final preschool year (age 6) and were reassessed at the end of the first, third and fifth grade of elementary school (age 7,9,11). The children were located at 12 different schools after the school transition (preschool to elementary). All of the children lived with both parents. The socio-economic levels of the families were based

on their level of income. Families with a monthly income of $500 or less were included in the lower socio-economic level; families with an income between $500-1500 were included in the middle socio-economic level; and those with an income of more than $1500 were included in the higher socio-economic level.

2.2 Measure

Teacher Assessment of Social Behavior (TASB): Children's social behavior in the peer group was assessed with the TASB (Cassidy & Asher, 1992). Teachers were asked to rate children on four behavioral dimensions: prosocial, aggressive, shy/withdrawn, and disruptive. Each dimension was assessed using three items, for a total of 12 items. The scale ranged from a 1 (very uncharacteristic) to a 5 (very characteristic). Cronbach's alpha coefficient was from .88 to .91 for eachdimension. The TASB was adapted to Turkish by Seven (2010). All items loaded on three dimensions (prosocial, shy/withdrawn, and aggressive/disruptive), with loadings ranging from .63 to .89. Cronbach's alpha coefficient ranged from .74 to .94 for these dimensions.

2.3 Procedure

In 2006, a letter explaining our study was sent to the families of 110 children of 6 years of age who had attended six preschools. In the letter, they were asked whether or not they wanted their children to participate in our study. They were requested to fill in the information form and to send it back to us if they gave their consent for their child's participation. Seventy-two families gave their consent for their children's participation in our study. Five years later, the families of 21 of the children had moved to another city. One of the children had lost his mother. Therefore, information was gathered from 47 children, 23 of whom came from extended families, and 24 of whom came from nuclear families. The first data were collected in May 2006. The second, third and fourth set of data was obtained in May 2007, 2009, 2011 when the children were in their fifth year of primary education. The TASB was applied to the 10 teachers in 2006, 18 teachers in 2007, 19 teachers in 2009 and 2011 individually in a separate room in the 12 primary schools which the children attended.

3. Results

Stability of aggression in children at 6 to 11 years of age

Predictions of changes in aggression scores from age 6 to age 11 were examined. The results indicated that aggression at age 6 was a significant predictor of aggression behavior at age 11 ($F = 23.28$, $p < .001$. see Table 1). Notably, there was a significant level of stability ($r = .79$, $p < .001$) in aggression behavior over time.

The results of the one-way repeated measures ANOVA supported the aggression behaviors' stability. The findings showed that there were no significant differences between the scores for aggression at ages 6 to 11 ($F = 23.28$, $p > .001$).

Table 1.Regression equations predicting social behaviors at 11 years from social behaviors at 6 years

	β	R2	ΔR2	F
Aggression (n = 47)	.79	.62	.59	23.28**
Shyness (n = 47)	.31	.10	.04	1.57
Prosocial beh. (n = 47)	.54	.29	.24	5.74*

* p < .01, ** p < .001

Stability of shyness in children at 6 to 11 years of age

Predictions of changes in aggression scores from age 6 to age 11 were examined. The results indicated that shyness at age 6 was not a significant predictor of shyness at age 11 ($F = 1.57$, $p > .05$. see Table 1). Notably, there was not a significant level of stability ($r = .31$, $p > .05$) in shyness over time.

On the other hand, the results of the one-way repeated measures ANOVA supported the shyness non-stability. The findings showed that there was significant differences between the scores for shyness at ages 6 to 11

Stability of prosocial behavior in children at 6 to 11 years of age

Predictions of changes in prosocial behaviors' scores from age 6 to age 11 were examined. The results indicated that prosocial behaviors' at age 6 was a significant predictor of prosocial behaviors at age 11 ($F = 5.74$, $p < .01$. see Table 1). Notably, there was a significant level of stability ($r = .54$, $p < 01$) in aggression behavior over time.

On the other hand, the results of the one-way repeated measures ANOVA supported the aggression behaviors' stability. The findings showed that there were no significant differences between the scores for aggression at ages 6 to 11 ($F = 5.74$, $p > .01$).

Table 2. Stability of Social Behaviors from 6 to 11 years

		M	SD	F	Sig.
Aggression (n = 47)	6 years	13.36	6.01	23.28**	.000
	7 years	13.30	6.67		
	9 years	11.68	5.70		
	11 years	11.77	6.24		
Shyness (n=47)	6 years	6.83	2.38	1.57	.211
	7 years	6.83	2.62		
	9 years	6.49	2.73		
	11 years	5.72	2.4		
Prosocial Behaviors (n=47)	6 years	10.95	3.11	5.74*	.002
	7 years	10.11	3.34		
	9 years	10.68	2.87		
	11 years	10.98	2.95		

* $p < .01$, ** $p < .001$

4. Discussion

This study examined the stability of children's aggression, shyness and prosocial behaviors a five-year period, from age 6 to age 11. The results of the present study show a significant degree of stability of aggression and prosocial behaviors from age 6 to age 11. Whereas, There was no a significant degree of stability was found for shyness. In conclusion, social behavior was found to be stable for 55% prosocial behaviors, 31% Shynese behavior and 79% for aggressive behavior as results of regression analysis. These findings support the argument that aggression (Adams, Bukowski & Bagwell (2005); Loeber, (1982); Loeber & Hay, (1997); Olweus, (1979) and prosocial behaviors (Knafo & Plomin, 2006). follows a stable course from age 6-11 age onwards and shyness Asendorpf (1990), Degnan et. al. (2008), Prior et. al. (2000) and Roberts and del Vecchio (2000) follows low stability .

This research has some limitations. The research tools were limited to the TASB scale. Different social behaviors scales should be used and adapted into Turkish in future studies. In this study, social behaviors were determined in line with the opinions of children. However, different and numerous techniques such as observation and peer opinions may be used in future studies. In this study, social behaviors were analysed in terms of stability.

Some proposals have been developed in light of the present study's results. In this respect, first, it is proposed that new scales that measure social behaviors such as aggression, shyness and prosocial behaviors from early childhood to adolescence should be developed in order to conduct studies using different age groups. The results of the present study demonstrate that aggression and prosocial behavior have stability tendency from 6 to 11. Therefore, studies should be carried out on family subjects such as child education, mother-child interaction and childcare. In line with the studies indicating that social behaviours may change depending on culture, studies should be conducted in order to investigate the forms and continuity of social behaviors in the Turkish culture and other cultures.

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THE EFFECT OF SITUATIONAL FACTORS AND PSYCHOLOGICAL FACTORS OF STUDENTS IN THE CHOICE OF THE MECHANICAL ENGINEERING EXPERTISE PROGRAM IN VOCATIONAL HIGH SCHOOLS IN THE YOGYAKARTA SPECIAL TERRITORY

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Abstract

This study aims to describe situational and psychological factors, the choice of the mechanical engineering expertise program, and find out determinations of situational and psychological factors on the choice of the mechanical engineering expertise program in Vocational High Schools (VHSs) in the Yogyakarta Special Territory. This was a correlational study which was ex post facto in nature. It was conducted in state and private VHSs belonging to the technology and engineering group in the mechanical engineering expertise program in the Yogyakarta Special Territory. The data were collected through inventories, observation sheets, and documents. The data were analyzed using the descriptive analysis, regression analysis, and path analysis. The results of the descriptive analysis show that the scores of situational factors are in the high category, those of psychological factors are in the high category, and that of the choice of the mechanical engineering expertise program in VHSs is in the high category. The research hypothesis testing shows that: (a) there are significant effects of situational factors (family, previous school, and social environments), and psychological factors (students' information mastery, self-understanding, and attitudes) on the choice of the mechanical engineering expertise in VHSs with a contribution of 53.8%; and (b) based on the results of path analysis showed that the choice of the mechanical engineering expertise program in VHSs by junior high school (JHS) graduates is dominantly affected by a situational factor in the form of social environment and the most influential psychological factors are students' self-understanding and attitudes.

Keywords: situational factors, psychological factors, determination of mechanical engineering expertise program in VHSs.

1. Introduction

After graduating from junior high school students have two alternative choice to continue formal education, namely Senior High School (SHS) and Vocational High School (VHSs) [1]. In the case of the elect to continue their education to VHS, the students of class IX Junior Secondary Schools need to get serious attention from the various parties in order to determine the choice of fields of expertise in VHSs them not mistaken. This is very reasonable considering there are 121 competencies skills offered at VHSs as specified in the spectrum of expertise vocational education [2].

Basically, the selection of areas of expertise is the process of fusion among the needs, expectations, and economic demands [3]. It also said that the selection of areas of expertise is the combination of interests, abilities, values, opportunities, expectations and any limitations in the reality of life [4]. For that reason there needs to be an intensive information from the school and the parents to the Junior secondary School students related to the election of the expertise program in VHSs. The problems that happened in the election of the expertise program in VHSs by graduates of junior secondary school students, outline can be grouped into three, namely the problems associated with the guidance of parents and teachers, social influence society and the problems associated with the psychological aspects of the students.

Because of the extent of the spectrum of the expertise program in VHSs, so this research is focused on the selection of one of the expertise program in VHSs namely Mechanical Engineering Expertise Program. In this study the factors that influence the selection of fields of expertise are grouped into two categories,

namely external factors or environmental factors and internal factors or psychological factors of students. External factors (environment variable) is limited to the family environment, previous school environment, and the social environment, while to internal factors (psychological variable) limited to the mastery information, self-understanding, and attitudes of students in VHSs.

The choice of the field of expertise virtually is the process of fusion of between the needs, sources of private individuals, the demands of the economic, and socio-cultural conditions. "Ref. [3]" more information is also mentioned that the development of vocational someone is the interaction between the behavior, attitudes, ambitions and values of individuals with social factors surrounding it.

Decision making is a strange problem in the phase of development vocational someone [5]. The development of the individual personality is basically a mental processes a person as a consequence of its involvement in the community. To describe one's personality in the social life used the term self-identity (ego identity). Self-identity is formed due to the interaction between the three factors namely: biological conditions of the individual, psychological and social culture where individuals are located.

The choice of the field of expertise is a stable process that occurs on a certain period and is a combination of hope and the possibility of [6]. More information mentioned that there are three stages in the process of the choose of the field of expertise/vocational training a person namely: stage fantasy, tentative and realistic. The fantasy stage generally in children age around 6 -11 years. At this time the children start to show a focus on the work, but the children could not access the ability or opportunity and the limitations of reality. They acknowledge can be anything that they want. The orientation of their choice is still change. Tentative phase occurred on children age 11 - 17 years. At this time the children began to be aware of the problems faced by the associated with career or expertise of their future. They began to ponder potential they possess.

A person will be conducting a conscious choice between the various alternative choices that the aim is to maximize pleasure and minimize pain [7]. This theory is often called the theory of hope. According to this theory that a person who has established the purpose or the elect who have been taken can be motivated to make it happen if they believe that there is a positive correlation between the effort and the performance of the existence of the fulfillment of the reward as desired, awards/prizes from the achievements of the obtained and a strong desire to meet the needs to make the time to work is very valuable. In the process of the choice of a career or expertise there are four variables which influence, namely: reality factors, educational process, emotional factors and personal values [8]. Reality factors regarding one response to the surrounding environment condition that forced to that person to make decisions related to his career. Educational process related to the quality and quantity of education obtained a person that allows open insights that person to determine career choice. Emotional factors are things related to the aspects of personality. Emotional factors are things related to the aspects of personality. Personal values are aspects of the value that is attached to a person who also influence in selecting a career. Personal values are aspects of the value that is attached to a person who also influence in selecting a career.

From a variety of theories and the formulation of the above it can be concluded that the factors that influence in the election of the field of expertise or someone career: emotional factors (interest, sense of hope/impact, and the establishment of the), personal factors (personality, character and values), educational factors (cognitive ability, psychomotor ability, experience of education and training), and reality factors (capacity/opportunities, fees and requirements of supporters). The election of the field of expertise is the individual psychological awareness of the objective world in its relation to the self [9]. "Ref. [3]", more information mentioned that the development of vocational someone being alone is the interaction between the behavior, attitudes, ambitions and values of individuals with social factors surrounding it. So the selection field of expertise is the process of the psychology of the individual to determine the right attitude and right in the face of something object. Characters or individual personality will affect the person in addressing a wide range of expertise or the work that is in the community [10]. This means that every person will choose a career or certain job in accordance with his character of each. Based on the theory of Holland was people will see into himself (understanding themselves) to measure suitable whether or not a career or work with himself. This means that the understanding of themselves (self knowledge) is one of the important factors that influence in the choice of the field of vocational training. "Ref. [8]" that a person will choose a vocational field or certain job if they have faith and hope that the work or chosen field of expertise will bring

success and he will be tried with all his strength to get the field of expertise or the work.

In determining the choice of a field of expertise is also influenced by factors outside of the individual or external factors. External Factors are factors outside of the individual is also often called as situational factors. The environment is basically all aspects or physical and social phenomenon that affect the organism someone [11]. Physical and social phenomenon is a source of information that can be obtained by someone through the vision, hearing and smell and taste. This information is then made one resourceful, knowledge and understanding about something objects.

All aspects of human life, regarding the art of science, religion, moral, culture, education, political, economic and family life will be very influenced by the situation of the condition of the environment [12]. Environmental differences can cause differences in the attitude of the individual, psychologically can be learned through three ways: (1) imitate the more achievement in certain fields, (2) combine the experience, and (3) Special experience with a profound emotional [13]. More information mentioned that human behavior follows the pattern or procedures for certain rules according to the way which has been patterned raw material in their environment [14].

From the explanation above can be drawn the conclusion that determination in choice of the mechanical engineering expertise program in VHSs is a mental process that is influenced by internal factors (Individual/psychological), or external factors (environment/ situational answer). The internal factors in this research are grouped into three main variables namely: students' information mastery, self-understanding, and students attitude toward VHSs). While external factors can be grouped into three main variables, namely: family environment, previous school environment and social environment.

The purpose of this research is: 1) to describe of situational factors, psychological factor and the choice of the mechanical engineering expertise program in VHSs, and 2) to find out determinations of situational and psychological factors on the choice of the mechanical engineering expertise program in Vocational High Schools (VHSs) in the Yogyakarta Special Territory.

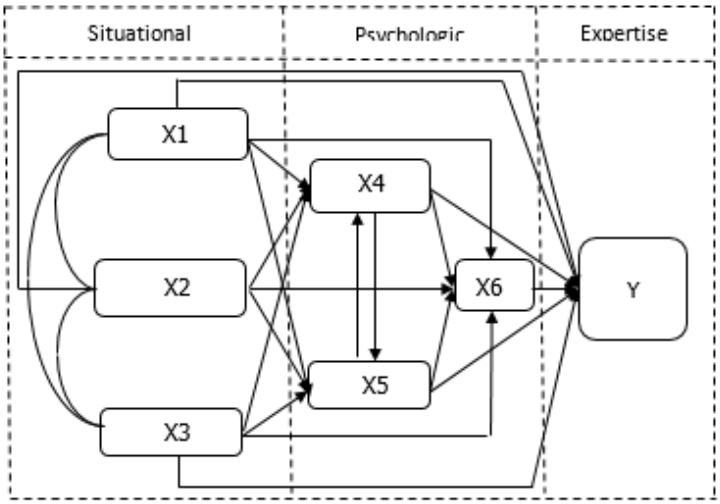
2. Method

This was a correlational study which was ex post facto in nature. The population in this research are the students of class X the mechanical engineering expertise program in VHSs in the Yogyakarta Special Territory. The number of research population is 1095 students. The number of samples is determined by the research based on the determination of the size of the sample using equal to 5 percent error [15]. Based on the results of calculation obtained the size of the samples of 285 respondents (rounded). To anticipate the questionnaires and data that could not be also, the number of sample plus 5%. Thus the minimum samples used in this research is: 285 (5% x 285) = 300 respondents (rounded).

Sampling techniques used is proportional random sampling so that the number of sample is calculated based on the amount of the population groups each of the groups. Techniques for data collection in this research using questionnaires, observation sheet and documentation. The validity of the instrument in this research include the validity of contents and the validity of construct. To know the validity of the contents of the instrument was done through the expert with Delphi technique. The validity of construct is proved by using confirmation factor analysis to see whether the particulars of the instrument is suitable to assess the elements that are found in the change that has been specified [16]. The calculation of the reliability of the instrument using the rules of the Cronbach Alpha [17].

The data were analyzed using the descriptive analysis, regression analysis, and path analysis. Prior to the data analysis first tested which includes testing requirements analysis: normality, linearity, homoskedastisitas, and multicollinearity.

This research design is shown in figure 1 below.



Information:
X_1: Family Environments
X_2: Previous School
X_3: Social Environments
X_4: Mastery Of VHS Information
X_5: Self-Understanding
X_6: Attitudes Towards VHS
Y: The choice of the mechanical engineering expertise program in VHSs

Figure 1. Research design

3. Results

The results of a descriptive analysis shows that the family environment, home school environment, social environment community, mastery of information, understanding themselves, attitudes the students and the selection of the field of expertise engineering at SMK by graduates of junior secondary school students including in the high category. Now the achievement of student response score from the highest score is assigned sequentially each is: 73,9%; 74,1%; 69.3%; 73.5%; 80,3%; 83,6%, and 81%. To fulfill the requirements of the analysis in this research done normality test, homoskedastisity test, linearity test, and multicolinearity test. The test results showed that normality score distribution and residual distribution of all the variables in this research qualify normality. This can be seen from the indicator as follows: a) score for each of the

distributed variable approach curve normal, b) seen from normal probability plots appear that the distribution of the data each of the variables are located around the diagonal lines and follow the direction of the diagonal lines, and c) tilt (skewness) each variable is located between -0,5 until 0.5.

Based on the linearity test, can be known that the value of F-count for each candidate, on the column linearity greater from F-table. This shows that the direction of regression lines all candidate means. Whereas if seen the value and the significance of F on the column deviation from linearity, all meet the requirements of linearity (F-count <F-table or sig>0.05).

Based on the results on the scatterplot can be known that the distribution of the score of the points) all bound variables in the regression equation does not constitute a pattern and spread randomly around the zeros on the axles Y. Based on the review of the Park shows that the similarities regression specified in this research all qualify homoskedastisitas.

Based on the results of the test analysis multico linearity can be known that the correlation coefficient (r product moment) all independent variables in this research are under 0.85; the value of tolerance is greater than 0.1; and there is no value of VIF above 10. Thus it can be concluded that there is no evidence of a serious multicolinearity between independent variable.

Based on the results of regression analysis showed that :

a. There is a significant effect of family environment (X1), previous school environment (X2), and social environment (X3) to control students' information mastery (X4); (F=103,98; p<0.05). The determination coefficient (R^2)=0,513; shows the contributions of three variables of 51.3%.
b. There is a significant effect of family environment (X1), previous school environment (X2), and social environment (X3) on the self-understanding (X5); (F=45,216; p<0.05). The determination

coefficient (R^2)= 0,314; shows the contributions of three variables of 31.4%.

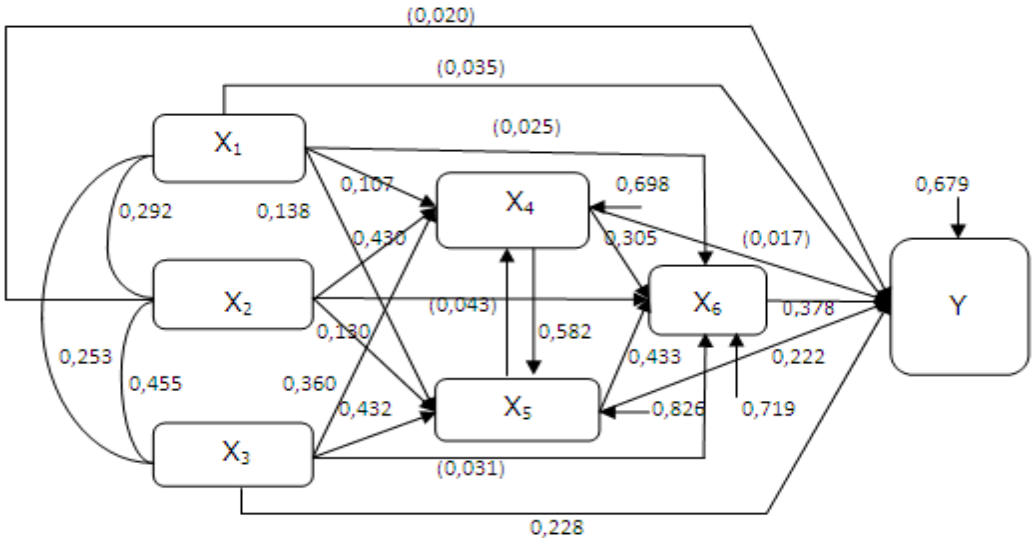
c. There is a significant effect of family environment (X1), previous school environment (X3), social environment (X3), the mastery of information (X4), and self-understanding (X5), on the attitude of the students at VHSs (X6); (F= 55,00; p<0.05). From the results of the analysis can also known the determination coefficient (R^2)= 0,483. This means that the contributions of five variables of 48.3%.

d. There is a significant effect of family environment (X1), previous school environment (X2), social environment (X3), mastery of information (X4), self-understanding (X5), and attitude of students (X6) on the choice of the mechanical engineering expertise program in VHSs (Y); (F=56,815; p<0.05). The determination coefficient (R^2)= 0,538; shows donations six variables of 53.8%.

e. Based on the values of the predictors and constant obtained from multiple regression analysis, the multiple regression equation can be formulated as follows:

$Y=12.199+0.153X_1+0.022X_2+0.239X_3 +0.219X_4 +0284X_5+0.366X_6$

Empiric causal relationship model which contains the regression weight (β) or full model line coefficient presented in Figure 2.



Information:

X_1: Family Environments	X_4: Mastery Of VHS Information
X_2: Previous School	X_5: Self-Understanding
X_3: Social Environments	X_6: Attitudes Towards VHS

Y : The choice of the mechanical engineering expertise program in VHSs

Figure 2. Model of causal relationships

The results of path coefficient significance test can be seen in Table 1.

Table 1. A summary of the results of the path analysis

Variable		Direct	Indirect effect through			Total	Total	Non-	Correla-
Dependent	Independent	**effect**	X_4	X_5	X_6	**ETL**	**effect**	**causal effect**	**tion**
X4	X_1	0,187	-	-	-	-	0,187	0.137	0,324
	X_2	0,430	-	-	-	-	0,430	0.195	0,625
	X_3	0,360	-	-	-	-	0,360	0.223	0,583
X5	X_1	0,138	-	-	-	-	0,138	0.147	0,285
	X_2	0,130	-	-	-	-	0,130	0.237	0,367
	X_3	0,432	-	-	-	-	0,432	0.094	0,526
X6	X_1	-	0,063	0,061	-	0,124	0,124	0.107	0,231
	X_2	-	0,146	0,057	-	0,203	0,203	0.198	0,401
	X_3	-	0,122	0,190	-	0,312	0,312	0.136	0,448
	X_4	0,340	-	-	-	-	0,340	0.255	0,595
	X_5	0,439	-	-	-	-	0,439	0.197	0,636
Y	X_1	-	0,025	0,057	-	0,093	0,175	0.099	0,274
	X_2	-	0,057	0,053	-	0,103	0,213	0.159	0,372
	X_3	0,245	0,048	0,177	-	0,287	0,532	0.013	0,545
	X_4	-	-	-	0,133	0,133	0,133	0.400	0,533
	X_5	0,238	-	-	0,171	0,171	0,409	0.206	0,615
	X_6	0,390	-	-	-	-	0,390	0.261	0,651

Based on the calculation of the influence directly and indirectly will be known:

a. The direct effect of the family environment against the choice of the mechanical engineering expertise program in VHSs is not significant. The indirect effect through the mastery of information and the attitude is not significant. But the indirect effect through the self-understanding and the attitude of the students is significant.
b. The direct effect of the school environment against the choice of the mechanical engineering expertise program in VHSs is not significant. But the indirect effect through self-understanding and the attitude of the students significantly, and indirect effect through the mastery of information and the attitude of the students is significant.
c. The direct effect of social environment against the choice of the mechanical engineering expertise program in VHSs is significant, and indirect effect through self-understanding and the attitude of the students is significant. This means that the social environment has a very important role in the choice of the mechanical engineering expertise program in VHSs.

4. Discussion

Based on the results of hypothesis testing in this study can be seen that there is a significant effects of situational factors (family, previous school, and social environments), and psychological factors (students' information mastery, self-understanding, and attitudes) on the choice of the mechanical engineering expertise program in VHSs. This suggests that the family environment, school environment, social environment, information mastery, self-understanding and attitudes of students at VHSs has significant effects on the choice of the mechanical engineering expertise program in VHSs. While individually family environment, social environment, information mastery, self-understanding and attitudes of students at VHSs has significant effects on the choice of the mechanical engineering expertise program in VHSs. But the school environment had no significant effect. It shows that the high and low level of accuracy in the choice of the mechanical engineering expertise program in VHSs will be affected by the high and low quality family environment, social environment, information mastery, self-understanding, and attitudes of students in VHSs.

With the effect of family environment on the choice of the expertise program in VHSs, then the research findings is consistent with the results of other studies that have found that with the guidance and direction of their parents, the children have a positive insight on the selection of fields of expertise submit their work [18]. The results of this study are also in line with the study that concluded that the quality of the relationship or interaction with parents and family functioning is not optimal degree of influence about 14 % of the variation of the determination of a child 's career [19].

The results of path analysis showed that the direct effect of family environment on the choice of the mechanical engineering expertise program

in VHSs is not significant, and the indirect effect through the mastery of information and attitudes are not significant, but the indirect effect through self-understanding and attitudes significantly. The results of path analysis showed that the mastery of information and attitudes students have less significance in explaining the effect of family environment on the choice of the mechanical engineering expertise program in VHSs. These results are in line with research that states that the control information of the graduates of junior high school students is still lacking, so will result in the perception and attitude at VHSs poor, which in turn will greatly affect the accuracy in determining areas of expertise program in VHSs [20]. The results of the analysis also showed that the family environment can not be directly influencing the choice of the mechanical engineering expertise program in VHSs without guided by self-understanding and students' attitudes towards VHSs. These findings are in line with the idea that the family environment, especially parents have a very dominant role in the formation of children's personality or attitude and self-concept (self-understanding) [21].

The results of path analysis showed that the direct effect of the school environment for the choice of the mechanical engineering expertise program in VHSs is not significant. But the indirect effect through self-understanding and attitudes significantly, and the indirect effect through the mastery of information and attitudes significantly. This suggests that self-understanding, mastery of information and attitudes have meaning in explaining the origin of the school environment influences the choice of the mechanical engineering expertise program in VHSs. The better the quality of the previous school environment will lead to better self-understanding, mastery of information and attitudes of students at VHSs that ultimately determine the better or more precise in the choice of the mechanical engineering expertise program in VHSs. The results are in line with the suggestion that schools with teachers who qualified were able to bring the students who have the capability to vary achieve good academic achievement, mastery of information, and fostering attitudes and expectations are high in the election areas of expertise or future job [22].

The direct effect of the social environment on the choice of significant areas of expertise program in VHSs and indirect effect through self-understanding and attitudes significantly. This means that the social environment has a very important role in the choice of the mechanical engineering expertise program in VHSs. Besides, the results of the path analysis also showed that the self-understanding and attitudes have meaning in explaining the effect of the social environment on the choice of areas of expertise program in VHSs. The better the quality of the social environment will lead to better understanding of ourselves and the attitudes of the students at the VHSs that ultimately determine the better or more precise in the choice of the expertise program in VHSs. The findings are in line with the idea that the social environment is very influential on the formation of attitudes and behavioral patterns, perspective and understanding of what is happening in the environment, especially with regard to career or job [23].

5. The conclusion

Based on the results of the descriptive analysis shows that the situational factors (family environment, school environment, and social environment), and psychological factors of students (mastery of information, understanding themselves, attitudes students) and the choice of the mechanical engineering expertise program in VHSs by graduates of junior secondary school, including in the high category. This shows that both situational factors or psychological factors of graduates from junior secondary school showed a positive image in the choice of the mechanical engineering expertise program in VHSs. Now the achievement of student response score from the highest score is assigned sequentially each is: 73,9%; 74,1%; 69.3%; 73.5%; 80,3%; 83,6%, and 81%.

Based on the results of multiple regression analysis shows that there is a significant influence family environment, home school environment, social environment, mastery of information, the understanding of themselves and the students attitude toward the choice of the mechanical engineering expertise program in VHSs with a donation of 53.8%. Based on the determination of coefficient partial, attitudes students have the greatest contribution to the choice of the mechanical engineering expertise program in VHSs (13.8%), followed sequentially social environment (6.3%), the understanding themselves (5%), the mastery of information (4.6%), family environment (3.2%), and the school environment (0.7%). Thus the attitude of the students have the effect of more dominant in determining the choice of the mechanical engineering expertise program in VHSs.

Now the results of the path analysis as follows:

a. The direct effect of family environment against the choice of the mechanical engineering expertise program in VHSs is not significant. But the indirect effect through the self-understanding and the attitude of the students is significant.
b. The direct effect of previous school environment against the choice of the mechanical engineering expertise program in VHSs is not significant. But the indirect effect through self-understanding and the attitude of the students is significant. So also the indirect effect through the mastery of information and the attitude of the students is significant.
c. The direct effect of social environment against the choice of the mechanical engineering expertise program in VHSs is significant. So also the indirect effect through the self-understanding and the attitude of the students is significant.
d. Psychological factors in the form of the self-understanding and the attitude of the students have significant effect either directly or indirectly in determining the choice of the mechanical engineering expertise program in VHSs, while the mastery of information does not provide the direct effect on the choice of the mechanical engineering expertise program in VHSs but a role in improving the attitude of the students to then influence in the choice of the mechanical engineering expertise program in VHSs for graduate of Junior Secondary Schools.

The results of the path analysis shows the important role of the variables understanding themselves and the attitude of the students of VHSs in explaining the influence of various situational factors (the environment his parents and the school environment, social environment) against the choice of the mechanical engineering expertise program in VHSs. In addition to the mastery of the information also shows a significant role in the improvement of the accuracy in the choice of the mechanical engineering expertise program in VHSs through the attitudes towards VHSs. Therefore very reasonable for more give priority in the development of the three psychological factors in the effort to enhance the role of the aspects of situational factors (family environment, previous school environment, and social environment) in improve the accuracy in the choice of the mechanical engineering expertise program in VHSs.

6. Suggestions

Under the results of this research, recommended:

a. Empowerment needs to be done on the parents of the students especially related to insights about advanced school especially related to the program that is in conventional and about the working world.
b. Junior Secondary Schools need to improve vocational guidance program, planting the entrepreneurial spirit, bring industry practitioner to schools for speeches, visit the students to the world of business/industry and the introduction of various types of work and the field of expertise in society that inserted in lessons related. It is intended that the students have a broad knowledge about the working world and can capitalize on students the attitude of discipline, resilient, honest, independent and eager to work hard.
c. The government in this case the Ministry of National Education needs to be more effective imaging VHSs in the community through both printed or electronic media.
d. The junior secondary school students need to be encouraged to be able to increase the capacity of themselves especially related with the ability to control the mastery of VHSs information, the self-understanding, and the development of the attitude towards VHSs by providing various media access information and counseling vocational training which more intensive.

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THE SELECTION DICISION SUPPORT SYSTEM OF STUDENTS ELIGIBLE FOR SCHOLARSHIPS WITH SIMPLE ADDIPTIVE WEIGHTING METHOD (CASE : SMK MAHADHIKA 2 JAKARTA)

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Abstract

Scolarship is income for the receiving and the purpose of scholarship is to help alleviate the cost burden education students or students who get. Division scholarship conducted by some agencies to help someone less capable or accomplished during study at SMK Mahadhika 2 Jakarta. SMK Mahadhika 2 Jakarta is one of the school that give scholarships to students every semester. This is certainly in order to ease the burden of student tuition fees. In accordance with regulations prescribed by the SMK Mahadhika 2 Jakarta to obtain a scholarship, then the required criterias for determining who will be selected to receive scholarships. Based on this determination to assist in determining a student get s acholarship, it takes a decision support system with methods you can use FMADM(Fuzzy Multiple Attribute Decision Making). FMADM method is a method that can find a best alternative from several alternatives based on criterias that have been determined. The point is that the method determines the weight on each criteria. This method uses SAW (Simple Additive Weighting) to perform the calculation method FMADM. The best alternative in question is eligible to recieve scholarships based on establised criteria. Research done by finding the value of weight for each criteria, and then made the process of ranking that will determine the optimal alternative is the best student will be considered by decision makers to gain a scholarship.

Keyword : scholarship, criteria, simple addiptive weighting, decision support system

1. Introducing

Scolarship is income for the receiving and the purpose of scholarship is to help alleviate the cost burden education students or students who get. Division scholarship conducted by some agencies to help someone less capable or accomplished during study at SMK Mahadhika 2 Jakarta. SMK Mahadhika 2 Jakarta is one of the school that give scholarships to students every semester. This is certainly in order to ease the burden of student tuition fees.

In accordance with regulations prescribed by the SMK Mahadhika 2 Jakarta to obtain a scholarship, then the required criterias for determining who will be selected to receive scholarships. Based on this determination to assist in determining a student get s acholarship, it takes a decision support system with methods you can use FMADM(Fuzzy Multiple Attribute Decision Making).

FMADM method is a method that can find a best alternative from several alternatives based on criterias that have been determined. The point is that the method determines the weight on each criteria. This method uses SAW (Simple Additive Weighting) to perform the calculation method FMADM. The best alternative in question is eligible to recieve scholarships based on establised criteria. Research done by finding the value of weight for each criteria, and then made the process of ranking that will determine the optimal alternative is the best student will be considered by decision makers to gain a scholarship.

2. Theoretical

2.1 Decision Support System

Definition of Decision Support Systems (DSS)

Little (1970) defined as a set of procedures based DSS models for data processing and assessment in order to help managers make decisions. Alter (1980) defines DSS by

comparisonthe EDP system (electronic data processing) traditional on five dimensions.

2.2 Fuzzy Multi-Attribute Decision Making (FMADM)

Fuzzy Multiple Attribute Decision Making is a methodused to find the optimal alternative of a number of alternative criteriacertain. The essence of FMADM is to determine the weight values for each attribute, followed by the ranking process that will select the alternative that has been given. Basically, there are three approaches to find the value of attribute weights, the subjective approach, objective approach and an integrated approach between subjectively and objectively. Each approach has its advantages and disadvantages. In the subjective approach, the weight value is determined based on the subjectivity of decision-makers par, so that some of the factors in the processranking alternatives can be determined freely. While on approachObjectively speaking, the weight value is calculated mathematically to the exclusion of subjectivityfrom decision makers (Kusumadewi, 2007). There are several methods that can beused to solve the problem FMADM among others (Kusumadewi, 2006):

1. Simple Additive weighting method (SAW)
2. Weighted Product (WP)
3. ELECTRE
4. Technique for Order Preference by Similarity to Ideal Solution (TOPSIS)
5. Analytic Hierarchy Process (AHP)

2.2.1 Simple Additive weighting metod (SAW)

SAW method commonly known term weighted summation method .

The basic concept method SAW is seeking the sum of the weighted performance rating for each alternative on all attributes . SAW method requires a process of normalizing the decision matrix (X) to a scale that can be compared with all the ratings of existing alternatives .

$$r_{ij} = \begin{cases} \dfrac{x_{ij}}{Max\ x_{ij}} & \text{jika j adalah atribut keberuntungan (}benefit\text{)} \\ \dfrac{Min\ x_{ij}}{x_{ij}} & \text{jika j adalah atribut biaya (}cost\text{)} \end{cases}$$

Rij .....(2.1)

Xij if j is an attribute advantage (benefit)
Xij if j is an attribute costs (cost)

Where rij is the normalized performance rating of alternative Ai on attribute
Cj ; i = 1,2 , ... , m and j = 1,2 , ... , n . Preference value for each alternative (Vi)
is given as : $V1 = \sum_{j=1}^{n} WjRij$ ... ...(2.2)
Vi larger value indicates that the alternative Ai is selected.

2.2.2 Step Resolution

In Research model FMADM using SAW method. The steps are :

1. Determining criteria to be used as reference Decision Making , ieCi .
2. Rating criteria for determining suitability of alternative each criteria.
3. Make matrix based decisioncriteria(Ci) , then do normalization matrix by equationadjustedoperating attributes (attributes benefit or attributecover charge),so toget normalized matrix R.
4. Final resultsfrom the process of ranking namely summation from the matrix multiplication R with normalized vector thus notevaluelargest selected as best alternative (Ai)as Solution (Kusumadewi , 2006).

2.3 Software in Use

2.3.1. Java Netbeans IDE 8.0.2.

NetBeans is a software development platform written in Java. The NetBeans platform allows applications to be developed from a set of modular software components called *modules*. Applications based on the NetBeans platform, including the NetBeans integrated development environment (IDE), can be extended by third party developers.

The NetBeans IDE is primarily intended for development in Java, but also supports other languages, in particular PHP, C/C++and HTML5.

NetBeans is cross-platform and runs on Microsoft Windows, Mac OS X, Linux, Solaris and other platforms supporting a compatible JVM.

2.3.2. MySQL

MySQL is an open source relational database management system. Information in a MySQL database is stored in the form of related tables. MySQL databases are typically used for application development.

A MySQL database can be accessed (queried) directly using; C, C++, Eiffel, Java, Perl, PHP and Python computer languages. There is also third party support for connection in a Windows environment.

MySQL databases are queried using a subset of the standard Structured Query Language (SQL) commands.

3. Analysis

3.1 General Review

3.1.1. SMK Scholarship Mahadhika 2 Jakarta

SMK Mahadhika 2 Jakarta is a vacational school in Jakarta was focus in the field of electronics and automotive. Their goal is to make young people indonesia master of electrical engineering and automotive.

3.1.2. System Requirements Analysis

Students may only be rated from 1 to 5 only per class are allowed to register as candidates for scholarships in vocational Mahadhika 2 Jakarta.

Information needs are needs that exist in the system and the information generated by the system. Information needs of decision support systems for the proposed scholarship are :

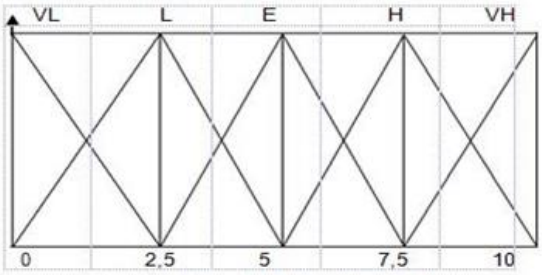
1. The criteria required

Here are the criteria needed to get decision, based on the requirements of the scholarship in general. The predetermined criteria that the average value of a lesson (C1), income parents(C2), semester (C3),number of dependent older people (C4) and age C5) .

From these criteria, then created a level interest criteria based on predetermined values to weights into fuzzy numbers . Rating match any alternatives at each of the following criteria :

Very Low (VL) = 0
Low (L) = 2.5
Enough (E) = 5
Height (H) = 7.5
Very High (VH) = 10

The weight value is created in a graph to make it more clear, as shown below.



Picture 3.1 Weight chart

Explanation :

VL = Very Low
L = Low
E = Enough
H = Height
VH = Very High

Based on rating criteria and suitability of each alternative.Criteria has determined, then the translation of notesany criteriahas converted withfuzzynumbers.

- Avarage value criterion lesson

AVL=Average value of lesson

Criteria AVL is a necessary requirement for decision-making, based on the number of AVL earned by students during the study. Here interval AVL has been converted by fuzzy numbers below.

Table 3.1. AVL Value

AVL Value	Value
AVL<7	2.5
AVL>=7	5
AVL>=8	7.5
AVL>=9	10

- Incomes parents

Criteria parental income is a necessary requirement for decision-making, based on the amount of variable or fixed income every month. The following translation of the interval the

amount of income of parents who have been converted by fuzzy numbers below.

Table 3.2. Incomes parents

Income parents (X)	Value
X<Rp. 1.500.000	10
X>=Rp. 1.500.000	7.5
X>=Rp. 3.000.000	5
X>=Rp. 5.000.000	2.5

- Semester criterion

  Criteria half of the requirements needed for decision-making , based on half of that has been taken . Here's the translation of half interval which has been converted by fuzzy numbers below.

Table 3.3. Semester

Semester (S)	Value
S = 1	0
S = 2	2
S = 3	4
S = 4	6
S = 5	8
S = 6	10

- Criteria Number of Dependents Parents

  Criterion number of dependents of parents is a necessary requirement for decision-making, based on the number of children of dependent parents in the form of cost of living. Here's the translation of a number of intervals of children who have been converted by fuzzy numbers below.

Table 3.4. Dependents Parents

Dependents Parents	Value
1 son	0
2 sons	2.5
3 sons	5
4 sons	7.5
5 sons	10

- Age Criteria

  Age criteria is a requirement needed for decision-making, based on the age of the student. The following translation of the age interval that has been converted by fuzzy numbers below.

Table 3.5. Age

Age	Value
Age = 15	0
Age = 16	2.5
Age = 17	5
Age = 18	7.5
Age > 19	10

1. Following the manual calculation is based on a case study.

   Three candidates for scholarship applicants have the following data :

Table 3.6. Data applicants

Criterion	Aplicants name		
	Student 1	Student 2	Student 3
AVL	7.5	8.3	9
Incomes	1000000	2000000	4000000
Parents	2	4	5
Semester	3	2	5
Dependents Parents	16	18	17
Age			

Based on the data above can be formed applicants a decision matrix X which has been converted by fuzzy numbers, as follows :

Table 3.7. Rating suitability of each alternative on each criterion

Alternative	Criterion				
	C1	C2	C3	C4	C5
A1	7,5	10	2	5	2.5
A2	8	7.5	6	2.5	7.5
A3	10	5	8	10	5

.

Decision makers give weight, based on the level of importance of each of the required criteria as follows :

Vector weights : W = [10 , 7.5 , 5 , 2.5, 2.5]

Make a decision matrix X, made from table match as follows :

$$X = \begin{Bmatrix} 7.5 & 10 & 2 & 5 & 2.5 \\ 8 & 7.5 & 6 & 2.5 & 7.5 \\ 10 & 5 & 8 & 10 & 7.5 \end{Bmatrix}$$

First, do normazation X matrix to calculate the value of each criterion based on the criteria assumed as the criterion of profitas follows :

$$r11 = \frac{7.5}{\max\{7.5,8,10\}} = \frac{7.5}{10} = 0{,}75$$

$$r12 = \frac{8}{\max\{7.5,8,10\}} = \frac{8}{10} = 0{,}8$$

$$r13 = \frac{10}{\max\{7.5,8,10\}} = \frac{10}{10} = 1$$

$$r21 = \frac{10}{\max\{10,7.5,5\}} = \frac{10}{10} = 1$$

$$r22 = \frac{7.5}{\max\{10,7.5,5\}} = \frac{7.5}{10} = 0,75$$

$$r23 = \frac{5}{\max\{10,7.5,5\}} = \frac{5}{10} = 0,5$$

$$r31 = \frac{2}{\max\{2,6,8\}} = \frac{2}{8} = 0,25$$

$$r32 = \frac{6}{\max\{2,6,8\}} = \frac{6}{8} = 0,75$$

$$r33 = \frac{8}{\max\{2,6,8\}} = \frac{8}{8} = 1$$

$$r41 = \frac{5}{\max\{5,2.5,10\}} = \frac{2}{10} = 0,2$$

$$r42 = \frac{2.5}{\max\{5,2.5,10\}} = \frac{2.5}{10} = 0.025$$

$$r43 = \frac{10}{\max\{5,2.5,10\}} = \frac{10}{10} = 1$$

$$r51 = \frac{2.5}{\max\{2.5,7.5,7.5\}} = \frac{2.5}{7.5} = 0.33$$

$$r52 = \frac{7.5}{\max\{2.5,7.5,7.5\}} = \frac{7.5}{7.5} = 1$$

$$r53 = \frac{5}{\max\{2.5,7.5,7.5\}} = \frac{5}{7.5} = 0.66$$

Second ,make normalization matrix R result from the findings normalizationmatrix X as follows :

$$X = \begin{Bmatrix} 0.75 & 1 & 0.25 & 0.2 & 0.33 \\ 0.8 & 0.75 & 0.75 & 0.025 & 1 \\ 1 & 0.5 & 1 & 1 & 0.66 \end{Bmatrix}$$

Next will be made of matrix multiplication W * R and summing the results of multiplication to obtain the best alternative by ranking the greatest value as follows :

V_1 = (10)(0.75) + (7.5)(1) + (5)(0.25) + (2.5)(0.2) + (2.5)(0.33) = 16.6667

V_2 = (10)(0.8) + (7.5)(0.75) + (5)(0.75) +(2.5)(0.025) + (2.5)(1) = 20

V_3 = (10)(1) + (7.5)(0.5) + (5)(1) +(2.5)(1) +(2.5)(0.66) = 22.9167

The results of the ranking obtained : V1 = 16.6667, V2=20 and V3 = 22.9167 .

The greatest value is in V3, so alternative A3(Student 3) is an alternative that is chosen as the best alternative .

3.1.3. ProcessDesign

3.1.4.Use Case Diagram

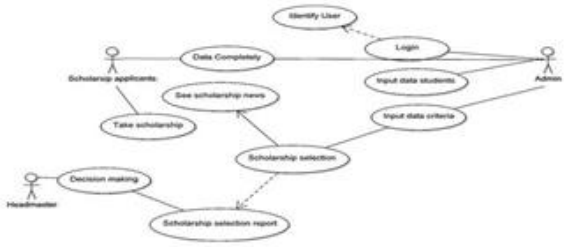


Figure 3.2. Use Class

Candidates receiver scholarships that would take the scholarship to complete the data required and admin input the data of the applicants as well as data input criteria for the recipient and be selected recipients then the selection results reported and the reports received by the school principal and at its discretion make a decision who managed to get a scholarship .

3.1.5. Class Diagram

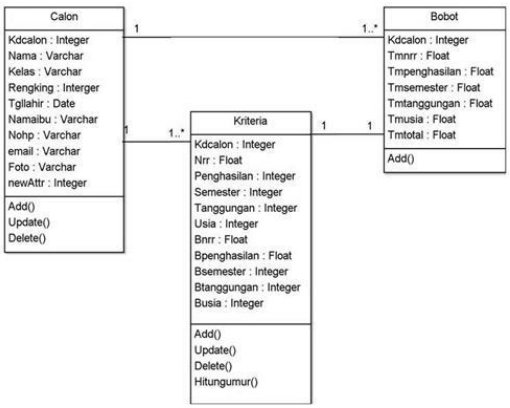


Figure 3.3. Class Diagram

Each of the applicants has several criteria and

each criterion has a weighting. Each weight is multiplied by the matrix and the sum of the weights with matrix multiplication into the result of the greatest ranking most entitled a scholarship.

4. Discussion

4.1 System Implementation

The implementation phase of the system is made to elaborate on a few things on a system that was created before the system will be implemented, with the aim of testing the system whether it is feasible to be implemented or not .

4.1.1 Implementation Program

Implementation of the program is a form of programs that run on the system developed

1. Login Form

Figure 4.1. Login

2. Menu Form

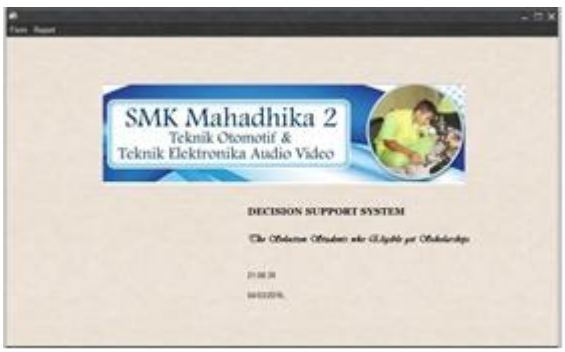


Figure 4.2. Menu

3. Form Data Applicants

Figure 4.3. Data Aplicants

4. Form Convert Data to Data Fuzzy

Figure 4.4. Convert Data to Data Fuzzy

5. Form Proses Data

Figure 4.5. Form Process

6. Form Report

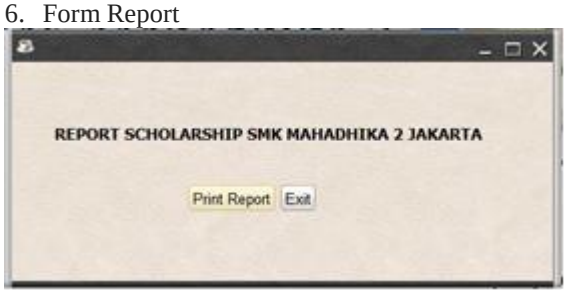


Figure 4.6. Form Report

7. Reports

Figure 4.7. Report

5. Conclusion

Making the Decision Support System to perform calculations as the data selectors applicant with the results ranking has been successfully built. The system has made reference to the formulation of the problem that exists is the system can select the data the applicant pursuant to perform calculations based on the method of SAW (Simple Additive weighting) in FMADM (Fuzzy Multiple Attribute Decission Making). Some of the conclusions that can be described as follows:

1. The system is intended to assist the user in data processing student, scholarship application, selection results and reports - reports.
2. The calculation of the system for sorting using SAW (Simple Additive weighting).
3. Stage - the stage of the system development process in this research is the identification of problems, systems analysis, design, testing and implementation.
4. The result of the calculation is a system of ranking the highest value to the low and the highest value is the result needed for consideration by the user to obtain a scholarship.
5. The system is built only as a tool to provide information to the user or scholarship as consideration in making a decision.

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EXPLORING ONLINE SOCIAL CAPITAL AND GENERALISED SOCIAL CAPITAL AMONG YOUTHS

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Abstract

We form relationships with people such as family, friends, neighbours, club, acquaintances, online, institutional trusts and those who we meet in our daily life in general. We categorised them into different networks. The quality of social networks very much depends on the trust and the reciprocal interaction that we build in it. Social capital consists of the essence of trust and reciprocity in these social networks. In this research, we study eight types of social capital. We would like to investigate whether there is a change of pattern in forming generalised social capital which reflects on the trust that we put in people in general. We also would like to investigate about the factors that contribute to online social capital. The comparison between Model 1 (social capitals that lead to generalised social capital) and Model 2 (social capitals that lead to online social capital) can shed insight in telling us whether we treat people online the same as we treat people in general. We surveyed 5,954 young people aged 15-25. The respondents were recruited by stratified and clustering sampling. The results from Pearson correlation showed that all predicting factors: (1) family, (2) friends, (3) neighbours, (4) club, (5) acquaintances and (6) institutional trust are significant to Online Social Capital (OSC) and Generalised Social Capital (GSC). However, result from linear regression reflected that social capital among family weakens OSC, but not GSC. In conclusion, we found that these two models did not reflect the same pattern as there are differ in the family social capital context. The result implies that social capital among family plays a bigger role in assisting young people to determine who and what they want to trust compared to online social capital. Future research needs to explore about family interaction in order to get an understanding on the impact of FSC on OSC.

Keywords: youth; online social capital; generalised social capital

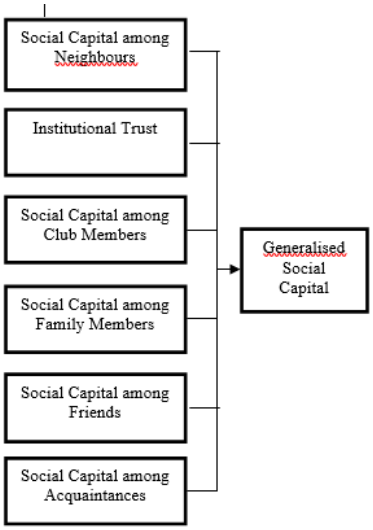
1. Introduction

We live in a world that made up of numerous generations since our forefathers. Howe and Strauss (1991) defined generation as a group of people whom share a time and space and live collectively. However, McCrindle and Wolfinger (2010) suggested to add the impact of globalisation into account because the generations nowadays are shaped with the same events, trends and developments regardless the geographic factor as they are avid users of online technologies. Gibson, Regina and Edwards (2009) categorised generations into three major categorisations base on birth cohorts; Baby Boomers, Generation X and Generation Y (also known as Millennial). Baby Boomers was born between 1946-1964, Gen X was born between 1965 to 1980 and Gen Y was born between 1981-1994. Wiedmer (2015) added another category; Generation Z, which is the latest generation who were born between 1995-2015. She also reported that Gen Y is the largest generational cohort group since the Boomers, 71 million. If we were to compare these generations based on their exposure to online technology, Gen Y is found as the major user of internet, followed by Gen X, and lastly by Baby Boomers (Littrell, Yoon & Halepete, 2005). Gen Y is incredibly sophisticated and technology-wise since they have been exposed to technology since early childhood, making them having high trust in online input (Wyn & Woodman, 2006). Gen Y also tends to be more social and confident compared to other generations, resulting in having wide networking and high trust to other individuals. Therefore, in this current study we will focus on Gen X and Y because they are the majority of our young people today. They also trust people they meet online as they are very exposed to online technology.

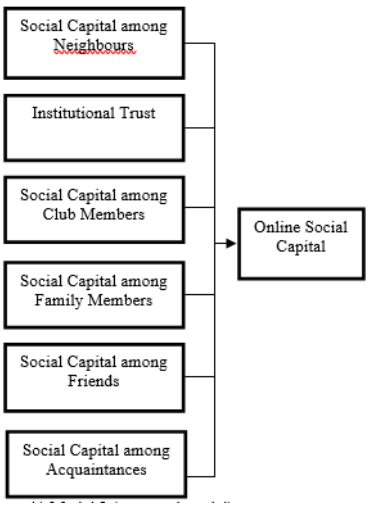
Trust and reciprocity are the important dimensions in social capital which helps to sustain a harmonious community (Putnam, 2000; Coleman, 1988). For instance, if X trusts Y, X will help Y when Y in need. X also believes

that Y will reciprocate in the future whenever X need help (Coleman, 1988). Social capital is intangible — exist in the form of human relations, and made up of different entities. It could be either localised entities (family, friends, neighbours, clubs, institutional trust) or global (acquaintances, online and generalised people) (Coleman, 1988). This statement was also supported by Putnam (2000) and Coleman (1988) whom proposed that if individuals trust and reciprocate to their locality, they will expand their trust and reciprocity towards people in general.

Currently, technology has expanded progressively and it impacts our daily life. The invention of social networking sites (SNS), internet banking and online shopping enhance our daily functioning. In addition, it also plays a role in creating and maintaining social capital (Penard & Poussing, 2010). Penard and Poussing (2010) investigated how internet usage can affect the formation and maintenance of social capital. They hypothesised that (1) high-commitment young people were more likely to use internet to maintain their social capital only, (2) low-commitment young people were more likely to use internet to create new social capital only, and (3) high-tech young people were more likely to use internet for both, maintaining and expanding their social capital. They recruited 1,554 respondents from Luxembourg to do a survey. As predicted, all hypotheses were supported. The findings reflected the vital role of OSC in creating and maintaining social capital among young people. Nowadays, we can see that young people, which mostly made up from Gen X and Y, are very engaged and passionate about online technology. Gen Y is also described as a generation that love to share their private life online. They are comfortable to update and share almost everything that happened to them (e.g., share photos of their lunch on Instagram, updates their hatred to their colleagues on Facebook). They also involved in online banking and online shopping. Dhanapal, Vashu and Subramaniam (2015) did a study to identify the perceptions and challenges on online shopping in Malaysia. They sampled 400 respondents from Klang Valley which comprise of Gen X, Gen Y and Baby Boomers to do the survey. The finding showed that Gen X and Y do online shopping more than Baby Boomers. Common products that they bought online are cinema tickets, airline/train tickets as well as holiday packages. This finding implies that young people have a high OSC as they frequently use online technology including social networks and internet banking. The emergence of OSC raises a new question to the existing model— Model 1 (*See Figure 1*) demonstrated by Putnam (2000) and Coleman (1988) whom suggesting that if we trust and reciprocate to localised social capitals such as family and friends, we will expand our trust and reciprocity to people in general— could OSC be a proxy to GSC? Therefore, in this current study, we would like to investigate whether there is a change of pattern in forming generalised social capital which reflects on the trust that we put in people in general. We alo would like to investigate the factors that contribute to OSC among young people



a) Model 1 (existing model)



b) Model 2 (proposed model)

Figure 1. Types of social capital that contribute to GSC and OSC

2. Method

We surveyed 5,954 young people aged 15-25 nationwide: (east and west of Malaysia), (M = 19.51, SD = 3.14; 3203 males, 2751 females). The respondents were recruited by stratified and clustering sampling. The survey analysed eight types of social capital (family, friends, neighbours, clubs, institutional trusts, acquaintances, online and people in general) The survey was using a 5-point Likert scale, ranging from 1 (extremely agree) to 5 (extremely disagree).

3. Results

We would like to categorised the eight types of social capital into two groups: (1) localised entity and (2) global entity. Localised entity includes family (M = 4.37, SD = 0.76), friends (M = 3.92, SD = 0.73), neighbours (M = 3.68, SD = 0.66), institutional trusts (M = 4.03, SD = 0.77), and clubs (M = 3.61, SD = 0.72). Meanwhile, global entity includes acquaintances (M = 3.55, SD = 0.76), online (M = 3.19, SD = 0.83) and people in general (M = 3.54, SD = 0.71). Based on Figure 2, it can be seen that young people trust and reciprocate towards family at most, whereas young people trust and reciprocate towards online at the very least. Figure 2 also illustrated that, in average, all components in localised entity have a moderately high mean score compared to global entity. This finding implies that young people trust and reciprocate more with people in their circles that they meet face-to-face instead of those they rarely meet or virtually meet. In other words, young people prefer traditional interaction (face-to-face) in order to create and strengthen social capital towards other people.

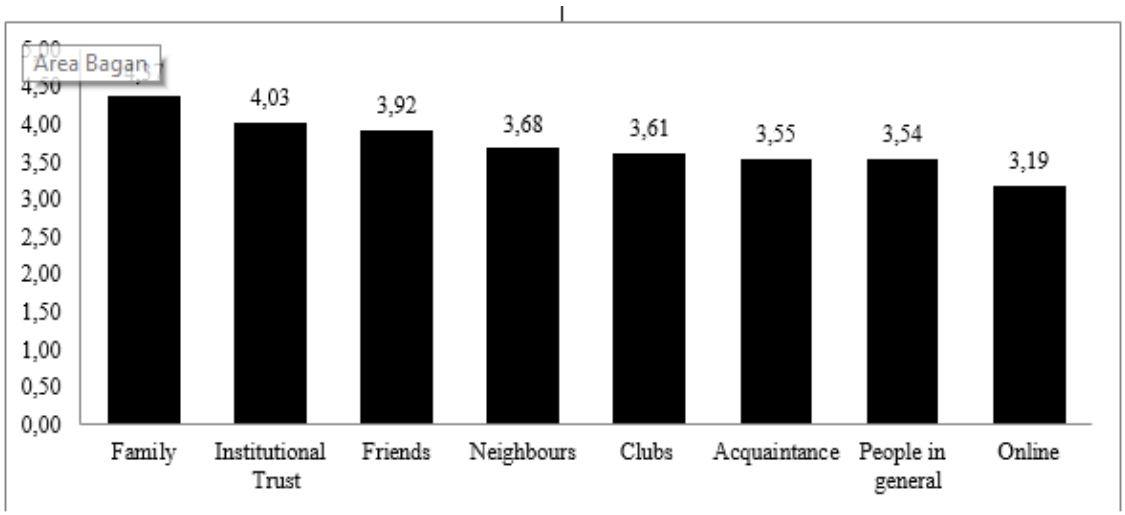


Figure 2. Overall Mean Score for Eight Types of Social Capital

Table 1. Correlations between eight types of social capital with GSC

Social capital	Neighbours (NSC)	Club (CSC	Online (OSC)	Acquaintance (ASC)	Friends (FrSC)	Family (FSC)	Institutional trust (ISC)
Generalised (GSC)	.45**	.46**	.34**	.38**	.38**	.28**	.25**

Table 2. Correlations between eight types of social capital with OSC

Social capital	Neighbours (NSC)	Club (CSC	Generalised (GSC)	Acquaintance (ASC)	Friends (FrSC)	Family (FSC)	Institutional trust (ISC)
Online (OSC)	.30**	.35**	.34**	.44**	.31**	.10**	.24**

Table 1 illustrated that, basically all determinants correlate significantly and positively with GSC, such that the higher the trust and reciprocity that young people put towards family (r = .45, p <.005). friends (r = .38, p <.005), neighbours (r = .45, p <.005), clubs (r = .46, p <.005), institutional trusts (r = .25, p <.005), online (r = .34, p <.005) and acquaintances (r = .38, p <.005), the higher the trust and reciprocity that young people put towards people in general. It was also found that clubs was highly correlated with GSC while institutional trust was lowly correlated with GSC. Table 1 illustrated that, basically all determinants correlate significantly and positively with GSC, such that the higher the trust and reciprocity that young people put towards family (r = .45, p <.005). friends (r = .38, p <.005), neighbours (r = .45, p <.005), clubs (r = .46, p <.005), institutional trusts (r = .25, p <.005), online (r = .34, p <.005) and acquaintances (r = .38, p <.005), the higher the trust and reciprocity that young people put towards people in general. It was also found that clubs was highly correlated with GSC while institutional trust was lowly correlated with GSC.

Meanwhile, Table 2 illustrated that, basically all determinants correlate significantly and positively with OSC, such that the higher the trust and reciprocity that young people put towards family (r = .10, p <.005). friends (r = .31, p <.005), neighbours (r = .30, p <.005), clubs (r = .35, p <.005), institutional trusts (r = .24, p <.005), people in general (r = .34, p <.005) and acquaintances (r = .44, p <.005), the higher the trust and reciprocity that young people put towards those they meet online. It was also found that acquaintances was highly correlated with OSC while family was lowly correlated with GSC.

Table 3 showed the result from multivariate regression when the dependent variable is GSC and OSC. We tested the effect of six predictors on GSC and OSC in Model 1 and Model 2, respectively. However, in model 1, we control the effect of OSC on GSC whereas in model 2 we control the effect of GSC on OSC.

Figure 3 portrayed that In Model 1, we found that all predictors significantly and positively predict GSC, such that high trust and reciprocity towards family (β = .50, p = .001), friends (β = .09, p = .001), neighbours (β = .21, p = .001), clubs (β = 0.21, p = .001), acquaintances (β = .09, p = .001), and institutional trusts (β = .05, p = .001) predict high trust and reciprocity towards people in general. The major predictor that predicts GSC is neighbours (NSC).

Meanwhile, in Model 2, we found that all predictors, except for FSC, significantly and positively predict OSC, such that higher trust and reciprocity towards friends (β = .09, p = .001), neighbours (β = .05, p = .001), clubs (β = .12, p = .001), acquaintances (β = .28, p = .001), and institutional trusts (β = .09, p = .001) predict high trust and reciprocity towards people in general. In contrast, FSC significantly weakens OSC such that higher trusts and reciprocity towards family predicts lower trust and reciprocity towards online (β =-.14, p = .001). The major predictor that predicts OSC is acquaintances (ASC). In conclusion, findings demonstrated that OSC is not a proxy to GSC as the predictors for OSC and GSC are different—family (FSC) weakens OSC but strengthen GSC.

In addition, Table 4 also illustrated that trust and reciprocity towards localised entity (family, friends, neighbours, clubs) are more likely to increase GSC if compared to OSC. In addition we also can see that trust and reciprocity towards global entity are less likely to increase GSC if compared to OSC. This finding implies that young generation prefer to use traditional (face-to-face) interaction compared to the virtual interaction in order to create and strengthen the social capital towards other people.

4. Discussion

This paper aimed to investigate whether there is a change of pattern in forming generalised social capital which reflects on the trust that we put in people in general. It also would like to investigate the factors that contribute to online social capital. Contrary to the prediction, it was found that types of social capital that predicting OSC and GSC are different. The major different was illustrated by social capital among family (FSC) as it weakened OSC but strengthen GSC, such that high trusts and reciprocity towards family predict low trusts and reciprocity towards online, but predict high trusts and reciprocity towards people in general. Therefore, this finding suggested that OSC is not a proxy to GSC.

An alternative explanation for the relationship between social capital among family and online social capital is due to the fact that young people often look up to their parents, take the parents as a figure that they can fully trust and rely on. In addition, this is due to the sacrifice and the unconditional love that parents have given to the young people since they were kid. Parents always want the best for the children. Therefore, young people perceived parents'

advice as something beneficial to them, and hence, will highly trusts and reciprocate towards their family.

Table 4. Sum of beta (*β*) for Localised and Global Entities on GSC and OSC.

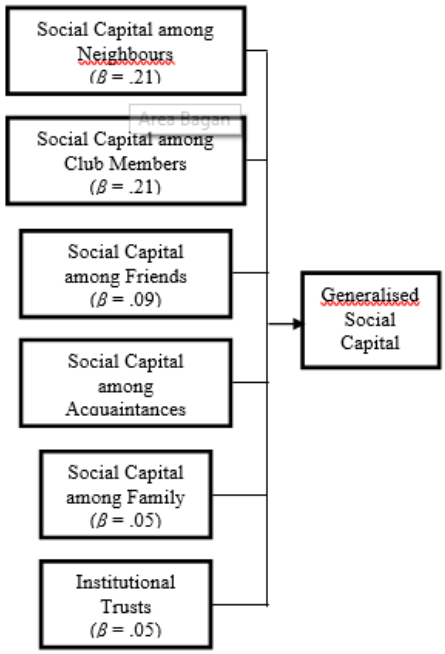
	GSC (β)	OSC (β)
Localised entity	0.61	0.21
Global entity	0.09	0.28

One of the reasons why young people are less likely to trust and reciprocate towards online is might be because of the numerous syndicates and cases that involving online technologies such as cyberbullying, hacking, fraud as well as making a fake profile on social media to find a date. As a result, young people are more likely to be more cautious in trusting and reciprocating towards online and hence, making a sense on why FSC weakens OSC.

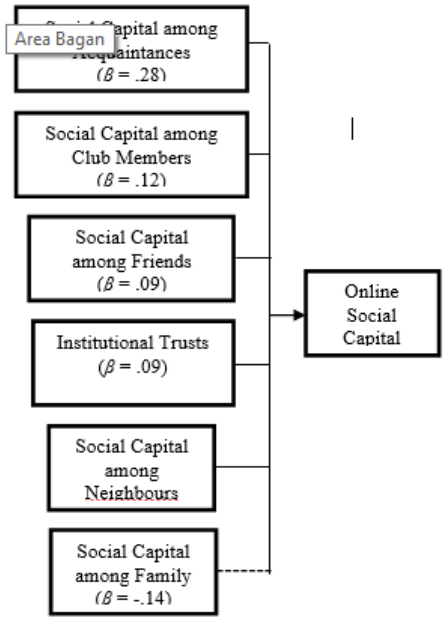
The finding also showed that young people trust localised people more than global people. This might be due to the fact that they prefer to trust and reciprocate with those they meet face-to-face instead of those they have not meet. This finding is consistent with Zajonc (1968) which proposed that we tend to trust and like those we frequently and repeatedly meet, due to the mere exposure. Compared to online interaction, the face-to-face interaction is more powerful in creating and strengthening trust and reciprocity towards other people (Zajonc, 1968).

Figure 3(b) illustrated that trusts and reciprocity towards neighbours and club members help young people to trust and reciprocate towards people in general. This finding implies that young people need to have a wide networking, actively participate in activities such as volunteering, and mingle around with the neighbourhood community in order to engage with other people and hence, help them to create and strengthen their social capital.

In conclusion, we found there is no change of pattern in forming social capital towards people in general. We also found the factors that contribute to both, generalised social capital as well as online social capital. The only factors that differ these two models is social capital among family. We also found that young people are more likely to trust and reciprocate toward localised entity instead of global entity due to the trust that they gain thru mere exposure.



a) Model 1 (Existing model)



b) Model 2 (Proposed model)

Key: Predicting factors were arranged in descending order

Predictor that weakens social capital

Predictor that strengthen social capital

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BRIDGING QUALIFIED HUMAN DEVELOPMENT: PROSPECTS AND CHALLENGES OF INTERNATIONAL CLASS PROGRAM

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Abstract

This research is aimed at revealing the strategic management of ICP towards WCU in UIN Maliki Malang. By employing the qualitative research design through interview and documentation, this research has found out that ICP has implemented internationalization project that is started from bilingualism and student partnership program. Those two aspects indispensably take significant issue to develop the ICP term that has been debatable. The worthy discussion lies on the emergence of Arabic and English languages that inextricably becomes the World Class University's uniqueness from other Indonesian universities whether under auspices of Religious Affair Ministry or Ministry of Education, Technology and Research. Besides, the standard quality performance (SQP) that has been the masterpiece of ICP to thrive its future challenges for tomorrow education needs to be explored by empirical studies.

Keywords: ICP, strategic management, WCU, internationalization

1. Introduction

International Class Program (ICP) has been argumentable for its establishment. The word "international" has been considered dualistic in the part of simply naming it "bilingual class program." Observing this notion through the ICP of Tarbiyah and Teacher Training Faculty (FITK) UIN Maulana Malik Ibrahim Malang, we can obtain politically acceptable philosophy of the ICP design that can be a panacea for Islamic Higher Education (IHE) to emulate in international community.

Before further discussion, WCU is the first term to take a look. WCU, a goal of more universities in the world has made the interest to be recognized as the elite education circumstances. It is because the standard criteria of being WCU are nominated by diverse profit and non-profit WCU labeling organizations whose scorings are different, such as three international academic university rankings known as Shanghai Jiao Tong University (SJTU) in China, Times Higher Educational Supplement Quacquarelli Symonds (THES) in UK, and Cybermetrics Lab in Spain. One of those three WCU ranking institutions made Indonesian surprised in 2008 when Gajah Mada University (UGM), Bandung Institute of Technology (ITB), and University of Indonesia (UI) were indexed as the-top-400-university across international borders by THES; UGM on the 360th rank, UI on the 287th rank, and ITB on the 315th rank.

The international stature of institutions is constructed by those three leagues by using objective or subjective data (or both) achieved from the universities themselves or from the public domain. The THES ranking selects the top 200 universities in the world. Based on its emergence in 2004, the methodology of this ranking mostly focuses on international reputation, combining subjective inputs (such as peer reviews and employer recruiting surveys), quantitative data (including the numbers of international students and faculty), and the influence of the faculty (as represented by research citations). Operating since 2003, SJTU employs methodology that focuses on objective indicators exclusively, such as the academic and research performance of faculty, alumni, and staff, to identify the top 500 universities in the world. The evaluated measures include publications, citations, and exclusive international awards (such as nobel prizes and field medals).

Different from the two ranking leagues, Webometrics, produced by Cybermetrics Lab, compares 4.000 world tertiary education institutions and marks them on the scale from 1 to 5 across several areas that purport to measure visibility on the internet as a proxy of the importance of the concerned institution. In Indonesia, Surya Dharma Ali, X minister of Religious Affair Ministry Republic Indonesia pointed State Islamic University of Maulana Malik Ibrahim Malang (UIN Maliki Malang) and

State Islamic University of Syarif Hidayatulloh (UIN Syarif Hidayatulloh) as the Islamic universities towards World Class Universities in 2013.

The selection by the government is without deep reasoning. It is fundamentally based on Salmi (2009) declaring that there are three basic strategies to construct WCU. The first is government must consider upgrading potentially excellent universities. The second is government can encourage some institutions to merge and transform to be a new university that can achieve synergy type of WCU. The last is the government has initially constructed WCU. Due to the reality in Indonesia, the first criterion is purposively selected by the government. By this nomination, consequently, UIN Maliki Malang has kept unceased efforts to purposively enhance the website to heighten the ranking.

The fundamental criteria of ranking of Webometrics comprise four main points. First, the webpage that can be easily detected by search engines, for instance Google, Yahoo, Live Search, and Exealed. Secondly, the number of external links received by a website. The third point is the variety of relevant files to the academic fields and publications that are relevant to be uploaded in the website. The selected files are commonly extracted in the form of Adobe Acrobat (.pdf), Adobe Post script (.ps), Mocrosoft Word (.doc) and Microsoft Power Point (.ppt). The fourth criterion is the quality of the academic writings and publications found in Google Scholar. Although those three international rankings have different standardized guides to score each university, they have similar aims in improving the quality of universities across borders. Centered on Webometric, UIN Maliki Malang is in the process of escalating its academic quality to productively create academic dynamics.

From various WCU-labeling organizations, we have found no detailed definition of the notion of world-class universities. In fact, Altbach (2004), Director of the Center for International Higher Education at Boston College, said that the world-class university should be superior in the field of research and meet the adequate facilities for academic work, the conducive atmosphere for intellectual interest, academic freedom, and independence in governance. World-class universities should not be only emphasized on the qualifications specified by the institutions of ranking the world-class university, such as ARWU, THES, and Webomatrics. In addition to academic quality improvement in terms of adequate human resources and competent natural resources, of course, funding is an indispensable component to support research, teaching and the functions of the other universities. Here's a brief description of Altbach (2004).

Excellence in the field of research reflects the concept of a world-class university benchmark. Qualified research is research that has been recognized by fellow scientists and contributing to the development of science. With regard to the urgency of research, other aspects of the university also need to support the creation of high-quality research. Consequently, freedom of intellectuals is indispensable to accommodate a world-class university signed by the ability of the professors and students to publish their intellectual works. Management of higher institutions, one of important parts of world-class universities should be owned by the academic institution. In the practice of education, the concept of interdependency is not only done by students as learners. To attain world class universities, universities must have autonomy in the management and an influence on the main elements of academic life, the new students, curriculum, graduation criteria, the commitment of lecturers and professors, and the main direction of academic work in the institution.

Beside management, adequate facilities for academic activities are also highlighted. Research and teaching quality must have access to the trustworthy libraries and laboratories whether virtually or not and through the internet and other electronic resources. Along with the increasing complexity and scope of the science development, the funds to provide those accesses highly fluctuate. Operational funding plans are indispensable from all academic activities required to build a world-class university. Salmi (2007) also agreed that the availability of abundant funds is characteristic of World Class Universities. High-quality scientific activities are perpetuated with the availability of sufficient funds.

Meanwhile, Salmi (2007) explains that there are three main elements for a world-class university, namely the concentration of talent, abundant resources, and good management. Why can talented students be the crucial factor in determining the advantages of a world-class university? Salmi explained that the quality of students is more significant to promote the university rather than the quantity of students. Great universities worldwide attract excellent students and lecturers as well as great researchers from around the world. Abundant fund is the second characteristic of the world-class Universities to carry out the vision and mission of world-class universities. In Asia, the National

University of Singapore (NUS) has the highest endowment fund of 774 million dollars, obtained from the collection of funds from many parties.

Table 1: Comparison of the University Fund Endowment in the US and the UK

US	Endowment in 2006 (in million dollar)	UK	Endowment in 2002 (in million dollar)
Harvard University	28.916	Cambridge	4.000
Yale University	18.031	Oxford	4.000
Stanford University	14.085	Edinburgh	3.200
University of Texas	13.235	Glasgow	240
Princeto University	13.045	King's	200

Table 1 shows the fund uses can certainly affect short and long term goals of universities and into the needs for students, faculty, and researchers for productivity both in the academic world. Dimensions of the third world-class university, namely good management can be influential to build the world class university. Leading universities in the US has a high interest to lead the university without government intervention. University environment like this will foster competitiveness, scientific research, critical thinking, innovation, and creativity. This interdependency of universities can be adapted by the next world class universities to manage their resources to be more beneficial for the lives of many people.

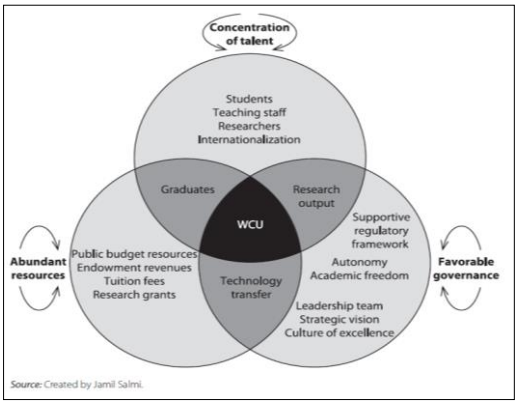
Salmi (2009), higher education UNESCO experts concludes that the combination of these three dimensions to create a university into a world-class by synergizing three elements is illustrated in Figure 1:

Figure 1: Synergy of Grouping Talented Student, Renewable Human Sources, and Strategic Management

Figure 1 shows that when the three elements are synergized, the university can produce World Class University (WCU). Signified by beneficial research results, competent graduates, and technology transfer, a world-class university can perpetuate its emergence to serve society

Table 1 is an overview of some of the endowment fund world-class universities in the United States (US) and the United Kingdom (UK)

interests on academic parts. From the description



above, then there are some ways to attain the world-class university nomination. One of which is internationalization.

Internationalization has emerged as one of the issues to establish higher education globally. A literature has grown as academics debated the conceptualization, the characteristics and challenges of internationalization, and as they seek to uncover the reasons for the reality and implications for universities and countries in different regions of the world. Knight (2004) meticulously analyzes internationalization as a process of integration of the international dimension, global cross-cultural views to the purpose, functions or delivery of education. Brandenburg & Federkeil (2007) make a distinction between internationalization and internationality between process and outcome.

They define the internationality as the status of international activities at the institute at any given time. Internationalization is aimed at improving the level of internationality within a certain time frame. The second definition above implies an understanding of the university internationalization as a continuous process that aims at integrating the international dimension in learning, research, and community service. As part of this process, the university needs to understand the process of internationalization as continuity, ranging from low-level to upper-level management in which the process of study and research involves foreign students and lecturers.

Components for internationalization towards a world-class, according to Kai Ming (2009) from the University of Hong Kong, require prerequisites and commitments that must be done such as building higher education as a priority, creating a resource, having identified

institutions, good academic recruitment system, developing resources, and governance reform. Of the six cores, the most possible points on the college's own initiative are to reform governance or management (Huda, 2009).

Altbach (2004) states that there are systematic twelve elements as benchmarking of World Class University (WCU). Those can be analyzed in Figure 2:

Figure 2. Elements towards WCU (Altbach, 2004)

Those elements can be categorized as main requirements for the educational institutions which dream to reach the label of flagship universities or WCU. One of which is UIN Maliki Malang. At the same time, Tarbiyah and Teacher Training Faculty, the only one education faculty in UIN Maliki Malang is developing International Class Program, known as ICP.

ICP is purposively legalized in 2010 to support the WCU in UIN Maliki Malang. To reach the goal, this unit is doing refurbishment and innovation to well-implement its vision, missions and objectives to strengthen its development and progress in globalization era. The vision of this program is ooptimally developing student's potentials either in the areas of academics, personality or spirituality. While the missions comprise some essential points:

a) Preparing students to be professionals of Islamic education, social science education and Islamic elementary education.
b) Developing students' potentials to have good and responsive personality to the advancement knowledge and technology.
c) Equipping students to be able to compete in national and international boundaries

This program is generally aimed at graduating professional baccalaureates, particularly in aspects of Islamic education, social science education and Islamic elementary education that have qualified competences on pedagogy, personality, high social awareness and high national and international competitiveness. To increase the epitome of flagship university, FITK UIN Maliki Malang has recently launched ICP for Arabic Education Department, among others are Departments of Islamic education, social science education and Islamic elementary education. Those are initiated to answer the society's needs on all life aspects.

Additionally, ICP is firstly intended to develop intelectual ability of the students so as to have strategic, creative, contextual and synthetic thinking ability to face global challenges. Second, it is aimed at graduating the baccellaureates that have deep spirituality, noble attitude, broad knowledge and professionalism. The last, it is purported to graduate baccalaurettes that have high competence on learning and education so as to be able to compete in national and international context.

Therefore, this unit has set standard of quality performance that obliges the students who intentionally select this program to maximally use international languages (Arabic and English). Automatically, the teachers should master international languages skills. Those languages are considered essential to initiate and explore the international atmosphere. Because the success of establishing WCU is not merely emphasized on the use of international languages as the scientific and sophisticated language, other factors also take main roles in the existence of ICP. The kinds and classifications of ICP class can be seen in Figure 3.

2. Method

This research was conducted in ICP FITK UIN Maliki Malang, Jl. Gajayana no 50, at Megawati

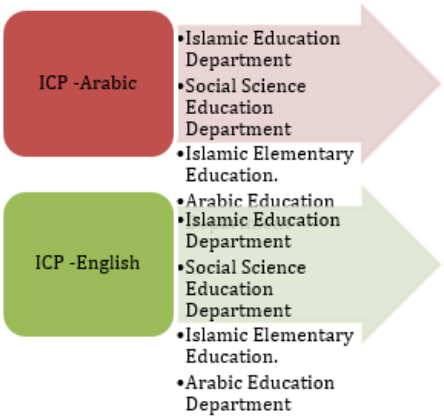


Figure 3. Classification of ICP Classes

building. This program is fulfilled by four education departments, including Islamic Education Department (PAI), Islamic Elementary Teacher Education Program (PGMI), Social Science Education Department (PIPS) and Arabic Education Department (PBA) as the latest program launched in November 2015. During the study, the students are divided into English and Arabic instructional languages that similarly learn subjects as the regular classes.

To answer the research focus, this research employed case study under qualitative research that is aimed at finding out the strategic management of ICP and towards WCU in UIN Maliki Malang. The researcher firstly collected the data from the research subjects that consist of the leader and the secretary of ICP, the head of education departments in FITK Maliki Malang, lecturers, alumni, the students of ICP who had done partnership program in overseas and the students of ICP from the third and the fifth semesters. Those visualized their perspectives by their privilege since not all of people or policy makers have good time to interview. Besides, the researcher collected the ICP documentation records consisting the number of student and teacher, curriculum, academic references, library, and other facilities that can succeed WCU. After collected, the researcher analyzed the data meticulously. Then, the conclusion was organized.

3. Results

Based on the observation and interviews obtained from the subject and interviewees, ICP has its own efforts to encourage the atmosphere of international community and to participatively succeed the academic research. Those efforts, in fact, are not systematically similar to the Altbach's theoretical framework (2004) in determining WCU universities. The difference is because every university has its own abundant research and resources to obtain the elite label of WCU. Because academic research publications that are necessary for the society are mostly obtained by flagship universities, ICP as the developing unit of course does not spontaneously produce the students and have teachers who are ideal for WCU. However, ICP has contributed a lot to strengthen its organizational institutions and optimally support the qualified graduates that can adjust with global knowledge and can be a part of global citizen. As the bridge to establish WCU in UIN Maliki Malang, ICP has its own strategic managements to reach the epitome of flagship university. From the observation, interview and documentations, ICP has emphasized on internationalization.

Internationalization

In global and knowledge-based societies, greater emphasis has been placed on the internationalization of higher education. From a purely management framework, internationalization is widely defined as the development of business operations processes, including strategy, structure and resources, within international environments (Calof & Beamish, 1995).

Reflected into ICP, the system of those aspects is controlled by the university and the faculty. It is because the condition of UIN Maliki Malang as a developing university still needs a process to reach the summit of WCU from all aspects of university, governments and stakeholders. Because of new regulation from Ministry of Education, UIN Maliki Malang should use KKNI standard that internalizes Curriculum 2013.

Started from 2009 to 2030, ICP has strategic plans as stipulated in the quality objective of department, centering on (a) education and instruction (b) institutional organization, (c) the advancement of abundant resources (d) the advancement of research quality and (e) the advancement of public society service.

The strategic plans are divided into some phases. The first is international recognition phase (2007-2012). This phase is concentrated on international standard through organization of international certificates such as ISO and international cooperation, for instances student exchange so as to encourage the overseas students to deeply learn Islamic religion and education in UIN Maliki Malang. One of the examples is the Thailand students that have sent their youngsters to engage learning environment in FITK UIN Maliki Malang since 2005, engaging students to compete in international and national competitions. The second phase is the integration between international and national standards (2013-2017). This phase is categorized as the development and integration of department as the institution that are competently managed nationally and internationally. The indicators broken down into department vision and missions are well planned and integrated. Therefore, it should be relevant with the university internationalization program to be prominent department. The indicators that become the standard in this phase are stipulated

on the department quality objective that integrates between BAN PT and ISO standard.

The third phase is international establishment phase (2017-2023). This phase is designed as the portrayal of professional management on how to provide international service without neglecting local values. More ASEAN students become the customer of this program. ASEAN corner must be established to bear and optimize stakeholder services from around the world. The fourth phase is called international reputation (2023-2030). Department has set plans to legally own international standards of service system, information system, learning process system, accreditation system and recruitment system of teachers and students.

For the budget of professional teachers and talented students, it is obtained from DIPA expenditure. DIPA is the budget for each faculty in UIN Maliki Malang, including the Faculty of Education and Teachers Training (FITK). This budget is also distributed to each department for the developments of curriculum, research for students and teachers, talented students, qualified teachers and students, and many others in which the use of the expenditure has to be in line with the government regulation. If not, it will be categorized as corruption. Therefore, the budgets are sometimes quite enough to spend for academic interests, regarding to a large number of departments in FITK UIN Maliki Malang.

Additionally, ICP has no guest houses for teachers that are self-managed because everything is centrally controlled by university. However, ICP students are obliged to stay at ma'had or Islamic Boarding house Sunan Ampel Al 'Ali (MSAA) before their entrance on ICP. It is a must for the students who are in the first and second semester to involve with the activities in ma'had that can be beneficial to support the student's skills on learning Islamic cultures from Arabic program and English programs. Unconciously, ma'had can support the international learning atmosphere because the foreign students are immersed with the local students in which they can share knowledge and cultures.

To support the knowledge on English program, the students are required to take English courses in the 3rd and 4th semester planned by UIN Maliki Malang through language unit, namely PKPBI. The students are not only learning general english but also English for Academic Purpose (EAP) that consist of 6 sks per semester. They learn English in regular class and intensive class. Diferrent from learning English, the Arabic course takes much more hour than English class in which each class generally takes 2 learning hours. The learning Arabic is started from 14.00-2.00 WIB. Both Arabic and English language programs train the students' language skills, such as listening, reading, writing and speaking that equip them to be able to engage in global citizen.

Internal and External Networkings

The internationalization that has been promoted by ICP is aimed at building internal and external networkings not only with Indonesia but also with other countries across nations. Networkings are expected to optimize the development of human resources, academic research, benchmarking and quality of the universities. To meet these goals, ICP has employed international languages (English and Arabic) as the instructional language.

The international languages are purposively used to construct international atmosphere since there are many foreign students that study in UIN Maliki Malang, including ICP students. Most of foreign students are from Malaysia and Thailand including male and female students. All of them are Moslem. They also join same language programs to develop Arabic and English skills. For special treatment, the overseas students are also required to attend Indonesian program (BIPA) that can help them communicate with local students and share their ideas to the students. Therefore, the use of (inter)national languages and networking are influential each other.

Bilingual program was firstly proposed and legalized in academic year 2009/ 2010 which was promoted to International Standardized School (SBI). This program has similar voice with the mission of bilingual program in UIN Maliki Malang consisting of Intensive Arabic and English Development Programs. Besides, it can contribute to students' competitiveness to fulfill competition qualifications in increasingly global circumstances and can prepare students to engage in international schools either in Indonesia or overseas.

4. Discussion

Using English as the main working language greatly enhances a university's ability to attract highly qualified foreign academics and to produce leading-edge research. For example, the impressive achievements of NUS in recent years, as reflected by its rapid ascension in the major global rankings, are due in part to the contribution of its foreign staff, representing half of the teaching staff and close to 80 percent of

researchers. By contrast, the University of Malaya has been hampered in its internationalization efforts because its use of English is less widespread in teaching and research (Mukherjee and Wong, 2011).

Because universities are international institutions, with an openness to faculty and student flows and to borderless knowledge creation and dissemination, the language of science and scholarship is of central importance. For teaching and publishing, the earliest European universities used a common language—Latin. Even at that time, the universities saw themselves as international institutions, serving students from throughout Europe and often hiring professors from a variety of countries. Knowledge circulated through the medium of Latin. Two key tasks in those early years were translating books from Arabic and Greek into Latin and introducing this knowledge to Europe. Later, as a result of the Protestant Reformation, national languages began to dominate universities in their home countries, and the universities became national, rather than international, institutions.

French was a central language of scholarship during the Age of Enlightenment and the Napoleonic Era. German became a key scientific language with the rise of the research university in the 19th century, and many of the new scientific journals were published in German. Following World War II, English slowly gained influence as the major language of scientific communication with the rise of the U.S. research university and the expansion of university systems in (a) English-speaking countries such as Australia, Canada, New Zealand, and the United Kingdom; and (b) former British colonies including India and Pakistan in South Asia and Ghana, Kenya, Nigeria, South Africa, and Zimbabwe in Africa. In Asia, Hong Kong and Singapore emerged as academic power houses that used English in their universities. By the beginning of the 21st century, English had emerged as the nearly universal medium of scientific communication (Lillis and Curry 2010). Today, universities in non-English-speaking countries are to varying degrees using English as a language of instruction in certain fields.

Reflected into ICP FITK UIN Maliki Malang, this unit has its own characteristic to promote WCU, that is by using Arabic and English languages. This combination cannot be generally found in any other universities in the world because many of them have used English as the symbol of sophisticated and scientific language. Thus, it can be said that Arabic and English languages become the unique domains of the development of bilingualism to encourage the internationalization in UIN Maliki Malang.

The reason for the internationalization of university education is the subject of social discourse in Japan. While enjoying social stability and quality of life as a developed country, Japanese society is also facing some common issues that come along with such advancement. To fight against an aging population and low birth rate, the import of international talents is certainly the right strategy, but the benefit of such action would benefit the society at another level: stimulation of the young generation. There has been a phenomenon among students in Japan, which is immobility. Statistics show that the percentage of student opting for exchange has dropped in recent years. Young people are not willing to step put their comfort zone. Therfore, internationalization of education sector is the most direct way to encourage youngsters to get in touch with the world.

Because ICP recruitment is centered on the overseas students who want to discover their learning in UIN Maliki Malang, there should be a cultural and language center to avoid language barriers and culture shock that can be experienced by the international students. Therefore, it is a courage to well design incubation, initiation and maturity stages that can offer new system and policy for the improvement of ICP.

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DEVELOPMENT STRATEGY OF TEACHER PROFESSIONALISM ON ACTION CLASS RESEARCH AND RESEARCH PUBLICATION IN HULU SUNGAI SELATAN REGENCY, SOUTH KALIMANTAN

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Abstract

Teacher has the responsibility to improve the quality of student both skill and intelligent. Action Class Research is needed to improve the quality of student. Teacher professionalism also needs to publish the research result in journal or book. The research objectives is to identify the teacher perception about Action Class Research and research publication, to identify the teacher problem in Action Class Research and research publication, to identify the teacher skill development from education department of Hulu Sungai Selatan, to evaluate the development strategy of teacher professionalism on Action Class Research and research publication in Hulu Sungai Selatan. Research samples are Junior High School Teachers in Hulu Sungai Selatan. Number of samples is 114 teachers. Variable of research consists of teacher perception, teacher problem and development strategy of teacher professionalism. Data analyze consists of percentage and SWOT. Research shows that 97.44 % teacher understand about the characteristic of Action Class Research, but only34.21% teacher doing the Action Class Research. Teacher training about Action Class Research and research publication from Education Department of Hulu Sungai Selatan is about 10.26 %. The most teachers get the information and training from another teacher. Strategy to develop the teacher skill is teacher skill training from Education Department and university, and teacher group discussion.

Keywords: teacher professionalism, development strategy

1. Introduction

The condition of education in Indonesia is far behind compared to other countries. The condition based on data in the UNESCO report, education for all global monitoring report (EFA-GMR) - Education Development Index (EDI) in 201, was on ranked 57th out of 115 countries [1]

The teacher is a person who is responsible to educate, guide and nurture the student. Teachers have a competence, applying the principles of teaching in order to carry out their duties in professional. Teacher has the obligation to cover the principal activities plan a learning, implementing the learning, assessing learning outcomes, guide and train learners, and carry out the additional task which the main task [2], [3], [4], [5].

Teacher is the spearhead of successful educational purpose and therefore teachers who know directly the difficulties faced by student in the field. Teacher should always be proactive and responsive to the problem and difficulties encountered in the classroom as a manifestation of responsibility to student's success in learning. Education improvement efforts conducted with constructivist approach. Teachers take a responsibility and play an active role in the reform of education and to develop their knowledge and skills through Action Class Research.

Action Class Research is one of the professional development activities of teachers. This research activity can be implemented by teacher in the class which can be used to improve the quality of learning practices. The purpose of action class research is improveing the quality of the process and learning outcomes of students in the classroom and school. The focus of action class research is in the classroom or how the learning happens in the classroom; it is not on input class so action class research has to have aim, or about things that happen in the classroom [6]

The elements assessed in the credit number of teachers are education, learning/guidance and specific tasks, continuous professional development and support the task of teachers. Professional development of sustainability includes conducting research, innovative work and scientific publications [7].

Unrest of teachers is happening today is the inability of teachers in implementing the Action Research due to lack of experience in carrying out such research and the lack of ability in scientific writing. whereas to be a professional

teacher should be able to carry out research that appropriate with the demands of school accreditation, certification as an educator, and the School Operational Assistance (BOS) [6].

Based on the results of the study in year 2012, 2013 and 2014 about using of funds certification, personality and social competence and curriculum implementation in 2013 in Hulu Sungai Selatan (HSS) is still reflected in the teacher's ability to communicate the results of the research are still low because teachers are still not used to writing in a journal or reports research to overcome these problems suggested to the Education department HSS to facilitate the training of scientific thesis in cooperation with the Institute of Community Service and Research (LPMP) and Mangkurat University of South Kalimantan in designing scientific training. Based on the background the researchers interested in learning about strategies for improving teacher professional in conducting Action Class Research and scientific publications in Hulu Sungai Selatan [8], [9].

The research purposes are to identify the teacher perception about Action Class Research and research publication, to identify the teacher problem in Action Class Research and research publication, to identify the teacher skill development from education department of Hulu Sungai Selatan, to evaluate the development strategy of teacher professionalism on Action Class Research and research publication in Hulu Sungai Selatan

2. Method

This study was conducted in Hulu Sungai Selatan, South Kalimantan Province. The population in this study is a junior high school teacher in Hulu Sungai Selatan District with a population of 447 people. The samples were 114 teachers. Data collection uses structured interviews and focus group discussions (FGD) with teachers and education department of Hulu Sungai Selatan. The data analysis is done by percentage analysis, and SWOT analysis (Strength, Weakness, Opportunity, and Threat).

3. Results

3.1 Perception of Action Class Research

Knowledge of Action Class Research

Knowledge of teachers to the Action Class Research is presented in Table 1 and Figure 1.

Table 1 Knowledge of teacher on the Implementation of Action Class Research

No	Question	Criteria	Frequency	Percentage (%)
a	Carry out a survey of learning activities in the classroom	Yes	114	100
		No	0	0
b	Using techniques: observation, interviews, document analysis and tests	Yes	114	100
		No	0	0
c	Identifying problems	Yes	111	97.37
		No	3	2.63
d	Formulate the cause of the problem clearly	Yes	111	97.37
		No	3	2.63
e	Planning the action to resolve a problems that arise	Yes	100	87.72
		No	4	3.51
f	Implementation the actions that have been planned	Yes	100	87.72
		No	4	3.51
g	Observing the performance and behavior of students	Yes	111	97.37
		No	3	2.63
h	Explaining the success or failure of the implementation of the action	Yes	113	99.12
		No	1	0.88
i	Perform the reset action planning	Yes	112	98.25
		No	2	1.75

Source: Primary Data (2015)

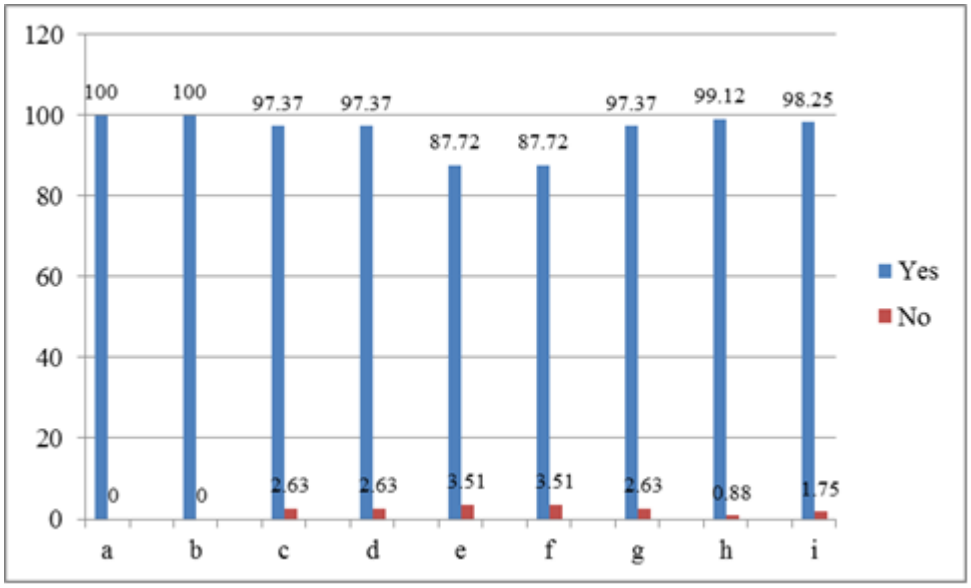

Figure 1.Knowledge of Action Class Research

There are 97.37% of the teachers know how to identify problems, 97.73% of the teachers are able to formulate the cause of problem clearly, 87.72% of the teachers are able to plan action to resolve the problem, 87.72% of the teachers carry out the action, 97.37% teachers observe the students' performance, 99.12% of the teachers explain the success/failure the action, and 98.25% do redesign. Thus, it can be said that the knowledge of teachers of secondary school in Hulu Sungai Selatan on the implementation of Action Class Research is very high.

a. Knowledge of Action Class Research Objectives

More than 90% of teachers know the purpose of the implementation of action research there are only a few teachers who do not know. 98.25% teachers know that action research can improve teaching practice, helping teachers overcome learning problems, and improve the professionalism of teachers. Thus, it can be said that the knowledge of Junior High School teacher in the District of Hulu Sungai Selatan about the purposes of conducting action research is very high. The knowledge of action class research objectives is presented in Table 2 and Figure 2.

Table 2.Knowledge of Action Class Research Objectives

No	Question	Criteria	Frequency	Percentage (%)
a	Repairing and improvement of learning practices	Yes	112	98.25
		No	2	1.75
b	Helping teachers to solve the problems in the classroom	Yes	112	98.25
		No	2	1.75
c	Improving the professional attitude of educators	Yes	112	98.25
		No	2	1.75
d	Creating a proactive attitude in improving the quality of education	Yes	111	97.37
		No	3	2.63

Source: Primary Data (2015)

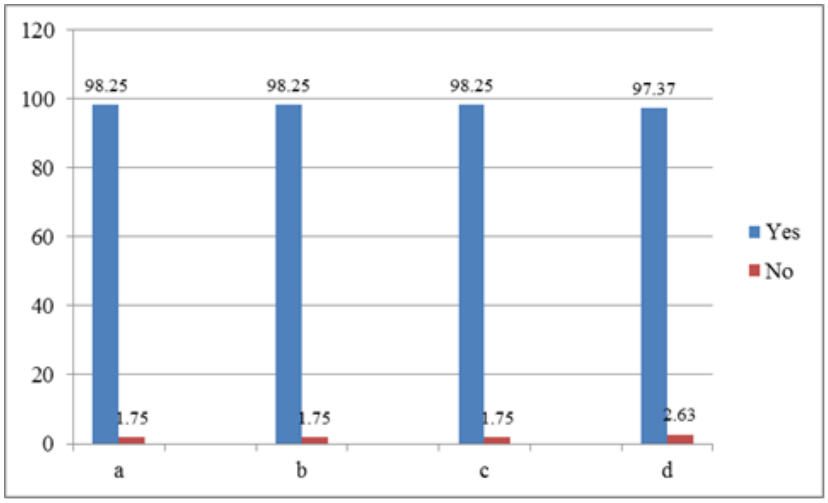

Figure 2. Knowledge of Action Class Research Objectives

b. Knowledge of the Characteristics of Action Class Research

Knowledge of Junior High School teacher in the district of Hulu Sungai Selatan about the characteristics of a class action is presented in Table 3 and Figure 3. Based on Table 3 and Figure 3, approximately 91.23% of the teachers know that action research can be planned by a teacher. 91.23% of the teachers realized that the Action Class Research conducted to resolve learning problems in class. 90.35% teachers know that the results of Action Class Research useful for students and teachers. Based on the results of the percentage of junior high school teachers in Hulu Sungai Selatan understand the characteristics of Action Class Research.

Table 3. Knowledge of the Characteristics of Action Class Research

No	Question	Criteria	Frequency	Percentage (%)
a	Researchers of Action Class Research done by teachers	Yes	104	91.23
		No	10	8.77
b	Action Class Research plan done by teachers (allowing assisted by outsiders)	Yes	98	85.96
		No	16	14.04
c	The appearance of the problem is felt directly by the teachers	Yes	104	91.23
		No	10	8.77
d	The main characteristic of Action Class Research is to repair a recurring	Yes	99	86.84
		No	15	13.16
e	The role of teachers in the Action Class Research as a teacher and researcher	Yes	106	92.98
		No	8	7.02
f	Action Class Research implemented in the classroom	Yes	82	71.93
		No	32	28.07
g	Data collection is done by teachers and assisted by outsiders	Yes	88	77.19
		No	26	22.81
h	Action Class Research results directly utilized by teachers and felt by students	Yes	103	90.35
		No	11	9.65

Source: Primary Data (2015)

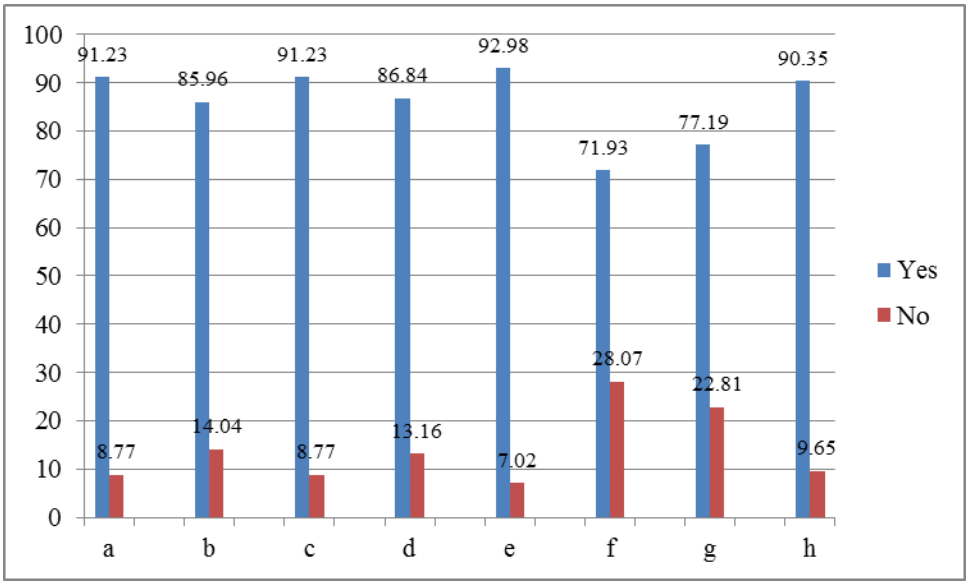

Figure 3. Knowledge of the characteristics of Action Class Research

A. The problem of Action Class Research

a. Implementation of Action Class Research

Implementation of action research class at Junior High School) in the district of Hulu Sungai Selatan is presented in Table 4 and Figure 4 below**.** Based on Table 4 and Figure 4 above of some questions are given to teachers about the implementation of the Action Class Research is only about 34.21% of teachers who carry out action research, while 65.79% of teachers do not carry out action research. 34.21% teachers who have done the research do not find any difficulty in the implementation of Action Class Research.

Table 4. Implementation of Action Class Research

No	Question	Criteria	Frequency	Percentage (%)
a	Implementation of Action Class Research	Yes	39	34.21
		No	75	65.79
b	Difficulty of Action Class Research Implementation	Yes	4	10.26
		No	35	89.74
c	Difficulty to achieve the purpose of Action Class Research	Yes	9	23.08
		No	30	76.92
d	Difficulty to distinguishing the characteristics of Action Class Research with Non- Action Class Research	Yes	1	2.56
		No	38	97.44
e	Constraints of each activity	Yes	26	66.67
		No	13	33.33
f	Students get benefit	Yes	4	10.26
		No	35	89.74
g	Experiencing problems when Action Class Research activities	Yes	9	23.08
		No	30	76.92
h	Difficulty in finding problems	Yes	1	2.56
		No	38	97.44
i	The problem can be solved by Action Class Research	Yes	1	2.56
		No	38	97.44
j	Need to get a guidance	Yes	39	100
		No	0	0
k	Receive a guidance in preparing of Action Class Research	Yes	4	10.26
		No	35	89.74

Source: Primary Data (2015)

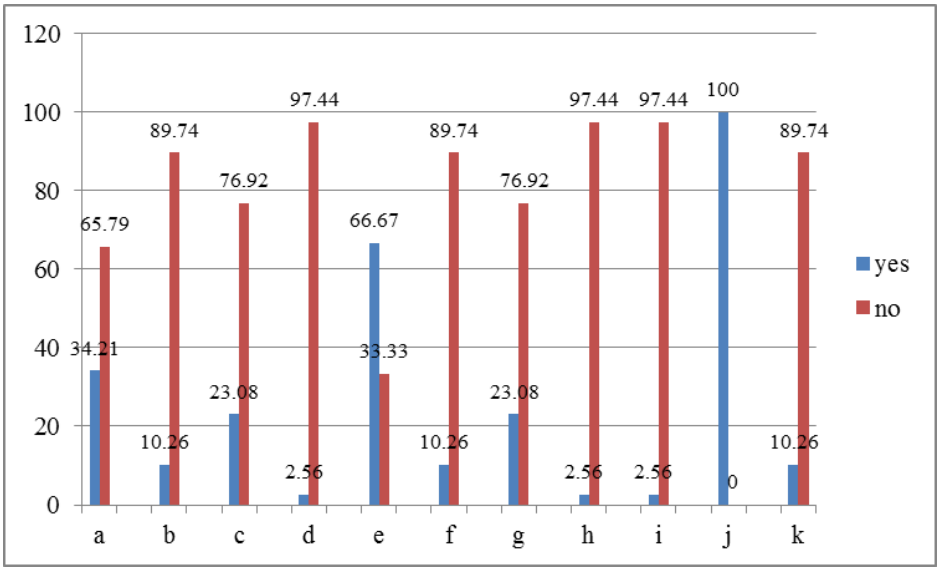

Figure 4. Implementation of Action Class Research

b. Implementation Guidance of Action Class Research

The implementation of Action Class Research in Junior High School in the District of Hulu Sungai Selatan is presented on the Table 5 and Figure 5 below. Based on the Table 5 and Figure 5, Guidance is done in Action Class Research and the highest scientific publications. Guidance of colleagues is 56.41%. Forms of guidance is personalized ie 48.72%. Teachers have received training through training activities to provide assistance to their colleagues. The government's role in teacher training is still lacking in quantity of training and training time.

c. Teacher guidance in implementing the Action Class Research and Publication of Scientific Work

Teacher guidance in implementing Action Class Research and publication of scientific works has been carried out by the Education department Hulu Sungai Selatan. Development activities carried out through training followed by approximately 30 junior high schools in Hulu Sungai Selatan. The activities carried out regularly by the department to improve the quality of teachers in Hulu Sungai Selatan. Some of the obstacles encountered in training activities, especially in the scientific publication is the lack of sustainability at this stage of the publication of scientific papers produced by the teacher.the education department of Hulu Sungai Selatan has not provided facilities and infrastructure to support the publication of scientific publications. Therefore, the role of the university is very important to help teachers in publish of scientific papers.

B. Teacher Development Strategies in implementing the Action Class Research and Publication of Scientific Work

Strategy of teacher guidance in implementing Action Class Research and scientific publications based on SWOT analysis is presented in Table 6.

Table.5 Implementation Guidance of Action Class Research

No	Question	Criteria	Frequency	Percentage (%)
a	Source of the guidance	Head Master	6	15.38
		Colleague	22	56.41
		Supervisor	6	15.38
		Lecturer	5	12.82
		LPMP	0	0.00
b	Form of the guidance	Individual Guidance	19	48.72
		MGMP	11	28.21
		Training	7	17.95
		Seminar	1	2.56
		Others	1	2.56

Source: Primary Data (2015)

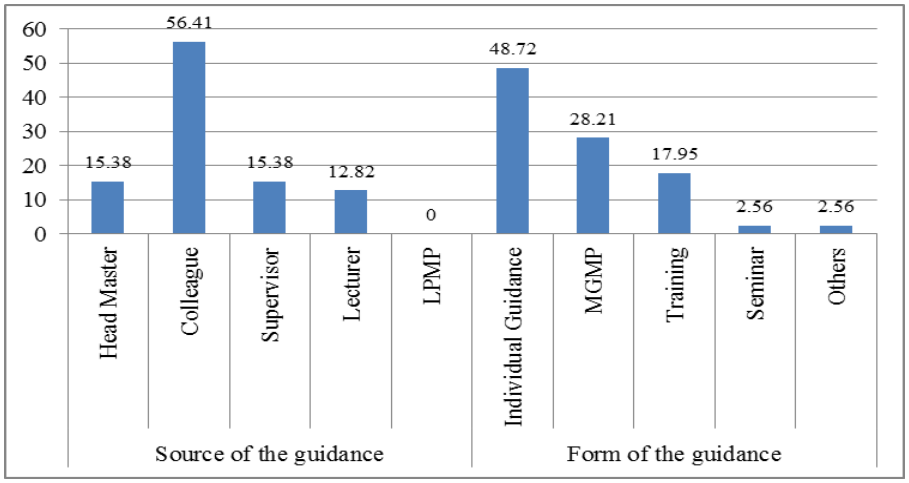

Figure 5. Implementation of Guidance of Action Class Research

Table 6. Strategy Development of Teachers in Implementing of Action Class Research and Scientific Publications

Strength	Weakness	Opportunity	Threat	Strategy
• A good comprehensive of Action Class Research by some teachers • Action Class Research be one way out to overcome the problems of teachers in the classroom • Awareness of the teachers about the importance of writing and publication of scientific works	• There are many teachers who do not carry in Action Class Research • There are many teachers who do not understand about Action Class Research • There are many teachers who do not understand how scientific writing and publishing scientific papers	• Subject Teachers Consultative Network (MGMPs) is strong • Support from Department of Education • Support from the school	• There are many teachers who are less interested in conducting the Action Class Research and scientific publications	• Development of University lecturers • Training from school • colleagues helping who already understand about the Action Class Research • Training Action Class Research and scientific writing through Activities Subject Teachers Council (MGMPs) and seminars.

Source: Data Analysis (2015)

Some of the obstacles encountered in training activities, especially in the scientific publication are the lack of continuity at the stage of publication of scientific papers produced by the teachers. Education department Hulu Sungai Selatan has not provided facilities and infrastructure to support the publication of scientific publications. Therefore, the role of the university is very important to help teachers to publish scientific papers.

4. Discussion

Action Class Research is used to solve the problem in the study process, such as low student grades, and low motivation of study. The result study about action class research indicated that the action class research can increase the student score and student activity [10], [11], [12]. Action class research can increase the student achievement [13]. Action class research may increase the student creativity [14]. Action class research improves the teacher professionalism such as developing of teacher professionalism, and developing of teacher knowledge [15].

Junior High School Teacher in Hulu Sungai Selatan Regency understands the important of action class research and research publication, but most of teacher difficult to do action class research in their classroom and research publication. The guidance from Education Department of Hulu Sungai Selatan is still low activity. Many of teachers didn't get in the teacher training from government.

Teacher problem in action class research and research publication are difficult to create the learning tools, and to write the research report [16]. Teacher in Hulu Sungai Selatan understand about the characteristic of action class research but they cannot implement the action class research in their classroom. The teacher also has the difficult the research report writing, hence the action class research and research report guidance need to give for teacher in form of teacher training to improve the teacher professionalism.

6. Conclusion

Based on the results of research and discussion, it is concluded that there are teachers of Junior High School in Hulu Sungai Selatan who do not understand and have never implemented Action Class Research. The teacher who has implementing the Action Class Research expressed there is no difficulty in its implementation, it is because they never follow Action Class Research training and get personal guidance from colleagues. Teachers Junior High School (SMP) in Hulu Sungai Selatan is still many who do not understand the way of scientific writing and publishing scientific papers.

Guidance teachers in implementing of Action Class Research and scientific publications have been implemented by the Department of Education Hulu Sungai Selatan in the form training the obstacles encountered in the implementation of the Action Class Research training activities and the publication of scientific papers. There are still many schools which are not attending. Strategies in guidance is the involvement of the various parties concerned, such as Department of Education Hulu Sungai Selatan, LPMP of South Kalimantan Province, MGMPs of Hulu Sungai Selatan, and Lambung Mangkurat University

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CONTEXT, INPUT, PROCESS AND PRODUCT EVALUATION OF THE INCLUSIVE EDUCATION PROGRAM IN PUBLIC ELEMENTARY SCHOOL

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Abstract

The purpose of this study is to evaluate the context, the input, the process, and the product of inclusive education program in Elementary Public School 1, Mangunsari, Temanggung, Central Java. This research is descriptive evaluative. The program evaluation model used was: Context, Input, Process, and Product (CIPP) model. Data were collected through interviews, observation and documentation studies. The sources of the data include: headmaster, classroom teacher, subject teacher, and parents of students. The analysis technique used is a qualitative analysis data. The evaluation results in this study show that: (1) the inclusive education program was needed by the stakeholders of the Public Elementary School 1, Mangunsari because they realized the importance of education for children with special needs; (2) the inclusive education program in Public Elementary School 1, Mangunsari was well planned. Human resources and facilities support in schools are sufficient and relatively adequate for the implementation of the program programmed; (3) the process of implementation of the inclusive education program in Public Elementary School 1, Mangunsari was relatively good, but still need improvements; (4) . the products evaluation of the inclusive education program in Public Elementary School 1, Mangunsari show that: a) the objectives of six programs was attained properly, and b) the objectives of two program was not achieved. The recommendation proposed is that The District Education Office should facilitate the appointment of Special Guidance Teacher.

Keywords : Program Evaluation, CIPP, Inclusive Education Program, Elementary Public School

1. Introduction

In response to *The Salamanca Statement and Framework for Action on Special Needs Education* which stipulates the obligation for schools to accommodate all children, including children who have physical, intellectual, social, emotional, linguistic or other disabilities. Government of Indonesia ensures the rights of children with disabilities to learn in inclusive education by *Law No. 20 of 2003* on "National Education System", *Article 5, paragraph 1 to 4*. Subsequently, the *Regulation of the Minister of National Education of Indonesia Number 70 of 2009 Article 1* states that the inclusive education program is an education system that provides opportunities for all learners with disabilities, yet with full of potential intelligence and/or special talent, to participate in learning in an educational environment together with other learners in general.

The main goal of inclusive education is to educate children with physical, mental, and social disabilities in regular classes together with non-disabled students but with additional support that they need. Previously, children with special needs mainly receive education from a special school, segregated from regular schools. However, it is important for school nowadays to make every effort to provide inclusion of children with disabilities. (Friend, 2006). Ideally, all schools in Indonesia from elementary to high school level accept children with special needs in regular schools but with special treatment. These students could follow regular classes, but on the other hand they also have to follow special programs according to their needs and capacity. The curriculum used is the regular curriculum, but with implementation tailored to the students' ability.

In Temanggung, implementation of inclusive education program has been carried out since 2010. One of the inclusive schools in Temanggung is Mangunsari 1 Elementary Public School, Ngadiredjo, Temanggung, which was designated as an inclusive school in Temanggung by the Decree of the Head of the Department of Education Temanggung No: 120 /Kh8 /2015 on 24 February 2015. The number of pupils in this school is 126 students in 2014/2015 academic year, but there is at least one child with special educational needs in five class. According to the school's psychological test report, almost all the special need students in this school have a level of intelligence (IQ) below average. There are 5 (five) slow learner students, one *tuna laras* student and one ADHD student.

Based on the preliminary observations, there are fundamental issues in the implementation of inclusive education in SD Mangunsari 1. The first issue is that SD Mangunsari 1 has never held a thorough evaluation of the inclusive education programs they have run for five years. Evaluation of the current run is still focused on the results of teaching and student learning activities, but not exhaustive on the context, input, process and product of the program. There are various underlying reasons for not having run a thorough evaluation of inclusive education programs, one of which is the unavailability of time and instrument evaluation to see the development of the school. The second issue lies on the discrepancy of the school's capability to maximize its resources to achieve the predetermined goal of inclusive education. The main doubt is on the management of the inclusive program school itself--not so much on the ability of the learners.

An evaluation was conducted to evaluate the context, input, proses, and product of inclusive education in SDN Mangunsari 1. Researcher applied the evaluation model developed by Stufflebeam called the CIPP Model. First,the context evaluation of the program. Evaluation at this stage is conducted to answer the questions is the inclusive education program needed by SD Mangunsari 1 stakeholders? . Second, the input evaluation. Evaluation at this stage is conducted to determine whether the program is compatible with the needs, and wether human resources and facilities support in schools are sufficient and relatively adequate for the implementation of the program programmed. Third, namely the evaluation of the process of program implementation. Evaluation at this stage is the relationship between the resources, tools and equipment to process activities. Fourth, the product phase is evaluation of the result of the program. Evaluation at this stage is conducted to determine whether the product that was planned to be achieved is really achieved.

2. Method

This study is an evaluative research. The model of evaluation used is Context, Input, Process and Product Program Evaluation Model. The program to be evaluated is the inclusive education program in SD Mangunsari 1, Temanggung. The source of data used in this study was obtained from the internal data of SD Mangunsari 1, the school where the study was conducted. There are two kinds of data: primary and secondary data. The primary data in this research is directly obtained by interviewing principal, teachers, parents, and the students themselves regarding the purpose of inclusive education, the planning and implementation of learning in education programs in school. Meanwhile, the secondary data includes Reports on Psychological Tests in the elementary school, a written report by the school's principal regarding inclusive education program in SD N Mangunsari 1, as well as the school's own records on the number of admissions, the schoolteacher's status, and the school achievements. Data collection techniques used to evaluate the inclusive education program in SD N Mangunsari 1 are document analysis, interviews, and observations.

3. Results

3.1 Context evaluation of the program

The context of inclusive educational program in SDN Mangunsari 1 was that it is a national inclusive educational program stipulated in Indonesian Minister of Education's Regulation No. 70, 2009 about Inclusive Education for Students with Disabilities and Special Intelligence and Aptitude. Paragraph 4 article (1) of this regulation stated that *"District government assigns at least one primary school and one middle school in each subdistrict and one high school institution to conduct inclusive education which must allow the intended students in Paragraph 3 article (1) to study"*

In the operational level of Temanggung district, Education Department had assigned all schools to survey children with special needs who study there. The survey showed that in Ngadirejo subdistrict, SDN Mangunsari 1 is in the third place of children with special needs ranking, with 16 special students studying there.

Based on that finding, SDN 1 Mangunsari was assigned by the government to be one of inclusive educational institutions in Ngadirejo, Temanggung district. Despite teachers' initial insecurities due to their lack of competence and inadequacy of school's supporting facilities to conduct inclusive education, the program was run anyway. In this case, seen from contextual perspective, national and regional regulation as well as the school's commitment created a need of conducting inclusive education in SDN Mangunsari 1.

The inclusive education held in SDN Mangunsari 1 is a typical top-down program where schools are trying to translate national regulation into local context. Therefore, the need of this inclusive program was at first an external demand though later is combined with the schools' internal needs. The fact that there were one students with special needs and 15 students who belong to "dull" category became a stepping stone for the school to see an opportunity to conduct inclusive education and therefore this program became a needed program in the school by the stakeholders.

3.2 Input evaluation of the program

In response to the above explained need, there were several inclusive education activities in SDN Mangunsari 1 which are: a) socialization of inclusive education to the society, b) Special Education Teachers nomination, c) improvement of teachers and the headmaster's competence, d) students' disabilities identification, e) curriculum modification, f) supplying inclusive education facilities, g) inclusive learning, and h) disabled-students' talent/interests development.

The aim of socialization of inclusive education to the parents, both whose kids are normal and disabled, is to gain education primary stakeholders' awareness of what, why and how inclusive education is. This activity is critically strategic because it is the first key of inclusive education success. As what Suyanto and Mudjito (2012) asserted, connecting with families is really important for inclusive education institution because it could promote mutual understanding of students' detailed information and background. Society has to equally treat students with special needs since equal treatment plays an important role to promote self-independence in children with special needs. It will also support inclusive education plan since those children will contribute to the society at the end of the day.

Special Education Teacher (SET) nomination is also intended to fulfil the standard service of an inclusive education institution for the sake of the disabled-students. Normatively, SET plays a strategic role in inclusive education. SETs are responsible to (a) design and carry out specialized program, (b) identify, assess and design an individual learning program, (c) modify learning materials, (d) evaluate the program with class teachers, and report the program and the disabled-students improvements (Indriawati, 2013).

The improvement of teachers and headmaster's competence is planned to be carried out by the third party (Education Department and LPMP) since the beginning of the program. This plan is a determining factor of the following inclusive education success since all teachers were regular educational manager at the first place. Teachers are SETs' partners in doing inclusive teaching while the headmaster is a manager responsible for the inclusive program.

Students' disabilities identification is planned to be carry out in the beginning of each academic year in order to accurately identify the students' disabilities. This identification could be used to screen, classify, referral, plan and review the learning process and the students' improvement. Ideally, this activity should be done by SETs. However, when the school does not have any SET, the school could hire a psychologist or conduct the identification done by the existing teachers in the beginning of an academic year.

Curriculum modification is intended to adjust the regular curriculum to the students with special needs in each class. Based on the students' disabilities identification, class teachers along with SETs would ideally a) design and implement the specialized program, b) compose individual learning program, c) modify materials according to disabled-students' special needs. In the school under study, this activity was planned to be carried out at the beginning of an academic year involving SETs, all teachers, class teachers, the headmaster and school committee.

Facilities which are planned are for inclusive learning in regular class, supporting media for disabled-students and development of talents or interests of disabled-students. Facility provision is definitely based on the disability identification of each students with special needs studying in the school.

Inclusive learning is designed based on the disabled-students' needs in each school, the availability of SETs, class-teachers' competence, and the availability of inclusive learning facilities. According to Directorate of Special School Development (2007), there are several models to place disabled-students in an inclusive school in Indonesia, which are: a) regular class

(full inclusion), b) regular class with cluster, c) regular class with pull out, d) regular class with cluster and pull out, e) a special class with integrations, and f) full special class.

Disabled-students' talent/interests development is intended to provide a specialized program in a form of non-academic activities with an aim to explore the students' non-academic potentials. All of those above explained activities were fully funded by Central Java Government (Regional Budget Allocation I), both in the form of inclusive education grant or scholarship for students with special needs.

3.3 Process evaluation of the program

The process of the activities mentioned above is illustrated below:

a) Socialization of inclusive education

This activity was conducted in 2010 and 2013. The result of the socialization was a Memorandum of Understanding (MoU) between disabled-students' parents and the school about their children's education. The MoU states consensus that a) the children of those parents are under the category of children with special needs (based on IQ test results, b) their children need a special treatment, c) those children need special attention both by teachers and their parents at home, d) those children cannot participate in National Examination, obtain a graduation certificate from the government, but only obtain a letter of passing the school from the school.

b) Special Education Teacher (SET) nomination

Until the fifth year of inclusive education implementation in SD Mangunsari 1, there is no SET nomination conducted. The school cooperates with Temanggung Special School instead to occasionally have SET from that institution. This activity is funded by the budget allocation or scholarship for those students with special needs. The unavailabitlity of SET has impacted on how students' disabilities identification is carried out, curriculum modification, inclusive education model is chosen, and disabled-students' talent/interests development.

c) Improvement of teachers and headmasters' competence

The techers and headmaster of SD Mangunsari 1 have been in turn joining several inclusive education workshops since the school was appointed as one of inclusive schools.the workshops were conducted in Central Java Vocatioanal Education Training Office, Central Java Education Quality Assurance Institution (LPMP) and SMPN 4 Temanggung. In average, all teachers have at least joined the workshops three times. In addition, the teachers and headmaster also did a comparative study to SD Baledono, Boyolali. All those activities were granted by grant from provincial government.

d) Students' disabilities identification

Students' disabilities identification showed these following progress: Before the school was appointed as an inclusive school, the identification was under the criteria of "students' disabilities" and/or "students' achievement towards minimum passing grades" or "not capable students in their classroom". With these criteria which were too broad, 16 students with special needs were identified in 2010/2011 academic year, 10 students in 2011/2012 and 2012/2013 academic year. In the following years, the identification was carried out in a more scientific way by cooperating with Mental Hospital Magelang. Under this method, there were 6 students found to have special needs in 2013/2014 academic year, and 7 students in 2014/2015. With a more accurate identification, the school could design a special treatment for those students in terms of teaching and learning process and its monitoring.

e) Curriculum modification

Curriculum modification is intended to adjust the existing curriculuk (KTSP) with the needs of those special students. The aim is to accommodate disabled-students' needs so that they could have a treatment based on their potentials. The modification is done in terms of learning goal, material, media, process and evaluation. The modification is carried out in the beginning of an academic year. Before undergoing the modification, meetings of curriculum team were held. This activity is funded by Regional Budget Allocation I, and the team consists of headmaster, class teachers, subject teachers, and school committee.

f) Facilities provision

Facilities provision for this inclusive education was done in two periods, 2010 and 2013, funded by Regional Budget Allocation I grant. In the first period, the facilities which were supplied were computers, laptops, DVD, CD, inclusive education visual aids, whiteboards, bookshelves, and reading books for students

with special needs as well as wheelchairs to support disabled-students activities. In 2013, the facilities supplied were a keyboard and a set of marching band instruments.

g) Inclusive learning

The unavailability of SET makes the school choose pullout model where the disabled-students learn in a regular class with other normal students. Then, when the class dismisses, those disabled students would stay in the class to have a special guidance from their teachers. Occasionaly, the teaching and learning process was also facilitated by teachers from Temanggung Special School.

h) Disabled-students' talents/interests development

The unavailability of SET also has an impact on Disabled-students' talents/interests development program. The school chose to be granted a keyboard, sound system and a set of marching band instruments. However, those instruments ended up being useless because the student who has a talent to sing moved to another city. While extracurricular activities for ADHD students since the student did not want to come to the activity. Teachers have difficulties to coordinate students with special needs who are hyperactive and hard to control.

Table 1.Inclusive Education Product in SDN N Mangunsari 1

No	Activity	Realization	Involved parties	Results
1	Socialization	2010 & 2014	Headmaster, teachers and students' parents	5 agreements between the school and parents in 2014
2	Improvement of teachers and headmasters' competence	2010-2015	Headmaster and teachers	The headmaster and 7 teachers obtained 2-3 certificates of inclusive education management
3	Curriculum modification	At the beginning of each academic year	Headmaster and teachers	Lesson plans of all classes were modified at the beginning of each academic year
4	Facilities provision	2010 and 2013	Headmaster and teachers	Supply of inclusive education facilities
5	Special Education Teachers nomination	2010 and 2013	Headmaster	Has not done yet. SET from Temanggung Special School visited two times
6	Inclusive teaching	All academic year	Class teachers and SET	Regular inclusive learning plus pullout model
7	Students' disabilities identification	2014	Headmaster and a psychologist from Mental Hospital Magelang	In 2014/2015, 7 students were identified (1 ADHD, 1 double-disabled, and 5 slow learners)
8	Disabled-students' talents/interests development	-	Sport teacher	Not done

Source: Analized research data

3.4 Product Evaluation of the program

With program implemtation process explained above, the product of inclusive education conducted bt SDN Mangunsari 1 could be summed up in the table below:

4. Discussion

From the above elaborated data, it is shown that from the contextual perspective, inclusive education program is needed by the school's stakeholders. From input perspective, the existing program has fulfilled the school's needs according to inclusive education implementation regulation with sufficient human resources, facilities and budgeting. From the process perspective, school's failure of not nominating any SET has impacted on inclusive education implementation either in students' disabilities identification, curriculum modification, inclusive education implementation, or special program implementation for students with special needs. From the the product perspective, the goals of six activities (socialization, improvement of teachers and headmasters' competence, students' disabilities identification, curriculum modification, facilities supply, and inclusive learning) were achieved. While two other programs which are SET nomination and disabled-students' talents/interests development were not achieved.

The fact that the inclusive education did not run well in the research site due to unavailability of SET is an example of implementation gap. According to Centre for International Private Enterpise & Global Integrity (CIPE-GI, 2012) "*implementation gap is the difference between laws on the books and how they are carried out in practice*". Studies on public policy, including public policy in educational field, has shown that there are always gap between what is stated in the policy and its real practice on the ground. (Rosli & Rossi, 2014; Effiong, 2013; Iqbal Ahmad et.all, 2012; Center for International Private Enterprise and Global Integrity, 2012; .Makinde, 2008; Okorama, 2006; Lam, 2005; Collins, 2005; O'donoghue & Vidovich, 2004**;** Taylor, 2004; Morris & Scott, 2003; Morris, 2002; Meadmore, 2001). This occurrence cannot be separated from the fact that, in one hand, a public policy is in nature a compromise of several parties behind the policy itself while in other hands this policy is always accepted and understood from different perspectives and agenda, and being carried out or not according to the responsible parties' capacity. Similarly, this occurrence also happens in an inclusive education implementation policy (Centre for Educational Research and Consulting, 2013; Haryono, et.all, 2015; Prita Indriawati, 2013 Bagaskorowati & Abdurrahman, 2013: Sunardi et.all, 2011).

According to CIPE-GI (2012) the reasons for why the implementation gap happens vary. The ultimate cause for implementation gap is a sum of several common underlying factors in political, economic, and social and cultural spheres. Political factors includes: state bureaucracy, legitimacy of the laws, quality of the laws, and divergent political agendas. Economics factors includes: resources to implementation the laws, barriers to economic activity, and vested interests. Social and cultural factors includes: influence of local elites, social structures, cultural legacy, and institution and incentives matter. The main obstacle in inclusive education implementation in SD Mangunsari was that inavailability of SET. This is because Education Depeartment of Temanggung's has not yet been willing to nominate any SET for inclusive education institution. Its unwillingness is assumed to have a strong correlation with lack of educational bureaucracy commitment in the district in supporting the implementation of inclusive education. There were two indicators which strengthened this assumption: a) Education Department had just issued a decree about Inclusive Education Institution after thi program has run for 5 years, and b) instead of supporting the implementation of inclusive education, Education Department set up Special School. The unavailability of SET caused normative processes in the implementation of inclusive education did not run optimally. The activity of designing a specialized program, identification process, assessment and composition of individual learning program, material modification, learning program evaluation and learning program report as well as improvement of disabled-students have not yet implemented according to the existing standards.

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EMPLOYEE ENGAGEMENT: DRIVING THE EMPLOYEES' ORGANIZATIONAL QUALITY OF LIFE

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Abstract

Employee engagement of key employees is critical in the long-term health and success of any organization. It leads to commitment and psychological attachment and reflects in the form of high retention of employees. The level of engagement in employees can be enhanced by identifying its drivers and work on them. The study conducted on 100 entry level employees and 50 supervisory level employees from the Business Process Outsource Industry in the Philippines and to determine the predictors of engagement outcomes founded on the Aon Hewitt Engagement Model.

More specifically, the paper aims to study what among the engagement drivers makes them fully engaged with their company. By using the multiple regression analysis, it was found that, company practices, opportunities, work and total rewards are the Engagement Drivers that would lead for the employees of the Business Process Outsource industry to be fully engaged with their company. The study proposed a modified model of Engagement Drivers.

Keywords: Aon Hewitt's model, employee engagement, engagement drivers, engagement outcomes

1. Introduction

There are many elements influencing employee engagement that span beyond the economic and geographic conditions surrounding the individual employee. Understanding the differences that exist by segments such as job level, job function and generation allows organizations to identify critical gaps where they may need to invest their resources differently or target them to a specific group of people. Engagement is repeatedly seen as a leading indicator of business performance.

Increasing employee engagement is difficult without having an understanding of just what fosters the relationship between a person and their place of work. Countless studies over the years have outlined some key workplace factors that, if mastered, can effectively drive the engagement, satisfaction and ultimately the retention of employees. The latest research effort is from consulting firm Aon Hewitt whose new '2014 Trends in Global Employee Engagement' survey explores some of the main prerequisites to employee engagement – and the positive outcomes successful businesses can expect. Based on his study all the engagement drivers are the factors for an employee to obtain their engagement outcomes and be fully engaged with their company.

Thus, the purpose of this study is to determine the predictors of engagement outcomes based on Aon Hewitt's [1] Engagement Model (Fig. 1) to the employees of the BPO Industry in Baguio City, Philippines. More specifically, the following research question guided this study: Which of the employee drivers are the significant predictors of employee outcomes? While most studies exploring relationship between employee drivers and employee outcomes have examined employees in a single or handful occupations, few have explored this relationship in the Business Process Outsource industry thus increasing literature in the service industry.

Aon Hewitt's Engagement Model has been tested, refined, and validated over 15 years of research on millions of employees across a wide variety of companies and industries throughout Asia Pacific, Europe, Latin America and North America. Together with this model, it defines engagement through three attributes that include the extent to which employees: Say—speak positively about the organization to co-workers, potential employees and customers, Stay—have an intense sense of belonging and desire to be a part of the organization and Strive—are motivated and exert effort toward success in their job and for the company. Hewitt believes employees need all three of these elements to be

fully engaged. For example, it is difficult to say employees are fully engaged if they strive to go above and beyond but do not really wish to stay with the organization—or worse, if employees want to stay with an organization but make no effort to go above and beyond. The behaviours engaged employees demonstrate lead to positive outcomes in key business drivers like customer satisfaction, operational efficiency and revenue growth. By identifying these drivers, employers can understand how to meet the needs of their employees and focus on the specific areas of improvement that have the largest impact on engagement and business results.

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Figure 1. Aon Hewitt's Engagement Model

Employee Engagement Drivers

In the Institute of Employment Studies [2] employee engagement is defined as positive attitude held by the employee towards the organization and its values. An engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organization must work to develop and nurture engagement, which requires a two-way relationship between employer and employee. According to their research, committed employees perform better. If we accept that engagement, as many believe, is 'one step up' from commitment, it is clearly in the organisation's interests to understand the drivers of engagement. In the study, many aspects of working life are strongly correlated with engagement levels. However, the strongest driver of all is a sense of feeling valued and involved. This has several key components: involvement in decision making, the extent to which employees feel able to voice their ideas, and managers listen to these views, and value employees' contributions, the opportunities employees have to develop their jobs and the extent to which the organisation is concerned for employees' health and wellbeing.

Quality of Life

Based on Aon Hewitt's engagement model, quality of life includes job security, safety and work/life balance. Basically job security, according to the business dictionary, is the assurance (or lack of it) that an employee has about the continuity of gainful employment for him or her work life. Employers value dedication and loyalty. Committed employees perform better at work, are absent less frequently, and are less likely to quit their job. Employees, meanwhile, also want the organisation to value them. When employees feel their contribution is valued, that the organisation cares about their wellbeing and is ready to offer help when needed. This would result for more employees to work harder and remain loyal. Focusing on an employee as an individual, the organization should establish, put into practice, maintain, and continuously improve actions, processes, and working environment to support an individual's behaviors and actions to maintain and discipline in life, aware of austerity by properly managing revenue and expenses, adhere to self-learning to gain well-round knowledge both for personal life and work benefits, have continuously step by step self-improvement, be able to making an appropriate decision according to principle of cause and effect and self-understanding, adhere to the principle of prudence, patience and perseverance, honesty and integrity, ready to respond to incoming changes and maintain good work-life balance [3]. One way that leaders can ensure employees are engaged is to ensure that they are thinking, "I belong here." An employee who feels as though she is part of her workplace's community and has an emotional connection to her organization will be more engaged at work. Ways to ensure that everyone on the team feels a sense of belonging include not holding meetings from which certain staffers are routinely excluded, and regularly soliciting ideas from everyone on the team, not just the select few "stars" [4].

Work

This involves the sense of accomplishment and work tasks. Psychologist David McClelland [5] studied workplace motivation extensively and theorized that workers as well as their superiors have needs that influence their performance at work. For example, employees who are Achievement-Motivated thrive very well in corporations where they receive regular performance evaluations. They feel energized and satisfied with their jobs because goals are set, they are given positive or negative feedback on

past behaviors and given some type of rewards if they performed well. According to Penna research report [6] meaning at work has the potential to be valuable way of bringing employers and employees closer together to the benefit of both where employees experience a sense of community, the space to be themselves and the opportunity to make a contribution, they find meaning. Employees want to work on the organizations in which they find meaning at work.

Company Practices

This involves communication, performance management and innovation. Employee engagement surfaces in every aspect of an organization--in its productivity, culture, brand--but the quest for deeper engagement is especially evident in a firm's talent management practices [7]. Organizations who have effectively developed a clear core vision or purpose—and who communicate it to their employees, customers and partners—are more likely to experience higher levels of success. Alignment within the organization is better achieved when key processes and steps are well-defined and documented, and when there is a clear understanding of how value is delivered to the customer [8]. Focusing on the organization, the organization should establish, put into practice, maintain, and continuously improve actions and processes to create a sustainable organization. This should be based on its core competencies and promote ethics as its culture, maintain ethical practices and good governance and consider long-term impacts, promote a learning organization, and encourage activities to harmonize employees within the organization and among the organization.

People

This includes senior leadership and supervision. Effective high-performance leaders engage by creating a specific line-of-sight that tells employees where we are going, how we will get there, and the expectations in doing so. The best leaders recognize that they must be engaged to get employees engaged. They also appreciate that such starts with understanding yourself, and working out ways to use your strengths to drive employee alignment and engagement. The degree of success is increased when there is a balance between contribution (value-added performance) and satisfaction (sense of self-worth and value). The connection between the organization's strategic alignment, the leader's capacity to be strategic, and the level of employee engagement are easy to understand, challenging to implement, yet undeniable in results and impact [9]. When they communicate frequently and honestly, clearly charting the course for the organisation and letting employees know what is required of them to help make the business successful, employee engagement increases. And when leaders actively endorse initiatives that drive engagement, the effect is multiplied [10].

Total Rewards

This includes brand/reputation, pay, benefits and recognition. Compensation is comprised of a variety of things, generally including base salary, variable pay components, and benefits. Employees have different kinds of needs. Some want money so they work for the company which gives them higher pay. The greatest impact of money on productivity and performance is in jobs where performance is directly related to compensation. For example, the knowledge of receiving a bonus after achieving a certain sales quota will likely motivate a salesperson to increase productivity. Other ways to retain employees is through regular promotions, which not only provide an employee with a higher base salary, but also the ability to take on more responsibility in the workplace. A business can achieve its objectives more easily if it has a good reputation among its stakeholders, especially key stakeholders such as its largest customers, opinion leaders in the business community, suppliers and current and potential employees. [11].

Opportunities

This includes career opportunities and learning/developments. We all know that work is about so much more than just pay check. Most people crave the opportunity to be challenged and to prove themselves. Career advancement possibilities within an organization can act as a motivational tool, a form of recognition, and the 'light at the end of the tunnel'. This means that no matter how motivated and engaged employees are, that's likely to dissipate if they can't see a glimmer of what all of their hard work will lead to [12]. Penna [13] researchers come up with a new model they called "Hierarchy of engagement" which resembles Maslow's need hierarchy model. Once an employee satisfied these needs, then the employee looks to development opportunities, the possibility for promotion and then leadership style will be introduced to the mix in the model. Finally, when all the above cited lower level aspirations have been satisfied the employee looks to an alignment of value-meaning, which is displayed by a true sense of connection, a common purpose and a shared sense of meaning at work. The Blessing White [14] study has found that almost

two third's (60%) of the surveyed employees want more opportunities to grow forward to remain satisfied in their jobs.

Engagement Outcomes

Employees are a critical component to every organization, and their engagement serves as a barometer of organizational health. By examining employee engagement, employers can create an engagement strategy to address employee motivation, behaviour, productivity and subsequent business results. Organizations that invest in understanding and managing the key drivers of engagement across their multiple constituencies will drive performance in efficient, effective ways.

Achieving high levels of employee engagement is an important goal for many organisations. Even in this age of increasing automation, digitalisation and other technologies, most companies are recognising that it is people that are really at the heart of what they do. Increasing employee engagement is impossible, however, without having an understanding of just what it is that fosters the relationship between a person and their place of work.

According to Aon Hewitt, there are three dimensions through which organisations can measure the strength of their employee engagement – which the consulting firm defines as "the psychological state and behavioural outcomes that lead to better performance". These dimensions are labelled by Aon Hewitt simply as Say, Stay and Strive. Say refers to the tendency for a company's employees to "speak positively about the organisation to co-workers, potential employees and customers", while Stay – as the name suggests – indicates whether workers "have an intense sense of belonging and desire to be a part of the organisation". Lastly, Aon Hewitt explains that highly engaged employees demonstrate a strong desire to Strive – and "are motivated and exert effort toward success in one's job and for the company". Aon Hewitt points out that measure for these three dimensions were either stable or increasing around the world between 2012 and 2013. Overall scores increased for Say (2 per cent) and Strive (1 per cent), to reach 67 per cent and 58 per cent respectively. Stay remained stable at 56 per cent.

Conceptual Framework and Research Hypotheses

The interrelationship between the independent variables and dependent variables were tested on how these six (6) independent constructs affect the three (3) dependent constructs. To illustrate, the study tries to figure how quality of life aligns to work and so on. In short, the proposed framework below suggest how all the employee drivers can be linked together in reaching a conclusion of becoming factors of an employee to say, stay or strive for the company. With this, the following hypotheses were formulated:

H_1: There is a positive relationship between the engagement drivers and engagement outcomes.

H_2: Engagement drivers significantly influence the engagement outcomes.

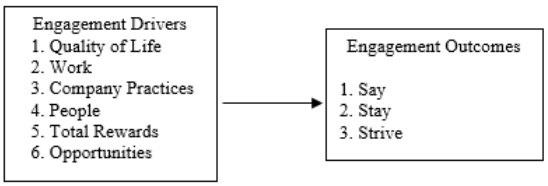

Figure 2. Research Framework

2. Methodology

Quantitative data was collected using the non-probability self-administered questionnaires that consist of questions with 5-point Likert scales distributed to our samples of individuals. The questionnaires are divided into two parts: Part 1 considers the employee drivers which was based on the Employee Opinion Survey [16]. This survey can be used to solicit employee opinions on a variety of issues such as the company's success in communicating its mission to employees, or local issues such as quality of the working environment. The survey often contain a series of multiple choice items grouped along one or more dimensions of the organization. The results of this type of feedback process provide an understanding how the employee perceives the organization along different dimensions.

On the other hand, Part II considers the employee outcomes. It is based on Employment Engagement Survey that was done by Acas [17] which made use of the "Say, Stay, Strive" framework to measure engagement. Acas used this survey to find out directly from employees how they feel about the organization, what issues are important to them and what they want the management to focus on to improve.

In analysing the data collected, Statistical Package for Social Sciences (SPSS) has been

employed. This section also introduced the sampling techniques used in order to collect information from target population using questionnaire in scale rating manner to be implemented into the SPSS program to process the reliability test and subsequent empirical analysis.

Survey is the primary data collection in which data is gathered by communicating with 150 employees (100 entry level positions; 50 supervisory positions) in Baguio City. The limitation of this study is with the entry level and supervisory level call center employees of as the respondents to whom the questionnaires are floated. The consideration of these respondents is that these companies have the highest percent of attrition. The study did not include any primary factors like age, gender or how many years the employees are working for the company because the study aimed to determine the opinions of employees on the engagement drivers basing only with their position in the company.

In order to test the relationship between variables, Pearson correlation analysis is performed to determine the associations between variables and test the hypotheses. Finally, in order to test the Aon Hewitt's Engagement Model, Multiple Regression were used to analyze the effect of the engagement drivers to the employee outcomes.

3. Results

The study focused on the relationship between the employee engagement drivers and engagement outcomes. Table 1 shows the correlation among all the engagement drivers and engagement outcomes. Based on the results, company practices (r=.757) and opportunities (r=.756) have the highest level of correlation with the engagement outcome say. This means that employees' feeling of involvement with the changes in the company or the trainings they attain from their company is significant for them to say good things about their company. While company practices (r=.715) is the highest correlation with the engagement outcome stay that shows employees find their feeling of involvement with the changes in the company significant for them to stay and belong in their company. With the engagement outcome strive, work (r=.728) and company practices (r=.738) are the engagement drivers that has the highest level of correlation.

Table 1. Inter-correlation

	Say	Stay	Strive	Employee Outcome
Quality of Life	.624**	.577**	.602**	.663**
Work	.699**	.646**	.728**	.766**
Company Practices	.757**	.715**	.738**	.815**
People	.711**	.634**	.700**	.754**
Total Rewards	.663**	.630**	.681**	.726**
Opportunities	.756**	.692**	.668**	.782**

***. Correlation is significant at the 0.01 level (2-tailed).*

Employees feeling challenged and contented with their job together with the feeling of involvement in the changes of their company is significant for them to exert their effort for their company. Overall, company practices (r=.815) has the highest level of correlation. This means that the feeling of involvement of employees in the changes in their company is the most significant factor for them to be fully engage in their company.

Significant Predictors of Engagement Outcomes

Table 2 shows the result of the multiple regression analysis performed indicating the engagement drivers that are significant predictors of the engagement outcome "say". Company practices, opportunities, and people are the engagement drivers that are significant predictors or indicators of the employee outcome "say". This is indicated by the computed p-value for each of these indicators where these values turned out to be lesser than 0.05 significance level. The regression model turned out to be a significant model as indicated the F-test performed giving out a p-value of .001.

Table 2. Multiple regression analysis for engagement outcome "Say"

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.054	.226		4.664	.000
	Company Practices	.819	.058	.757	14.086	.000
2	(Constant)	.708	.218		3.242	.001
	Company Practices	.462	.086	.427	5.351	.000

	Opportunities	.442	.084	.420	5.263	.000
3	(Constant)	.558	.224		2.490	.014
	Company Practices	.343	.099	.317	3.467	.001
	Opportunities	.384	.086	.365	4.452	.000
	People	.210	.090	.193	2.336	.021

Dependent Variable: Employee Outcome (Say); Adjusted R^2 = 0.646; P – value = .001

The results in table 2 show that company practices, people and opportunities make the employees brag and say something good about their company. Most people have relatively fragile self-esteem. If managers do not believe their employees can do something, they won't believe they can either, and they won't do it. This is shown in the predictors of the employee driver People. Most of the respondents answered that they are satisfied with their managers' behaviour. Aside from that, they are also satisfied when it comes to their company practices like making them be involved in the changes within the organization and opportunities like giving them training that would enhance their skills, make them feel that they are doing something meaningful. The respondents also feel the essence of teamwork. Managers encouraging their employees to work as a team rather than a collection of individuals to complete these projects is motivating.

Table 3. Multiple regression analysis for engagement outcome "Stay"

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.353	.284		1.246	.215
	Company Practices	.912	.073	.717	12.516	.000
2	(Constant)	.026	.285		.090	.928
	Company Practices	.576	.113	.452	5.110	.000
	Opportunities	.417	.109	.337	3.810	.000

Dependent Variable: Employee Outcome (Stay); Adjusted R^2 = 0.558; P – value = $8.88x10^{-27}$

Table 3 shows that Company Practices and Opportunities are the engagement drivers that turned out to be significant predictors or indicators of the engagement outcome "Stay". The model is significant as indicated by a p-value of $8.88x10^{-27}$ from the F-test performed.

The results show that doing something meaningful is more important than money or recognition to the employees for them to stay and to feel they belong in their company. Most of the respondents said that company practices and opportunities was the most motivating thing about their work. Establishing company's vision and goals- particularly involving the employees in creating them- makes them to achieve these objectives and help them feel that they are doing something meaningful.

Table 4. Multiple regression analysis for engagement outcome "Strive"

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.222	.281		.790	.431
	Company Practices	.962	.072	.738	13.321	.000
2	(Constant)	-.226	.286		-.789	.431
	Company Practices	.570	.115	.438	4.964	.000
	Work	.499	.117	.374	4.248	.000
3	(Constant)	-.300	.280		-1.074	.285
	Company Practices	.405	.125	.311	3.233	.002
	Work	.420	.118	.315	3.570	.000
	Total Rewards	.262	.089	.234	2.951	.004

Dependent Variable: Employee Outcome (Strive); Adjusted R^2 = 0.618; P – value = $2.47x10^{-3}$

The significant engagement drivers which are predictors of the engagement outcome "Strive" are Company Practices, Work, and Total Rewards.

The results show that company practices, work and total rewards makes employees want to exert their effort for their company. The respondents are satisfied when it comes to the recognition that is given to them by their company. For them, recognition is an amazing motivator. Most successful managers provided their employees with frequent and effective recognition [15]. Another predictor of total rewards is that employees are satisfied with the company's image that shows quality. Respondents can see that their company are

encouraging innovation. For example, the employees who are interfacing with customers or who are solving their problems in a daily basis shows this quality. They are also satisfied with their company practices and work. For them, their company focuses on fixing the problem rather than finding someone to blame. They find ways to improve and avoid mistakes to happen in the future.

Table 5. Multiple regression analysis for engagement outcome "Overall"

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.581	.200		2.905	.004
	Company Practices	.895	.051	.819	17.393	.000
2	(Constant)	.281	.194		1.448	.150
	Company Practices	.586	.077	.536	7.634	.000
	Opportunities	.383	.075	.361	5.133	.000
3	(Constant)	.080	.196		.409	.683
	Company Practices	.418	.089	.382	4.697	.000
	Opportunities	.320	.074	.302	4.317	.000
	Work	.278	.081	.249	3.417	.001
4	(Constant)	.068	.193		.351	.726
	Company Practices	.357	.091	.327	3.908	.000
	Opportunities	.265	.077	.250	3.449	.001
	Work	.248	.081	.222	3.055	.003
	Total Rewards	.149	.063	.159	2.356	.020

Dependent Variable: Employee Outcome (Overall); Adjusted $R^2 = 0.752$; P – value = $7.93x10^{-43}$

The engagement drivers that are significant predictors or indicators of the overall engagement outcome are Company Practices, Opportunities, Work, and Total Rewards. The result shows that company practices, opportunities, work and total rewards makes employees fully engaged with their company. For the respondents, developing fair company policies that adequately support company's goals motivates them even more. For example, not treating attending a seminar as a personal day if the company wants to encourage continuous learning. Rather, ensuring policies and practices encourage employee feedback, collaboration, decision-making, and so on. Opportunities for personal growth is also a satisfying factor for the respondents. People who get a chance to grow their skills and expertise take more pride in their jobs. Encouraging employees in the organization is a good way to gain new skill. These are all shown in the predictors of the engagement drivers Opportunities, Work and Total Rewards.

The objective of the study is to examine the positive influence of the Engagement Drivers to Engagement Outcomes to obtain employee engagement. This emphasizes the need to test Aon Hewitt's Model of Engagement if it would have the same result when used with the BPO Industry. The findings provide new insight to the field of study of Engagement Drivers and Engagement Outcomes. Previous researchers placed emphasis on predictors and outcomes of employee engagement. The result of the study would give the idea of what of these engagement drivers would lead to the employees to be fully engagement with their company. Although the statistical results of the study shows the positive influence of the engagement drivers to the engagement outcomes, only selected engagement drivers directly influence the employees' engagement outcome. To clearly show these results, suggested engagement models are made for each of the engagement drivers and overall engagement outcome.

4. Discussion

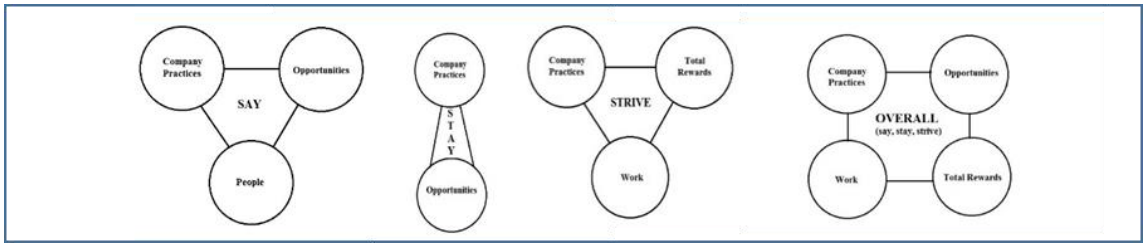

Figure 3. Engagement Model for Outcome "Say," "Stay," and "Strive"

Fig. 3 shows the suggested model based on the findings of the overall engagement outcome. Quality of Life and People are the Employee Driver constructs that are not considered by the participants as important factors for their Employee Outcomes. Generally, the findings of the study also explained, when employees are satisfied with their job security (work), being informed about the changes in their company (company practices), recognition given by the company (total rewards), and trainings (opportunities), they will be more engaged in saying good things about their company, working hard and having the strong sense of staying with their company.

Conclusion and Implication for Future Research

Employee engagement has become a top business priority for senior executives. In this rapid cycle economy, business leaders know that having a high-performing workforce is essential for growth and survival. They recognize that a highly engaged workforce can increase innovation, productivity and bottom-line performance while reducing costs related to hiring and retention in highly competitive talent markets.

While there is still much work to be done to improve engagement, this study aimed to test the Aon Hewitt's model to show its application in the Business Process Outsource industry and show if it will be an effective way in improving its employee engagement. Coming up with suggested models, one of the engagement drivers were not specifically considered by the respondents that shows dissatisfaction with their company. It is critical that managers give each of their employees' clear job descriptions and accountability. It's not enough to just state each role's responsibilities; it must specify the expected results and tasks. For example, the customer service agent's described role might be to handle inbound customer service calls. Their expected results, however, might be to answer all calls in 15 seconds or less, resulting in 90% customer satisfaction in telephone follow-up service. Only by specifying roles and expected results and accountability can managers get what they want from each employee. Another predictor of the engagement driver Quality of Life is letting employees feel valued in the company. This is also applicable with the engagement driver People which also need improvement when we consider the overall outcome that makes employees fully engaged. Listening is more important that speaking when it comes to leadership. Asking questions and making your employees feel that they are part of the team makes them participate, dictating the answers will cause them to tune out. Invite employees to help set goals. Seek employees to input on key decisions and plans on an ongoing basis. Managers must understand that as a leader they need to make the ultimate decisions and plans. Even if they do not follow their employees' advice or take their suggestions verbatim, however, the very act of soliciting their feedback will give you more information and ideas and will also make them feel involved.

Engaged employees work harder, are more productive, and most important, feel successful. Employee success and business success are inextricably linked. Yet most companies lack formalized, structured, and transparent programs that continually drive employee recognition and engagement in a fluid workplace. As the business environment becomes increasingly competitive, employees will have more choices. If they are not engaged in their company, they will leave. That's why it is very important for business to be passionate in finding ways for their employees to be satisfied and engaged. Aon Hewitt's model can be key for them to understand more clearly the needs of their employees and thus improving their organizational quality of life.

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"TIP-EX" AS AN EDUCATIONAL AND TRAINING MODEL TO ENHANCE THE QUALITY OF EDUCATORS IN THE ERA OF GLOBAL COMPETITION

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Abstract

The era of global competition and information openness has entered various sectors in Indonesia, including the sector of education. Unfortunately, Indonesia still faces some problems such as lacking the minimal standard of educational service, low teacher's competence, the mapping of poor education quality, and the frauds done by teachers in order to buy achievement (position, rank, and certification). Indonesia should have taken a stand in facing the global competition era by establishing and applying some educational and training programs, which focus on enhancing education and human resource quality. This is a literature study using qualitative approach. It was done by considering and analyzing existing problems based on the already existing literature. Solutions from various different literature reviews were combined to be a system plan or an innovative model, which is useful to solve the existing educational problems. Based on the search, analysis, and conclusion drawing results, a model of education and training called TIP-EX was established. TIP-EX is a model which combines or integrates the application of three important elements, namely Thematic Curriculum (TI), Proficiency (P), and Experiential Learning (EX). This model accommodates the competence in terms of global knowledge, technology mastery, and character education whose role is important and functions as the added value to face the era of global teacher competition. If TIP-EX model for education and training is put into practice, then, it is necessary to form ASEAN Educational and Training Board for Educators (AETBE). AETBE will function as the council of educational quality assurance at ASEAN level. The establishment of TIP-EX model is expected to be able to enhance the quality of educators or create professional and reliable educators who have good characters.

Keywords: *global competition, quality of education, TIP-EX education and training.*

1. Introduction

The era of global competition and information openness has entered various sectors, including the sector of education, of a country. The global competition era as global effect of globalization has caused the world be united and bound. The boundaries of a country have disappeared and been ignored as the globalization current requires the existence of free market labor among countries. It has created the openness of free market labor through the establishment of ASEAN Economic Community. Indonesia as a united independent country is regardless impacted by it.

The implementation of ASEAN Economic Community encourages the entry of foreign educators into Indonesia and vice versa. This indication was implicitly read by Minister of Labor and Human Resources, Hanif Dhakiri. He stated that he would narrow the regulation of foreign labor in Indonesia by not allowing foreign religion teachers to work in Indonesia (Hanif Dhakiri, 2014) [1]. Implicitly, it is concluded that foreign teachers of non religion majors can still work in Indonesia.

The era of global competition has influenced the education sector in Indonesia to enter the zone of educational internalization. It can be manifested through four identified lines or ways to sell or buy services in educational sector. These are based on the trade system of WTO (World Trade Organization) which consist of (1) cross border supply (long distance education), (2) consumption abroad (getting consumers from other countries), (3) movement of natural persons (recruiting educators from other countries, and (4) mode commercial presence (building partnership with foreign educational institutions, opening subsidiaries, or twinning arrangement with local educational institutions (Wirosuhardjo, 2015, p.47) [2].

Related to the issue, Indonesia's government through the Ministry of Education and Culture has set some restrictions. Permendikbud Nomor 31 Tahun 2014 states that Satuan Pendidikan Kerja Sama (SPK) or international schools must seek partnerships with other foreign educational institutions or Lembaga Pendidikan Asing (LPA) of the same level which are accredited by the government in the countries. Ditjen PAUDNI has issued the clearance of 123 SPK. This clearance was given to 67 ex international schools and 25 national plus schools which applied for the clearance adjustment until the late of November 2014 (Kemendikbud, 2015) [3]. Ideally, the increasing number of international schools organizing education in Indonesia encourages the higher needs of globally qualified educators.

Indonesia should cope with and face the competition of globally qualified educators. This could be done by establishing some training and educational programs for teachers which focus on accelerating the boost of education and educators quality. These programs are expected to produce graduates which have best quality and global competition potency. Besides, these programs can also become the tools for adjusting the low quality of educators in some areas of Indonesia to the expected quality of educators that all educators may have been globally competent and qualified.

In fact, nowadays the competition level of human resources in Indonesia is still low. Some reports released by several international institutions describe this condition. First, the Global Talent Competitiveness Index 2014 reported that Indonesia's level of competition was the 86th of 93 surveyed countries. Other ASEAN countries occupy the higher levels such as Singapore (2nd), Malaysia (35th), the Philippines (54th), Thailand (61st), and Vietnam (75th) (Lanvin, B., & Evans, P, 2014, pp 26-27) [4]. Second, the World Economic Forum reported in its Global Competitiveness Report of 2015-2016 that the competition power index of Indonesia was on the 37th level of 140 countries being evaluated. In the scope of ASEAN itself, Indonesia's level was still lower than the other three closest neighboring countries (World Economic Forum, 2015) [5]. It was reported that Singapore was on the 2nd, Malaysia was on the 18th, and Thailand was on the 32nd level.

In educational sector, there are still many weaknesses indicated in Indonesia. The Minister of Education and Culture, Anies Baswedan (2014) [6], highlighted some issues related to the problem. These include, first, 75% of schools in Indonesia does not achieve the minimal educational standard service. Second, the average of educator's competence was only 44.5, whereas the minimal competence standard was 75. Third, according to The Learning Curve, the educational quality of Indonesia occupied the level of 40 of 40 countries based on its mapping. Fourth, based on the mapping of higher level education, Indonesia was on the level of 49 of 50 surveyed countries. Fifth, according to the Program for International Study Assessment (PISA) 2012, the education in Indonesia was on the level of 64 of 65 countries. Sixth, PISA reported that in 2000, 2003, 2006, 2009, and 2012 the performance trend of Indonesia was often stagnant. Seventh, Indonesia occupied the 103rd level of countries indicated with actions of bribing and illegal collections. These facts strictly hint the needs of finding some integrated solutions like creating innovative and professional educational and training programs, which aim to solve the various problems related to the quality of education in Indonesia.

The process of educational implementation is much influenced by the roles of educators. Educators have important roles in planning, implementing, and evaluating the curriculum being used. They are challenged to develop their competence as the science and technology develop. Besides, the global competition requires them to be professional and certified. Based on these reasons, the educators need to be well prepared in order to cope with the demand of quality.

Indonesia's government has actually made some efforts to develop educators' competence through educational and training programs. Yet, these programs seem not being integrated and continuously done that they do not simultaneously benefit the schools around Indonesia. Besides this problem, the lack of educators' character values influences the quality of teaching and learning at schools. This can be seen through the following examples: (1) the dishonest act of exposing the key answers of the national tests (Ujian Nasional), (2) the acts of bribing and illegal collections, (3) corruptions, and (4) the lack of accountability of schools in reporting their financial transactions. All these things strengthen the stigma of black listing toward the quality of the existing educators.

Essentially, one of the missions of establishing schools is to teach moral virtues (Mondale & Patton, 2001; Mulkey, 1997) [7][8]. Character education as part moral education needs to have its role model at schools setting. For this case, educators truly become the models of performing morality for students. Besides, a global oriented education needs to teach students

of learning the concepts of globalization, technology, and ethics (Shattock, 2007) [9]. The imbalance between the demand of global industry and the output of schools lacking the knowledge of global competition, technology development, and ethics or character practices causes the high level of unemployment. The role of learning strategy and method greatly determines the gap between the needs of industry and the output of education (Shaftel, J. & Shaftel, T. L., 2005) [10].

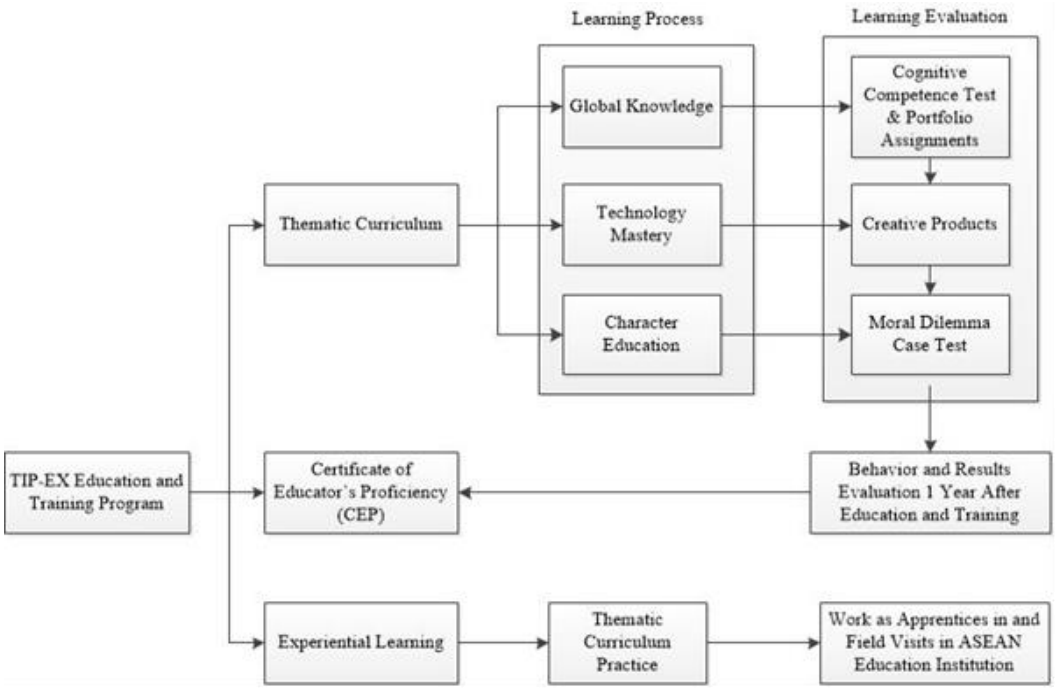
Because of looking at the problems and challenges faced by educators in the era of global competition, then, the idea of creating a solution model of educational and training programs comes up. This model is called TIP-EX, which purposefully accommodates the competence in terms of global knowledge, technology mastery, as well as character education whose role as the added value is very important to face the educators global competition era.

2. Methodology

This study is a literature study using the qualitative approach. It was conducted by considering and analyzing the possible sources of problems in educational sector, and it discovered the ways to solve the problems based on the existing literatures. The solutions were drawn from a number of literatures and combined to be a system design or an innovative model that is useful to solve the existing educational problems. More deeply, the discussion is supported by some research results or other researchers' opinions. This is in accordance with Creswell (2009, p. 25) [11] who stated, "The literature review accomplishes several purposes. It shares with the reader the result of other studies that are closely related to the on being undertaken." This statement means that the more relevant sources a study has, the more meaningful a study is. On this base, a study may produce a deep analysis of the investigated problem.

3. Results & Discussion

TIP-EX model of educational and training programs is a model that combines and integrates three important elements. They are thematic curriculum (TI), proficiency (P), and experiential learning (EX). Philosophically, the sense of TIP-EX was inspired by the everyday use of a brand of ballpoint eraser called Tipex. TIPEX means to erase the mistakes or weaknesses of something to be something better in the future. The creation of this model is expected to produce educators who are reliable, professional, as well as have good character. The flowchart of TIP-EX model of education and training program is as follows:



The Flowchart of TIP-EX Model

TIP-EX model of educational and training is differentiated based on the levels of education. The differentiation is made up of SD/MI, SMP/MTS, SMA/MAN, and SMK level; each level has different schedule from the others. The trainers and instructors of this program are

educational experts of ASEAN. They are made up of educational practitioners, professors, and experts from private educational institutions. This training program enables educators from around Indonesia meet one another. It is facilitated with outbound activities and educational and cultural exhibition. The exhibition may include activities as educational discussions, discussions of how to conserve local cultures, meeting educational figures, and local cultural shows. Besides, all the creative products of educators may also be displayed for public. These activities are expected to strengthen the social relationship and build networking among educators. These also may help them share their knowledge to other educators in the sense of togetherness.

The process of the training program uses thematic curriculum. It is a curriculum setting for learning which is held like programs, trainings, and activities giving the participants a wide range of dominant thematic contents (Finch, et al., 1997, p. 7) [12]. This kind of curriculum is an effort to integrate knowledge, skills, values, and learning attitudes as well as creative thoughts using themes (Sutirjo & Sri Istuti Mamik, 2004) [13]. There are some advantages of using the thematic curriculum (Sungkono, 2006) [14]. First, learning becomes more meaningful because it is based on students interests and needs. Second, the learning experiences and activities are relevant to the needs. Third, the results of learning may be more durable because learning is impressive and meaningful. Fourth, learning raises student's social skills such as working together, tolerating others, communicating, and understanding ideas of others.

In the training design for educators, there are three main themes accommodated. These consist of global educational insight, development of learning media based on information technology which supports cooperative learning, and character education. The global educational insight is a study that consists of (1) variety of humanism values; (2) system of economy, politics, global technology, and ecology; (3) global issues and problems; and (4) the history of international contact and dependence among nations, cultures, and countries (Kniep, W. M, 1986) [15]. The second theme covers the insight of the relevant information technology to support the learning process and skills making use of the various information technology media for learning. The third theme covers the elements of leadership in educators' character building. Being a leader in this context means becoming an organizational leader (able to organize a learning process) and a spiritual leader (an individual with special character, who is able to be a model, and who loves his/her teaching profession). These three themes should be designed in such a way that it may become the curriculum suitable to the needs of educators in the era of global competition. Because of this reason, prior to designing the curriculum, it is necessary to hold a focused-group discussion among educational experts from all ASEAN countries.

Proficiency is the focus of TIP-EX model. It is a non Indonesian term used to express high knowledge or skills (translation from http://kamusbahasainggris.com/). In this model, the training focuses on the acknowledgement of competence mastered by an educator who has finished taking its process. The participating educators will be assessed based on the results of cognitive competence test, portfolio assignments, creative products, and practices related to the three themes. Special for the theme of characters, the cognitive domain will be assessed through moral dilemma case test.

As the proof that educators have attended the national jamboree of education and training, they will receive the certificate of educator's proficiency (CEP). Yet, this certificate will actually be given after an evaluation done at school in the next year to assess and evaluate the success and the impact of the education and training program. Purposefully, this will be conducted in order to know whether the educators have put into practice what they had learnt and share it with other schools. The CEP will be implemented regionally and become the result of educational institution cooperation among ASEAN countries. It also may become the proof of certifying that an educator has the global teaching competence.

Experiential learning is experience-based learning developed by David Kolb in early 1980s. In experiential learning, experiences play a central role. The word experiential is used to differentiate the cognitive learning theory that emphasizes more on cognitive than the affective domain from the behaviorism learning theory that eliminates the role of subjective experience in learning process (Kolb & Boyatzis, 1999) [16]. Experiential learning does not only give students the insight of knowledge concepts, but also give them concrete experiences or learning by doing for building skills through concrete assignments (Dumiyati, 2015) [17].

The procedure in experiential learning consists of four stages. These stages are made up of (1) concrete experience stage, (2) reflective observation stage, (3) conceptualization stage,

and (4) implementation stage. First, the learning process starts with the concrete experiences that one is experiencing. These are then reflected individually. Second, in the process of reflection, one will try to understand what is happening or what he/she is experiencing. Third, this reflection becomes the conceptualization base or the process of understanding principles underlying the experiences and forecasting the possible application in a new situation or context. The implementation process is a situation or context which enables the implementation of concepts already mastered.

The implementation of experiential learning in the education and training program focuses more on practice experiences of the training materials. The educators are educated to learn by doing or to learn while practicing. To do this, they are facilitated by the trainers and instructors who are the combination of ASEAN educational experts. The trainers and instructors will always relate the learning to learning materials supported by easily understood learning media. In order to give examples about the educational practices in ASEAN countries, they may play videos or other relevant supporting media that show the reality of practices in the field. Besides, the participants will take time to work as apprentices in and do field visits to ASEAN countries which employ qualified educators and have good educational management system. It aims to strengthen and increase the insight level of global educational standard operating procedures, which is used to enhance the quality of educational operations.

To implement TIP-EX model, there are some important steps to consider. First, it takes synergy among some involved components, namely the ministry of education, teacher unions, social community institutions, and educational institutions of ASEAN countries. All the ministries of education in ASEAN as the highest authority are responsible to manage the educational system need to make a grand design about the scheme and flows of TIP-EX model implementation. It may be done by accommodating the suggestions from both government and private educational institutions and the representatives of teacher unions in each country. The educational ministries are expected to cooperate with teacher unions and social community institutions in order to develop and train educators through TIP-EX model. Besides, they are expected to socialize and open the opportunities of cooperation as broad as possible that TIP-EX model could be implemented around ASEAN.

If TIP-EX model is implemented around ASEAN, there is a need of forming ASEAN Educational and Training Board for Educators (AETBE). AETBE will function as the council of educational quality assurance at ASEAN level. The board has the authority to issue the quality standard and proficiency certificate for educators. The purpose of having the quality standard for educators is to build and develop the quality of educational operations in ASEAN. Through this, ASEAN countries may compete and become excellent in the quality of education in the global competition era. The essence of the global competition, specially the ASEAN Economic Community, is togetherness and the unity of spirit to go forward in all life aspects including education in ASEAN.

4. Conclusion

The era of global competition and information openness has entered various sectors of countries, including Indonesia. In educational sector, Indonesia unfortunately still faces some problems such as lacking the minimal standard of educational service, low teachers' competence, the mapping of poor education quality, and the frauds done by teachers in order to buy achievement (position, rank, and certification). Indonesia should have taken a stand in facing the global competition era by establishing and applying some educational and training programs, which focus on enhancing education and human resource quality.

TIP-EX is a model which combines or integrates the application of three important elements, namely Thematic Curriculum (TI), Proficiency (P), and Experiential Learning (EX). This training program enables educators from around Indonesia meet one another. It is facilitated with outbound activities and educational and cultural exhibition. The exhibition may include activities as educational discussions, discussions of how to conserve local cultures, meeting educational figures, and local cultural shows. This model accommodates the competence in terms of global knowledge, technology mastery, and character education whose role is important and functions as the added value to face the era of global teacher competition. The Education Minister and Culture of Indonesia and the education ministries of other ASEAN countries as the highest authority responsible for ASEAN educational system management need to develop a grand design of scheme and flows of TIP-EX model implementation. This could be done by accommodating the recommendations from both

government and private educational institutions and from teacher unions in ASEAN countries.

If TIP-EX model for education and training is implemented, then, it is necessary for the Education Minister and Culture of Indonesia and the education ministries of other ASEAN countries to form ASEAN Educational and Training Board for Educators (AETBE). AETBE will function as the council of educational quality assurance at ASEAN level. The board purposefully will guarantee and periodically evaluate the progress of educational operations in the countries that they may be able to compete in the global competition era. Besides, the board will also be responsible for equating the quality of education in Indonesia and other ASEAN countries.

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BENEFITS MATHEMATICAL MINDSET OF MANAGEMENT EDUCATION

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Abstract

The existence of mathematics in schools aim to equip students to be able to think and reason in drawing conclusions. It is also to develop the creative ability to solve problems by using the mindset that a logical, systematic, and effective. This capacity is expected to be the provision sensitizing learners when dealing with various phenomena of life problems. Moreover, as a mathematics teacher should be increasingly sensitive to the cause of the success or failure of the learning that has been done. As a leader who has mathematical abilities are expected to use mathematical mindset that can mengelolaan education maximally as expected the vision and mission of the institution. For example, employment at all establishments or institutions, usually tailored to the skills of the workforce, so that the expected goals these institutions can be achieved. Workforce skills can be measured, among others, through the evidence of diplomas or training certificates have been followed. Labor or human resources (HR) is a major asset of an organization, so that the necessary maintenance of the assets on a regular basis with a serious handling. But in reality, not all institutions aware of the importance of the maintenance of the asset has been owned.

Through the Ex-post facto research aims to find out what is the cause of many teachers who have been certified lecturers even still less qualified in performing basic tasks and functions (TOR) it. Interviews were conducted with students who come in Distance Learning Program Unit (UPBJJ) Open University (UT) Semarang also as a teacher. Respondents are teachers in elementary, junior high school or equivalent in a variety of areas that are in the area of Semarang. The interview was done in the period of approximately 4 years on each working day, 5 days a week and on average there are 2 to 3 guests consult students about various things about the education being undertaken at UT. The interview was to ensure the participation of teachers in training to career development as enhancing the competence and quality of self. The question asked among other things, what are the needs of teachers can improve their competence and career.

Respondents who have reported to have been involved in training that leads to the career development of teachers, as many as 148 of the 163 teachers, this is equivalent to 91%. This means that only 15 teachers who claimed to have participated in various training, among others, following the introduction of the curriculum in 2013, although in the end in schools where teaching is not used anymore. This statement shows that teachers lack a strong foundation of science keguruannya and requires a lot of preparation to be well qualified. In addition, there is no equalization of training and training programs are planned both for short term and long-term care on career development for teachers.

These findings are evidence that there has been a wrong prediction, whether by simply encourage teachers to continue their studies to a higher level can automatically transform and improve the competence of teachers which is useful for the development of his career. When we use the logical mindset will know the answer, why many teachers especially those who have obtained the certification have not been able to perform optimally tupoksinya. Why have not planned equalization institute training programs that can improve the quality and competence of knowledge, attitudes, and skills of teachers? What exactly is required teachers to improve their competence and her career? Actually, when we were able to take advantage of the use of mathematical reasoning and mindset then we have the sharpness think logically to solve the existing problems. Besides a mathematical mindset is actually very affecting work patterns are expected to achieve the vision and mission of the institution as well as in educational institutions.

Keywords: mathematical mindset, training, education management

1. Preliminary

The existence of mathematics in schools has the purpose of providing supplies to the students to be able to think and reason in drawing a conclusion. It is also to develop the ability to think creatively to solve problems by using the mindset that logical, realistic, systematic and effective. This capacity is expected to be equipped to cultivate learners' sensitivity when dealing with various phenomena of problems that occur in life. Especially when someone served as a mathematics teacher should be increasingly sensitive to the cause of the success or failure of the learning process that has been done. When someone on duty as the leader of the institution that has had the mathematical ability is expected to use his mathematical mindset. Furthermore, it can manage education maximally as expected the vision and mission of the institution. For example, employment at all establishments or institutions, usually tailored to the skills of the workforce so that the desired objectives these institutions can be achieved. Workforce skills can be measured, among others, through the evidence of diplomas or training certificates have been followed. Labor or human resources (HR) is a major asset of an organization, so it is necessary attention and maintenance of the assets on a regular basis with a serious handling. But in reality, not all institutions aware of the importance of the maintenance of the asset has been owned.

Human Resources Management which is often referred to as a personnel management is an acknowledgment of the importance of the human element as a resource of considerable potential and is crucial in an organization or institution, and should be motivated and developed so as to provide maximum contribution to the institution as well as for his personal development.

Currently we are in an era filled with change, and the demands of a highly dynamic environment that is being faced by the management of education. If we are sensitive to this phenomenon it needed a leader who has the education and able to use mathematical mindset. Leaders who are able to provide educational opportunities, training and further study for educators. Educators who have the innovative spirit will be creative and dare to challenge the future. Creative educator can quickly and always ready to deal with the problems that arise despite the very complex.

Keep in mind that the quality of graduates that cannot possibly be achieved without good quality teachers. We all understand that the environment also affect the educational process include: educators in schools; parents at home; and communities where children grow and develop [1]. Besides an educational institution requires a manager or a leader who acts as policy. The leader is someone who can manage the implementation of the learning process at school, and attaining the objectives that have been defined previously. Leaders of educational institutions should be someone who can plan, organize, organizing clear, to supervise the learning process so accomplished and achieved according to the learning objectives [1].

The fact shows that there are still many educators who have qualified are separated from the leadership oversight. If this is allowed, without direction, without guidance, without training, what happens if the increasingly growing in number. Anyone who currently carry out the mandate became the leader should be able to become a wise leader and responsible for duties.

By utilizing and also based mindset mathematical expected leaders as well as education managers were able to find the cause of the problems of education. In the implications of mathematical logic, there is a compound sentence "**p** => **q**" read "if p then q", only the antecedent is false when it is correct and cosequent is wrong. That is the logical thinking, we will be able to distinguish and criticize the events that occurred at this time. Do the events are reasonable and consistent with science or not? Not only that, a learner should also be trained to think critically so that he is capable of processing phenomena that received by the sensory system to be able to bring a variety of questions related and intriguing to look for the answer. Furthermore, the need to think about, whether the mathematical mindset can be utilized for the management of education?

The phenomenon happens, the government has provided a certificate to educators who are lucky to have an impact on the increase in income and welfare. However, it is unfortunate that not all educators are certified educators who are able to demonstrate the quality of performance. Next comes the critical questions such as, what might be causing less qualified educators: 1) what is actually needed by educators? 2) whether further study, sure to be a qualified educator? 3) whether the strong educational foundation can make the qualified teachers? 4) whether the training can be made more qualified educators?

2. Method

Ex post facto research method is used as one type of approach in research and often referred to *after the fact* means this research is done to determine the cause of the events that have occurred. The study also aimed to explore the causal factors that can influence it.

The events that actually occurred "many teachers are less qualified in carrying out performance". *Ex post facto* research is a systematic empirical investigation and investigators do not control the independent variables directly because the realization of these variables has taken place [2]. The independent variable *ex post facto* is a variable that cannot be manipulated as an example of the need educators such as training and development which has been followed and all of it is already happening. *Ex post facto* study methodically tested the hypothesis as well as in experimental research, but did not give specific treatments.

This research is used to reveal what the causes are still many educators who are less qualified in carrying out or performance of their duties and functions as a teacher. How should leaders manage education? Have the leaders associate educator needs with quality performance? If there is already feeling ever hooking, the solution look like?

Data obtained through observations and interviews with teachers who become students of the Open University teachers college who come alone to the office UPBJJ Semarang and is conducting the registration of courses teaching practice.

Excess *Ex Post Facto* research methods will yield useful information about the nature of a phenomenon. Moreover, it can also be used to improve strategies in the management of education. From planning, implementation and evaluation of existing programs [3]. In this research unearthed information about the needs of educators and involvement in training and coaching that leads to the career development of teachers. The subject of research as much as 163 teachers. 148 teachers reported to have been involved in training and coaching aimed at improving the career educator. This is equivalent to 91%, meaning that only 15 teachers or (9%) who claimed to have participated in various training, among others, following the introduction of the curriculum in 2013, although in the end in schools where teaching is not used anymore. This statement shows that teachers lack a strong foundation of science teachership and requires a lot of preparation to be well qualified. In addition, there is no equalization of training and training programs are planned both for short term and long-term care on career development for educators, especially teachers.

Disadvantages *Ex Post Facto* research methods, there is difficulty in determining the cause of the relevant factors; there is a major weakness of the study design *Ex Post Facto* in the absence of control over the independent variables; difficult to determine cause and effect when the relationship between the two variables have been revealed [3]. Although there are weaknesses in the results, but there are weaknesses that can be exploited for the development of further research.

Through observation and interviews, found a direct answer that "I wanted to be involved to follow the training as a field of study that I teach." When the unmet needs of educators then certainly be a further reduction in the low learning outcomes of learners.

3. Result and Discussion

These findings are evidence that there has been a wrong prediction, policy makers thought to encourage teachers to continue their studies to a higher level can automatically transform and improve the competence of teachers which is useful for the development of his career. The benefits of using such mathematical mindset to think logically and realistically it will know the answer. Many teachers especially those who have obtained the certification has not been able to carry out their duties and functions optimally. Public and private educational institutions have not been many who try to plan a training program, which can improve the quality of coaching competence knowledge, attitudes, and skills of teachers. Actually, it takes teachers are training and coaching programmed and continuously continuous to improve the competence and her career. Actually, when we were able to take advantage of the use of mathematical reasoning and mindset then we have the sharpness think logically to solve the existing problems. Besides a mathematical mindset greatly affect the pattern

of each individual, which is expected to achieve the vision and mission of the institution as well as in educational institutions.

This type of logic must follow the line of reasoning based on experience or reality. That is, if there is no evidence then the conclusion is not necessarily correct or exact. Thus, we are not going to trust a conclusion which is not based on experience or capture reality through the senses.

Based on research and other sources can be concluded that the challenges faced by the manager of Human Resources outline is as follows: (a) economic and technological development; (B) the availability and quality of labor; (C) settlement with the problems; (D) the restructuring of the organization or institution [4]. This means that in every educational institution with the status of educators are human resources that teachers and principals as leaders all require welfare and spiritual birth that makes peaceful and comfortable and not feel outdated or inferior when carrying out tasks profession. In addition, the availability of facilities and infrastructure is expected to support as well as support the work so as to improve the quality of manpower in this case the teachers and principals. Challenges and problems of population often cause movement of workers. In addition, as human resource managers need to pay attention to the organizational structure of the institution in order to clear the duties and obligations of each individual.

Therefore, in managing human resources into something that is crucial for the success of an educational institution. Failure to manage it will have an impact on the difficulties agencies face challenges in the future. When there is a presumption that the moral decline and the low quality of graduates was caused by the poor quality of teachers, then we should be able to open our eyes to the complex problems that exist. Thus the educator in this respect as a teacher and higher again as a lecturer, must understand the ins and outs of education. Qualification is not the main guarantee of the success of teaching but a defining experience, such as the sensitive teacher choose the right method, motivating learners in accordance with the mental development of children, providing feedback in the learning process.

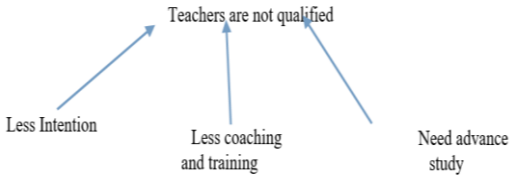

Figure 1.Portrayed of Teachers Condition

Teachers are not qualified

Indeed, not all teachers have not qualified, but all parents to put children to school will definitely choose a quality educational institutions. Parents as representatives of the people always look carefully who heads his school and who will be the teachers who teach at the school. Leaders or principals and teachers who are qualified community expectations. Often an agency only hope as soon as teachers follow further studies and then graduated after that it should be able to teach in a professional manner in order to be a good institution accreditation. None the less, when policymakers or leaders using mathematical logical thought patterns, and realistically it will be realized that the teachers that now there are many that are not generated by the school teacher education equivalent to high school. Why is that, because of school education as a vocational school teacher who is really able to prepare prospective educators have been dissolved since 1990. Whether we realize it or not this is the cause of less powerful foundation as a key condition foster educators. Psychology of child development and pedagogy is not learned from the beginning. Already more than a quarter of a century no one has thought of another school as his successor. Until now, that can be felt is the negative impact that very many of them, 1) among primary school students a lot going on teasing and less tolerance; no exemplary attitude of mutual respect among friends. 2) teachers who are now many backgrounds bachelor's degree, but if traced his high school education does not come from the school of teacher education has an impact on the performance of less qualified.

For teachers whose background is not undergraduate education has been required to take undergraduate education in accordance with the task in order to teach. Let us think together, eg "**p**" (teachers have a strong foundation) or (teacher training and coaching) or (teacher follow-up studies) and "**q**" (qualified teacher). The mindset of mathematics would run like this "**if** the teacher has a strong foundation, **so** the teacher will be qualified"; "**If** the teacher training and coaching **so** teacher will be qualified"; "**If**

teachers follow-up studies, **so** the teacher will be qualified".

What would happen if the teachers lack strong foundations have never received training and coaching as well as not have the opportunity to participate in further studies. Moreover, not all educational institutions aware of the importance of programming training for teachers to become "qualified teacher" or "professional teacher".

It is expected to meet the needs of the standard form of training certified educators will produce a quality performance. If you want a quality institution continuously, there is no other way to be able to improve the management of human resources as well as continuous investment. Training will be successful when the needs of resource management. Why do not many institutions that implement training programs, because they thought with further studies teachers can automatically Pinter himself. Though necessary perception to fit the expected goals of the institution. In addition, many institutions think teacher training is a waste of money, so it is considered unnecessary.

Math Logic

Before we understand the logic of mathematics, we need to know in advance the definition of that logic. Logic is derived from the ancient Greek word λόγος (logos) which means that the results of consideration of the mind is expressed through words and expressed in language. Logic has several benefits, among others [5]:

1) Help everyone who studied logic to think rationally, critically, straight, consistent, orderly, and coherent.
2) Improving the ability to think abstractly, accurately, and objectively.
3) Add intelligence and improve thinking skills sharp and independent.
4) Compel and encourage people to think for themselves by using the principles systematically.
5) Increasing love for the truth and avoid mistakes in the way of thinking.
6) Able to perform analysis of an event.
7) When it is able to think rationally, critically, straight, and analytical as mentioned in the first point it will increase a person's self-image and potential.

Now that we know about our logic will be easier to study mathematical logic. Here are the things that concerns the **mathematical logic.**

Mathematical Logic will provide a foundation on how we draw conclusions. When we study the mathematical logic will then have the ability to take and determine which conclusions are right or wrong. In mathematical logic there are implications organize our mindset.

4. Implication

The implication is a mathematical logic to the concept of suitability. Both statements will be connected using the symbol (=>) with the meaning of "**if p then q ... ...**" it means "p" as the cause (antecedent) and "q" as a result (consequent). For more details will be explained in the following table [6]:

p	q	p => q	Logika matematika
B	B	B	If the cause is TRUE then the result is TRUE conclusion is considered TRUE
B	S	S	If the cause is TRUE then the result is WRONG conclusion is considered WRONG
S	B	B	If the cause is FALSE then the result is TRUE conclusion is considered TRUE
S	S	B	If the cause is FALSE then the result is FALSE conclusion is considered TRUE

Logic as withdrwawal conclusion

In the mathematical logic there are some legitimate conclusion, among others [6]:

1. Modus ponens inference,
   Statement 1: **p => q : true**
   Statement 2: p : true
   Conclusion : q : true

2. Mode tollens inference,
   Statement 1: **p => q : true**
   Statement 2: ~ q : true
   Conclusion : ~ p : true

3. Syllogism inference,
   Statement 1: **p => q : true**
   Statement 2: **q => r** : true
   Conclusion : **p => r** : true

Mathematical mindset based on mathematical logic is to train the sensitivity of thinking. Let us use the sensitivity of this thinking in the management of education in our place of duty. Critical thinking is a deepening awareness and intelligence comparing of several problems that are and will happen so as to

produce a conclusion and the idea to solve the problem. Everyone has a different mindset. However, if everyone is able to think critically, problem they face would be more simple and easy solution.

5. Conclusion

Reforming mindset is a provision for decision-making and action in solving the problem wisely. Utilization of mathematical mindset to train sensitivity to various phenomena, especially in the management of education. If you dare to look at the development of countries that have developed, the leaders there are very concerned about education. When policy holders in this country is able to care for improving the competence of teachers and educators is also a lecturer, it can be guaranteed that our country must have soon lurched forward beyond the state that has developed. In essence, each individual is a leader. A wise leader is a leader who is able to understand and meet the needs of the people being led as an investment and a form of responsibility in the world and the hereafter.

As a suggestion, for educators should you keep the spirit and not easily give up to reach the expectations that is to educate students. If you as a leader should be able to meet the needs of co-workers around you. Besides able to sharpen directions for all the people being led. If expect educators of quality, there should be a training and education program planning continuous and sustained as a provision for carrying out the duties and functions of educators as they should. Each program shall be implemented and evaluated in order to know the value of successes and failures of programs that have been compiled. More importantly, the need to build a strong and solid foundation for educators through similar vocational school teacher education in high school, because it was 26 years ago the school was closed and no one has thought instead.

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AUDIOVISUAL LEARNING MEDIA AND SOCIAL LEARNING: GENERATING ENGINEERING STUDENTS' SOCIAL AWARENESS THROUGH TEAMWORK LEARNING DURING THE PROCESS OF VIDEO PRODUCTION

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Abstract

Today's education should not be directed to construct and develop students' cognition side only, but it should also address students' social and affective aspects. These aspects should not be taught through theory, but it should be infused within students' learning experiences. This indicates that the process of getting knowledge is very essential. How students get their knowledge will affect their values, their behaviour and how they use their knowledge. Learning in teams for producing video on social, cultural and technological issues around students' surrounding can be a method to facilitate students' social and affective awareness. Learning together in a team can grow senses of togetherness, care and social empathy. This group learning can help them to establish social relationship with others. Making video on social, cultural and technological issues around them can encourage students to be care about what happens around them and propose possible solutions. It is expected that through this learning facilitation, engineering students can be persons who can be accepted in their community by being able to develop positive social relationship with others and concern about their social environment. This indicates that this study confirms social constructivism perspective in learning by showing that learning happens in social contexts and students build their own understanding through social process. This study is based on teaching practice, in which I perform five TPB classroom observation. The study uses qualitative research approaches. The data are collected through students' reflective writing of five TPB English classes in ITS, videos that the students make and classroom activities. The data are analyzed by using phenomenological data analysis. The data show that through video making in groups, the students learn several aspects. The first learning area is they are developing and experiencing team learning values: self-group identification, appreciating expertise diversity, sharing, negotiation and agreement process, group engagement, combining/collaborating ideas. The second learning area is they are trying to develop social awareness and sensitivity on social, technological and cultural issues, grow technological wisdom, identify light and dark sides of technology, try to find potential solution and social care. It is expected that they can be engineering students who do not only care with technology and machinery, but they develop social senses. They can "feel" as well as "think."

Keywords: audiovisual, video production, social awareness, social learning, team learning, video production

1. Introduction

The purpose of genuine learning should be directed to build holistic students. This means students who think, relate and think. This implies that real education is not the matter of or depending on obtaining high scores, but relying on how students can process information they get and experiences they encounter during their knowledge acquisition. Thus, it is important for educators to concentrate on students' learning process and facilitate their learning experiences. From this learning facilitation, it is expected that students can get and construct their positive values that will last along their life. This learning facilitation through experiences should be emphasized since experiences will teach the process of how to get something instead of only receiving the knowledge. When the students know how to get knowledge by their own, they will be able to repeat the process or even improve their method to get knowledge or information. Thus, experience has substantial power to enhance learning process.

Today's students face bigger challenges in their learning. They now should know many

things, more than their parents should know in their parents' era. Their learning space is also broader than past generation era. This broader space allows today's students to accelerate their learning, be independent and lifelong learners. This broader space and accelerated learning pace are enabled and assissted by rapid development of ICT. ICT can be effective learning media which may help teachers to provide certain learning environment and foster particular type of learning or skills. Cognition development only should not be the primary centre in education. It should be balanced with social and affective competencies. Social capacity should be developed by students since by acquiring this skill they can build social relationship, have social awareness, empathy and care. They need this skill both for enhancing their learning process and dedicating themselves for humankind and society development. This social competency cannot be grown alone. It has intertwined interrelationship with the affective aspect. Students should also be able to feel. This feeling aspect should cover how they use their feeling for others and for themselves, being care and concern and be able to control/regulate their self.

Engineering students are our potential generation who are expected to be able to produce high technology. However, they should be guided and facilitated to be engineers who care about how this technology can be useful for our society and improve the quality of human life and humankind. To do this, it is necessary for the educators to facilitate (engineering) students learning environment and learning experiences. This paper is based on my teaching practice which I emphasize on facilitating students' teamwork for producing some videos. It is expected through this learning experience facilitation, the engineering students can develop their social competencies in learning together (in team/group learning) and start to develop social sense and care on issues and conditions which happens around them. It is expected that through this learning facilitation, they can start developing technological, cultural and social wishdom.

2. Research Questions

There are several reserach questions which I will discuss in this study:

1. What are the benefits and challenges that the engineering students obtain and encounter when they should make videos in their team and what they can learn from their learning experience?
2. What technological, cultural and social values and wishdom they can develop from their team learning and video production?

3. Theoretical Framework

3.1 Social and Affective Learning

It is not sufficient for the students to be smart (intelligent) only. They need to acquire other competencies to ensure their positive process of learning. Those are social and affection capacities. These two skills are the fuels of learning and define the fruitfulness of learning. They are interrelated. When students try to build social relationship with others, they should also learn how to control their emotion in order not to make other people get hurt. They also should be able to manage their emotion to absorb positive meaning from social feedback and social experiences. Linke [1, p14] mentions that emotion and social learning are interrelated since students should be able to regulate their own emotion when they want to establish positive relationship with other people. The Collaborative for Academic, Social and Emotional Learning (CASEL) [2, p1] defines social and emotional learning as "the process of acquiring and effectively applying the knowledge, attitudes and skills necessary to recognizing and manage emotions, develop caring and concern for others, making responsible decisions, establishing positive relationships and handling challenging situations capably." This is in line with a definition provided by Halberstadt, Denham & Dunsmore [3, p80], who argue that social affective competencies relates to one's capacity to be able to communicate one's feeling well, effectively understand and reply to others' feeling and be conscious, admit, and regulate his/her own emotion. Students who know how to interact and manage their emotions are likely to achive success [1, p14]. Academic grades cannot be the indicator of students' success in school, but their capacity to adjust to different social relationship can lead them to become more effective learners [Hartup, 1992, p1, cited in 1, p14]. Thus, when students try to learn how to make social relationship, they can be uncounscioulsy learn emotional management.

The areas of social learning is closely related to emotioanl learning areas. Zins and Elias [2, p15] identify several elements of social affective competencies: self-awareness, social awareness, responsible decision making, self-management and relationship skills. These elements indicates that when students want to

establish and maintain social relationship with others, they should work with their own emotion. One's emotion regulation can have substantial impact on his/her affection, cognition and social aspects [4]. Uchino, Cacioppo and Kiecolt-Glaser [1996, cited in 4, p287] find that how people express their emotion and how they react using their emotion affect social support and this support can minimize physiological reaction to the sources of emotional tension. This indicates that students should be aware of their emotion when they learn together.

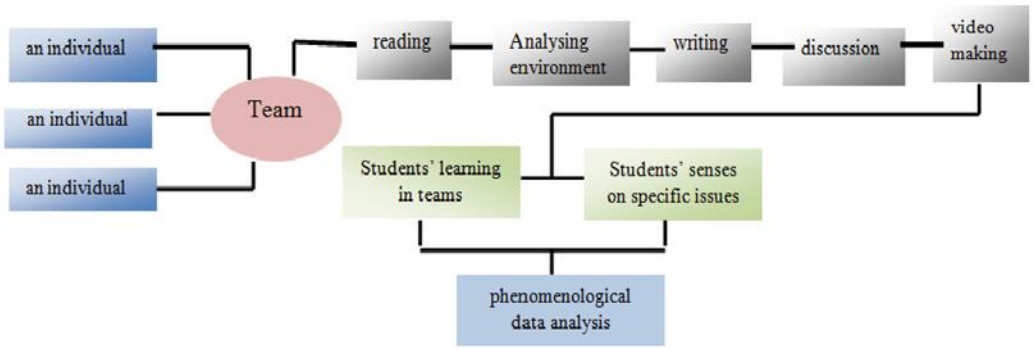

Figure 1. Process and Method of the Study

3.2 Team Learning

Learning is social process. This indicates that students should be able to learn from other people and work together with others. Frequently, to achieve learning goals, students cannot work alone. They need to collaborate themselves, combine their ideas/thinking and effort to reach collective goals or they should cooperate in a team. In team, students work together to obtain shared objective. Argote, Gruenfeld and Naquin [2001, p370, cited in 5, p1042] define group learning as "the activities through which individuals acquire, share and combine knowledge through experience with one another." Similarly, London, Polzer and Omoregie [2005, p. 114, cited in 5, p1042] specify team learning as "the extent to which members seek opportunities to develop new skills and knowledge, welcome challenging assignments, are willing to take risks on new ideas, and work on tasks that require considerable skill and knowledge." There are several lenses can be used to analyze team learning. Slavin [1996, cited in 6, p322] classifies team learning perspectives into four aspects: motivation in which each member suport each other to proceed, cohesiveness in which they are helping each other, developmental in which they use chances to share ideas to develop members' intellectual and cognitive elaboration in which members explain information to other members.

Forman [1994, cited in 7, p325] views team learning from two aspects: individualistic in which a team learning emphasizes cognitive performance by considering its surrounding and sociocultural dimension by examining aspects of individuality and social in learning process. In team, individuals learn together to overcome obstacles that they encounter during the process of accomplishing tasks. Thus, there is social learning occurs within the social process in team.

This social cooperative-collaborative learning process does not always successful. There are several aspects which students should practice when they engage in shared learning in team. Van der Linden, et. al., [6, p322] find that to work colaboratively, team members should share same aims, have joint responsibility, develop interdependency and interact openly. Van den Bossche, et. al. [8, p503] state that successful team learning are derived from several elements: beliefs and interpersonal context which include interdependence, social cohesion, task cohesion, group potency and psychological safety, team learning aspects including construction, constructive conflict and co-construction and the aspect of mutually shared cognition.

Some studies view team learning from roles of its individuals/members. Team learning is highly affected by its individual learning who are willing to communicate ideas and data through formal or informal contexts and involve in various and complex actions [9, p6]. An organization learns because individuals in that organization learn [10, p1]. These individuals transfer their experience into shared mental of organization [10, p11]. These individuals should also be able to manage their psychological factors since learning in groups can generate tension [Homan, 2001, cited in 8, p498]. To be

able to link themselves to group, these individuals should do social processes. Team members need to develop adaptive process [Kozlowski, Gully, Nason & Smith, 1999, cited in 9, p3]. Group members also contribute to each others' progress [Deutsch, 1949, cited in 11, p137]. Gillies [11, p137] mentions that group members should assist each other, do joint activities, participate in achieving goals and motivate other members to participate. This indicates that individuals in grroup cannot work alone. They should attach themselves to their groups. As mentioned by Van der Vegt and Bunderson [12, p535] to work together, members need to be committed and perform group identification. Team members should also learn handling constructive team conflict which can be done through interaction and negotiation [8, p496]. Similarly, Barnes and Todd [1977, p36, cited in 13, p395] emphasize the significance of collaborative interaction which can broaden members' knowledge and prevent the authority of one's knowledge. This indicates that collaborative process involves several actions. Wildermeersch and Jansen [1997, cited in 7, p327] identify several social process in team learning: action and experience directedness, critically reflective activity, dialogic principle and multi-factor principle.

Learning in group brings several advantages. Students can get experience which they can practice instead of just getting information from teachers. They will know how it feels. This is as mentioned by [14, p9] "interactive learning in small peer-groups is more likely than a lecture or a textbook to make the connections that students need to develop a more complex schema, offering moe links to accomodate new learning." Furthermore, cooperative learning can contribute to students' socialization capacity [11, p137]. The group members also can develop characters of helping other people [11, p137], stimulate integrating, compromising characters and identifying other members' diversity [12, pp534-535]. They also can learn the impact of cohesion and interdependence in accomplishing tasks [8, pp500-501]. This indicates that team learning can promote students' social capacity.

3.3 ICT in Education Team Learning

Today's education is highly supported by ICT. Various types of learning and different approaches of studying can be facilitated by ICT [15, p3] and today's students live within ICT era. Technology can be media for enhancing learning [16, p5]. This indicates that they should be able to touch and use ICT as part of their learning media. They should acqire digital literacy as part of their learning skills. Scheuermann and Pedró [16, p30] state that digital literacy means capacity to use technology to achieve individual and shared goals. Furthermore, Scheuermann and Pedró [16, p30] elaborate their concept with some concepts from the ETS report, lists several components of digital literacy: basic skills, download, search, navigate, classify, integrate, evaluate, communicate, cooperate and create. There are several skills required for learning in the next years, which are classified into four main skills: digital age literacy (functional, scientific, technological, information, cultural and global literacies), inventive thinking (adaptability, curiosity, creativity and risk-taking), high order thinking (creative problem solving and logical thinking) and effective communication (teaming, collaboration and interpersonal skills, personal and social responsibility, interactive communication and high productivity) [17, p7].

ICT can facilitate, promote and enhance various types of learning. These various types of learning can be supported by Ict through three ways: learning about ICT, learning with ICT and learning through ICT [18, p1]. There are three main benefits students can get when they learn using ICT: cognitive, collaborative and interactive advantages [19]. Technology can enhance affective learning, including absorbing certain character, increase motivation and internalization of values [20]. ICT can also be used to help educators to create authentic learning environment by providing broader access to information and facilitating complex learning activities [15, p344]. Technology can be used to promote cooperative and collaborative learning [21, p1]. Furthermore, Tinio [17, p9] classifies four learning areas supported by ICT: active, collaborative, creative, integrative and evaluative. ICT can be used to promote team learning. It can be used by educators to generate students' motivation to engage. As mentioned by Microsoft, NSW DET, dk2 & ACER [22, p5] "advances in technology have opened up new possibilities for the way in which teachers educate their claases, giving potential for innovative ways to encourage students to become more engaged in their schooling."

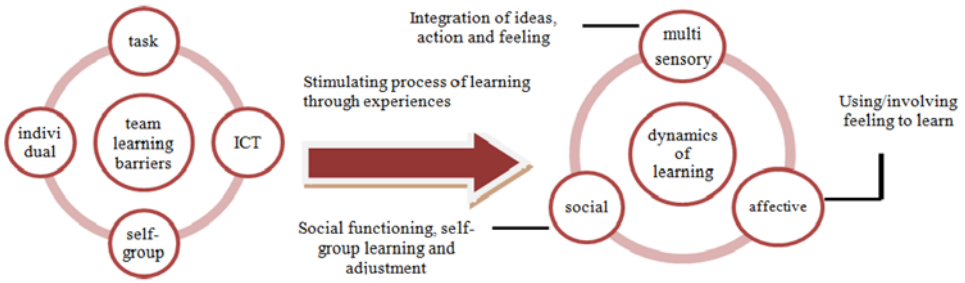

Figure 2. Team learning dynamics and impacts on other areas of learning

4. Research Method

In this study, I adopt a qualitative research method. The data are collected from students' inner voice in form of reflective writing, classroom direct observation and analysis of some videos made by students in team. The reflective writing is produced by the students. It is containing students' feeling when they cooperate in group to make videos and what they can learn from working together in team. Classroom direct observation is gained through my classroom observation when they discuss in group, present their videos and responding comments/answering questions from their friends. Their video production is also analyzed to explore and understand what technological, social and cultural issues that attract their concern, what (value/values) they can learn from technological, social and cultural issues. This study is phenomenological research in which I analyze students' experiences when they learn in team. The data are analyzed by using phenomenological research method data of analysis. It contains several procedures of recognizing the examined phenomena, eliciting the substantial experiences and gathering data from individuals who have the examined experiences [23].

5. Discussion

By facilitating students to waork in team to produce videos on social, cultural and technological issues, they students have chances/opportunities to experience learning in teams. They can learn some social competencies: some social values and cares/senses. The data indicates that social learning leads them to perform affective learning. They also can do self learning to improve their self capacity through social mirror when they are learning together in teams.

Figure 3. A sample of video (created by Victor Decha, Rizky Najwa, Habib Al-Hakim, Dewi Ayu and Arta Kusuma).

5.1 Learning in Teams

The data show that using ICT in team learning brings some benefits in four areas. Those are the multisensory learning, social learning and affective learning. The multisensory learning area shows that the students are able to use/integrate their three modalities of visual, auditory and psychomotoric, learn beyond book by practicing/experiencing, use their sensory awareness to find what happened/happens around them, learn to combine picture, music and appropriate wording/sentences to represent picture.

The students are also developing social capacities of being together by solving issues together, brainstroming ideas, appreciating each other, learning to be reliable/can be trusted by others, learning to manage selfishness, feeling shared fun as they can laugh and having jokes together, developing cooperation and encouraging/motivating each other. The other social functioning which is learnt by the students are closely related to the process self-group identification. They are aware that to be able to finish their task, they learn how to share ideas, manage the team, develop shared identity including collective goal, learn leadership, learn more about themselves through social mirror, be aware that diversity can flourish their team performance, learn social communication and synergizing.

Making video together also can entertain and refresh their learning process. They feel not getting bored. This happens because they feel different mixed happy and sad emotion. They also feel motivated to learn using technology and feel like being "modern" students.

When the students work together in team, they find several obstacles which they have to experience during the process of task completion. The data show that there are four main barriers: task, individual, individual-group identification and ICT-related issues. Task problem relates to difficulty encountered by the students when they find that they are interested in certain technological, social and cultural issue, but they do not know where to start analysing the issues. The other groups report that they are overwhelmed by being too fun and ignoring doing the core task, finding problems in prioritizing task, sharing the task in a balance portion to all members of group and managing overdependency of certain group member. The individual problem arises when a member gets angry very easily because of the behaviour of other members. The self-group barriers occurs when the students feel the tension with other members (disagreement or conflict), have to choose between personal voice or group voice, feel dissapointed with other members' characters, such as too lazy, throw the job to each other, being too flat. The ICT barriers relate to machine error, very exhausted, limited facility and the habit of *"sistem kebut semalam."*

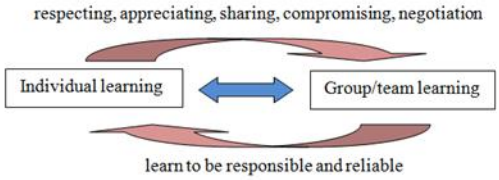

Figure 4. Individual and Group/Team learning Relationship

5.2 Generating Social Awareness from Inside and Outside of Self

The data show that the students are able to observe their closest social environment, observe, detect some issues and find the solution. Below is the sample of a video which is created by a group of ITS Multimedia Dept. Students. Those are Victor Decha, Rizky Najwa, Habib Al-Hakim, Dewi Ayu and Arta Kusuma.

The video is about impact of technology on social life. It tells how technology (smartphone) changes the nature of social relationship. People are getting closer to mobile phone and do not care about their real environment. The students who make this video are being aware of this situation and reminds their other friends to be more concern to their real closest social environment, their relationship with other friends.

This video data indicates that these engineering students learn that technology is not always constructive for human life. People should maintain using technology to flourish their life instaed of being controlled by technology. They also learn that real social relationship and care to other people should be maintained in human life.

5.3 Team Learning within the Domain of Social and Individual Learning

Team can be a place for students to learn social learning. Within team, they develop and maintain friendship. This friendship entails building social relationship. This social relationship can be developed when the students fulfill some requirements of effective team building. Those are aligning self into group, identifying the strengths of team, there is

coordinated actions and developing trusts [24, pp217-220]. The data show that the team learning is challenging because they should compromise and develop tolerance in group. This allows them to perform adaptive learning. A team can increase its capacity to grow and arrive at effective decision when its' group members can adapt each other [25, p118]. Social tolerance and
adaptation in team learning is developed by students by distributing task based on members' strength and develop fun interaction. The most difficulty that they find is tolerating group member who is not doing his/he job.

The students are also performing self awareness through social mirroring. In this situation, they know how are they based on their peers' response. This indicates that when they are working together, they can learn socially which can be reflected back to their individual learning. This social awareness can induce individual consciousness. An indiviudal develop his/her social intelligence when he/she has social awareness and facility [26, p84]. The following figure shows how students' social learning can affect their individual learning.

6. Conclusion

Classrooms are places to facilitate learning which is required for their future life after they leave their classrooms. This indicates that it is important for teachers to equip their students skills they require to survive and grow in their society. One of several skills they need is social capacities. By allowing and facilitating students to work and learn in teams to develop their social capacities, they learn several aspects, including self-group identification, groip identity, sharing, tolerating, compromising, negotiating, respecting and appreciating. Their social learning also may affect students' individual learning. They learn how to be responsible and reliable. When they make video with their team, students can learn how to work on teams and develop social awareness on issues around them. This indicates that it is central to remid students to be aware of social situation around them. It is also expected that students start thinking to solve problems in their social environment. For engineering students, this can be trigger for develop ideas/thinking or innovations which can be menaingful for society development.

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TUTORS QUALITY ANALYSIS AND BACKGROUND DIFFERENCES AT FACULTY OF MEDICINE UNIVERSITAS MUHAMMADIYAH SURAKARTA

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Abstract

The quality of student learning in PBL program is strongly influenced by the tutorial. The success depends on the tutor that does this role effectively. Evaluating the quality of tutors is a basis for improvement. Research on tutors and tutorial in the college is still limited. This study analyzes the background tutor's characteristic with quality tutors; analyze the influence of tutor background includes gender, employment status, education level, graduate tutor, tenure, and age on the quality of the tutors. The subjects were all tutors and students of the Faculty of Medicine, University of Muhammadiyah Surakarta (UMS). This study used primary and secondary data. Descriptive data analysis techniques with analytical, quantitative approach, consisting of a cross sectional descriptive statistical analysis, comparative statistical t-test and multiple linear regression. In general the quality of the tutors in the Faculty of Medicine UMS is relatively high with a mean value: 43.48 (63%). There is a difference in quality between the various backgrounds tutor especially between S1 and S2 showed significant values (p = 0.002). Quality education tutor S1 is higher than S2, while the other background showed no significant difference. The quality is influenced by the tutor's background variables with the value of F = 1329 and R = 0589. It can be concluded that quality of tutors in the Faculty of Medicine UMS is relatively high. Generally, there are differences in the quality of tutors based on their background, although not significantly. Tutor's quality are influenced by their background.

Key words: quality of tutors, tutors background

1. Introduction

Quality of student learning in the program depends on the PBL tutors who are doing their role effectively [1]. Faculty of Medicine, UMS has not been evaluated after four years since the adoption of the PBL learning strategies. There were complaints that some tutors of the first-year students mentioned they are less active in the tutorial. According to these authors and tutors complaints, there are some tutors cannot do their job properly and effectively. There are still some of them were late arriving and were not present at the second tutorial. In fact, according to Dent and Harden [2] and Van Berkel and Dolmans [3], tutors must have a good attitude. There were complaints from students who say that some tutors tend to be too passive, even when the discussion stalled. Though the task of tutors by Dolmans [4], Wood [5], Walsh [6] is to be able to keep the group dynamics and encourage all members of the group to participate. Some of them are not prepared prior the tutorial, while according to Dent and Harden [2], tutor must have prior knowledge.

Dolmans, Wolfhagen, Schmidt, and Vleuten [7]; Schmidt and moust [8]; Wilkerson [9] states that research on tutors and tutorial at college is still limited. There is little research that identifies performance of tutors that boost student learning.

Implementation of PBL method in University of Muhammadiyah Surakarta has been running 4 years and has never held an evaluation of PBL especially to the tutor. Triastuti [10] who did a previous study in the Faculty of Medicine UMS using questionnaires from Fisher, stating that first-year students have had the self-learning readiness that is high but not maximum in the value of the block final test. Factors that affecting the success of PBL including factors of tutors, so it is needed to investigate tutors whether they have done their jobs effectively or not.

There is still much needed research on the relationship of tutor's characteristics for the

tutorial. Until now there has a little research linking the quality of tutors and background [11].

The formulation of the problem in this study is that there is a gap between facts and theories indicating that tutor in the School of Medicine UMS not carry out their duties effectively and whether differences in the tutors's background affect the quality. The purpose of this study was to analyze the quality of the tutors in terms of encouraging active learning / constructive, encouraging student self-learning process, encouraging collaborative and contextual learning and behave well intrapersonal in the School of Medicine UMS, analyzed the differences in the quality of tutor (men and women), to analyze the differences quality based on employment of status of tutor as staff and non-staff, analyze differences of tutors's quality by education level S1 and S2, analyze differences in the quality of medical and non-medical tutor, analyze differences in the experiences of tutor's quality to time of <1 year and > 1 year, analyzing the differences in quality of tutor's age < 40 years and > 40 years, analyzing the influence of tutor's backgrounds including gender, employment status, education level, graduation, tenure, and age on the quality of the tutors.

This research is expected to benefit the tutor which changing paradigm of the tutorial and the quality of tutors. This study is expected to provide good leverage so tutors can repair and maintain it to be a good and effective tutor. For institution, this research is expected to be the basis of input and decision making in the selection of tutors, tutor's training, supervision and evaluation of tutors.

Dochy, Segers, Van Den Bossche & Struyven [12]; Zwaal & Otting [13] stated that PBL emphasizes on constructive learning, independent learning, contextual and collaborative learning. Gijselaers and Schmidt [14] stated that the role of the tutor is essential in problem-based learning (PBL). Tutor, prior knowledge and quality problems are affecting the function of the tutorial.

An effective tutor by Van Berkel and Dolmans [3] are: encouraging active learning by asking students to explain their own language and encourage students to look for relationships between the topics of materials have been studied; encourage self-directed learning by encouraging students to determine their own learning goals and use a variety of learning resources in searching for information related; facilitate contextual learning, in this case the tutor helps students to use their prior knowledge in an effort to resolve the problem in the scenario; facilitate collaborative learning by encouraging students to evaluate collaboration in groups on a regular basis and provide feedback to improve group dynamics; demonstrate interpersonal behavior, is a reflection of the positive motivation in fulfilling duties as a tutor and an awareness of strengths and weaknesses as a tutor. Chung, et al. [15] stated that the assessment of the relationship of tutor with tutor's backgrounds including age, gender, staff and non-staff and tutor training participation concluded that characteristic ot tutor affect the tutor ratings.

2. Methods

Research methods used in this research is descriptive research method and quantitative analytical approach, a cross sectional study. Quantitative data analysis techniques used in this research is descriptive statistical analysis, comparative statistical t-test and multiple linear regression. Comparative statistical test; statistic t-test; was used to assess the presence or absence of a difference between two independent samples. Test multiple liner regression to assess the tutors's background variables with quality of tutor. Descriptive statistical analysis aimed to determine the average value, standard deviation (SD), minimum and maximum values of the variables of the study. Data were analyzed using SPSS ver.12.0.

The research was conducted on the campus of the Faculty of Medicine, University of Muhammadiyah Surakarta. Students involved in this study were all first-year students (2011), second year (2010), and the third year (2009). Tutors involved in the study were as many as 22 people.

Data retrieval is done by secondary data and primary data. Secondary data were drawn from the academic administration of the Faculty of Medicine, UMS including tutor working status, length of work, gender, age, participation in training tutors, tutors and education levels. While the primary data in the form of questionnaires were distributed and completed by the student. Tutor Effectiveness Assessment Questionnaire, adapted and translated directly from "Short Tutor Evaluation Questionnaire, Maastricht Medical School (2002-2003). The questionnaire consists of 11 items and uses a Likert scale questions ranging from 1 to 5.

3. Results

The mean of total tutor at the Faculty of Medicine UMS is 43.4789, while the minimum value is 37.50 and the maximum value of 53.33. Table 1 below shows the employment status of

PBL tutor at the Faculty of Medicine (FK) UMS that mostly staff tutors which are 13 people (59.1%) and non-staff tutor by 9 people (40.9%). Education level of PBL tutors in FK UMS is still largely uneducated Strata I (undergraduate) as many as 20 people (90.9%). While tutors are educated Strata II (postgraduate) as many as 2 people (9.1%).

Table 1. Frequency and percentage of class background.

Background	Category	Frequency (n)	Percentage (%)
Employment status	Staff	9	40.9
	Non staff	13	59.1
The education level	S1	20	90.9
	S2	2	9.1
Tutor graduates	Medical	20	90.9
	Non Medical	2	9.1
Gender	Male	10	45.5
	Female	12	54.5
Age	< 40 years old	18	81.8
	> 40 years old	4	18.2
Experienced	< 1 years	14	63.6
	> 1 years	8	36.4
Training tutor attendance	Following training	22	100
	Not following training	0	0

Description: Non-medical is a graduate of the Faculty of Biology and the Faculty of Dentistry. Medical is a graduate of the Faculty of General Medicine.

Table 1 shows the PBL tutor at FK UMS largely a tutor who holds a general practitioner had as many as 20 people (90.9%) and only a small portion coming from outside of general medicine is a graduate of the Faculty of Biology and Faculty of Dentistry, as many as 2 people (9.1%). Most of the FK UMS PBL tutors are women i.e. 12 people (54.5%) followed by men of 10 people (45.5%). Tutor FK UMS mostly aged <40 years as many as 18 people (18.8%). Tutors were aged> 40 years by 4 people (18.2%). Tutor at FK UMS most recently had a long work <1 year that as many as 14 people (63.6%). While working with old tutor> 1 year as many as 8 people (36.4%). This suggests that the PBL tutor at FK UMS are women with young age is <40 years old with the new job <1 year and most of the status of part-time Staff tutors in the Faculty of Medicine UMS. All in FK UMS PBL tutors have received training tutor as many as 22 people (100%).

Table 2. Differences Mean values and p-value of gender, age, employment status, education level, graduate, and experienced.

Tutor variable	Classification	F1 Max:15	F2 Max:10	F3 Max:10	F4 Max:10	F5 Max:10	Total Max: 55	General score: Max:10	Absent Max:10	Replacement Max:10
		Mean±SD	Mean± SD	Mean± SD	Mean± SD	Mean± SD	Mean±SD	Mean± SD	Mean± SD	Mean± SD
Gender	Male	12.56±1.06	8.26±0.79	7.94±0.76	7.76±0.65	7.76±0.92	44.29±4.13	8.03±0.50	3.25±2.18	4.47±1.94
	Female	12.21±0.77	8.13±0.44	7.76±0.47	7.54±0.56	7.29±0.51	42.84±2.46	7.79±0.38	3.71±2.40	4.04±1.63
	P value	0.402	0.649	0.537	0.412	0.166	0.346	0.236	0.644	0.577
Employment status	Staff	12.13±0.85	8.07±0.48	7.62±0.49	7.54±0.62	7.25±0.58	42.61±2.74	7.73±0.36	3.44±2.28	3.89±1.78
	Non Staff	12.54±0.95	8.27±0.69	8.00±0.65	7.71±0.60	7.68±0.82	44.12±3.64	8.02±0.48	3.54±2.33	4.48±1.75
	P value	0.308	0.429	0.164	0.540	0.187	0.304	0.120	0.926	0.449
The educational level	S1	12.51±0.78	8.24±0.61	7.92±0.59	7.70±0.59	7.58±0.72	43.90±3.15	7.95±0.42	3.43±2.29	4.24±1.75
	S2	10.95±1.20	7.68±0.53	7.10±0.14	7.10±0.42	6.68±0.53	39.50±2.83	7.38±0.53	4.25±2.48	4.25±2.48
	P value	0.308	0.220	0.002	0.259	0.102	0.072	0.081	0.634	0.992
Tutor graduates	Medical	12.36±0.95	8.19±0.63	7.82±0.63	7.65±0.63	7.51±0.78	43.49±3.47	7.92±0.47	3.55±2.35	4.16±1.79
	Non-Medical	12.46±0.26	8.18±0.51	8.05±0.19	7.55±0.26	7.41±0.45	43.64±1.67	7.73±0.13	3.00±1.41	5.00±1.41
	P value	0.746	0.987	0.319	0.685	0.810	0.92	0.229	0.684	0.550
Experienced	<1 years	12.54±0.91	8.29±0.67	8.02±0.63	7.74±0.58	7.69±0.79	44.21±3.51	8.02±0.46	3.36±2.34	4.23±1.92
	>1 years	12.07±0.88	8.02±0.48	7.54±0.44	7.47±0.63	7.18±0.58	42.27±2.72	7.70±0.37	3.75±2.24	4.25±1.51
	P value	0.247	0.285	0.053	0.332	0.125	0.167	0.088	0.705	0.981
Age	<40 years	12.30±0.49	8.12±0.42	7.80±0.46	7.61±0.44	7.40±0.37	43.16±1.86	7.87±0.36	3.44±2.20	4.01±1.75
	>40 years	12.68±2.07	8.48±1.22	8.03±1.16	7.80±1.17	7.95±1.68	45.02±7.33	8.02±0.79	3.75±2.88	5.25±1.50
	P value	0.739	0.600	0.720	0.767	0.565	0.648	0.733	0.852	0.208

F1: active constructive; F2: independent learning; F3: contextual; F4: Collaborative; F5: intrapersonal behavior tutor.

Table 3 below shows that most tutors have shortcomings in terms of interpersonal behavior (F5) as many as 15 (29.41%). Further tutor has many shortcomings in terms of encouraging collaborative learning as many as 12 (23.53%). Tutors also have drawbacks in terms of encouraging independent learning as many as 11 (21.57%). Tutor has shortcomings in terms of encouraging active learning constructively as many as 11 (21.57%). Some tutors have had the ability to encourage contextual learning, only 2 people (3.92%) who do not have such capabilities.

Table 3. Open question tutor checklist

Tutor	Domain tutor assessment for improvement
T1	F1,F2,F3,F5
T2	F2,F4,F5
T3	F1,F4,F5
T4	F1,F2,F4,F5
T5	F2
T6	F2
T7	F4,F5
T8	F4
T9	F1,F5
T10	-
T11	F1,F4,F5
T12	-
T13	-
T14	F1,F2
T15	F2,F4,F5
T16	F2,F4,F5
T17	F1,F4,F5
T18	F1,F5
T19	F1,F2,F5
T20	F1,F2,F3,F4,F5
T21	F4
T22	F1,F2,F4,F5

Description: F1: active constructive; F2: independent learning; F3: contextual; F4: Collaborative; F5: intrapersonal behavior.

Linier test by using multiple linear regression test double

Table 4. Comparison of F count, F table, calculate R and R chart

F count	F table		R count	R chart	
	Error level of 5%	Error level of 1%		Error level of 5%	Error level of 1%
1.329	3.01	4.77	0.589	0.423	0.537

Table 4 above shows the value of F count <F table so it can be concluded that the linear regression is significant [16]. This means that altogether tutors's background factors include age, length of work, education, graduate, gender, employment status affect the quality of tutor to the value of F for 1.329. This is also confirmed by the results of calculating the value of R> R chart that concluded there is a positive effect of background and significantly by 0.589 to quality tutors.

4. Discussion

Tutor males have a higher value on the domain constructive assessment of the ability of an active, independent learning, contextual, collaborative, interpersonal behavior, and the value of total general score. However, the tutor men often find a replacement tutor. Tutors men also rarely absent. In general the quality of the tutors is better men than women with the values obtained over 60%. The results of this study presented in line with Groves, Rego, O'Rourke [11] that male tutors have quality tutors who are better than women.

Tutor women have lower value than the men in the active domain of constructive, self-learning, contextual, collaborative, interpersonal behavior, the value of total general score. Women are also more likely to be absent but rarely find a replacement. This is consistent with those expressed by Robbins [17] which states that women are more often absent from work. However, the quality is pretty good in female tutor where the values obtained over 60%. These results contrast with research Chung, et al. [15] which states that the tutor women have a higher value in all domains.

Non staff tutors have high value in the domain of constructive active learning, independent learning, contextual, collaborative, interpersonal behavior, the value of total general score. However, non-staff tutor also frequently absent and often find a replacement tutor. Quality non staff tutors are pretty good with the values obtained over 60%.

Staff tutor has a low value on the domain of constructive active learning, independent learning, contextual, collaborative, interpersonal behavior, total and general scores. However, less frequent staff tutor absent and rarely find a replacement tutor. These results contrast with research Chung, et al. [15]; Groves, Rego, and O'Rourke [11] which states tutor Staff tutor has a higher value than the tutor part-time. However, the results of the study are consistent with the

research of the moust and Schmidt, [8] which states that the staff tutor has a lower value than the tutor part-time.

Tutor with education level S1 has a high value in the domain of constructive active learning, independent learning, contextual, collaborative, interpersonal behavior, total and general scores. However, the level of education tutor S1 absent less often and looking for a replacement.

Tutor with education level S2 has a lower value on the domain of constructive active learning, independent study, contextual, collaborative, interpersonal behavior, total and general scores. However, the level of education tutor S2 was more often absent and looking for a replacement. This is slightly different from that presented by Mundarti [18] which states that the level of education affects the performance of S2 is higher than the level of education is lower. However, the level of education refers to the expert tutors tend to simply convey information and less fasilitate tutorial. It is as presented by Park, et al. [19] stated in a study at the Harvard School of Dental Medicine that tutors who are experts in the relevant field and an experienced tutor in the tutorial over a year does not affect the overall student test scores.

Medical Tutor has a high value on self-learning domain, collaborative, interpersonal behavior, and a general score. However, medical tutors have a low value in the domain of active learning constructive, contextual, total value. Medical Tutor absent more often but more rare to find a replacement. This could be due to busy medical tutor than non-medical tutor. According to Groves, Rego and O'Rourke, [11] tutor of medical clinics use more of its ability to provide expert information and as a facilitator than as a tutorial. This is in contrast with a tutor from the non-clinic that has a good tutorial facilitation skill.

Non-medical tutor has a high value in the domain of active learning constructive, contextual and total value. However, non-medical tutor also had low scores on the domain of independent learning, collaborative, interpersonal behavior, and a general score. Non-medical tutor rarely absent but more often looking for a replacement.

Tutor with long work <1 year have a high value in the domain of constructive active learning, independent learning, contextual, collaborative, interpersonal behavior, the value of total general score. Tutor with long work <1 year less frequent absences and finding substitutes. This could be due to old tutor worked <1 year have the motivation to work is still high.

Tutor with long work> 1 year have a low value in the domain of constructive active learning, independent learning, contextual, collaborative, interpersonal behavior, the value of total general score. However, the tutor with long working> 1 year is often absent and looking for a replacement. These results are slightly different from those presented by Robbins [17]; Muchlas [20] which states that the longer a person works will show the trend productivity and better performance. However, the results of this study in line with the research Mundarti [18] which states that a long tenure has lower performance than a short period of work. Thus, according to him, one with a shorter tenure would have a good performance. This is because a person who has a short working life is highly motivated in their work. The mechanism of reward and punishment are less likely to cause differences in performance quality. High motivation to work by As'ad [21] can be improved in several ways such as: providing facilities for teachers who excel, give recognition and appreciation of the work of teachers, providing job responsibilities, provide promotion / advancement on the work that has been done as a motivator and provide excellent supervision, salary, technical and interpersonal relationships both in the work environment.

Tutor with age <40 years had a low value on all domains are constructive active learning, independent learning, contextual, collaborative, interpersonal behavior, the value of total general score. However, the tutor with age <40 years were also more rare and more rarely absent looking for a replacement. These results are slightly different from those cited by Groves, Rego, and O'Rourke [11] that the tutor aged <40 years as a tutor quality better than the tutor aged> 40 years. Nevertheless, the results are consistent with research Chung, et al. [15] which states that students preferred tutors aged> 40 years.

Tutor with age> 40 years had a high value on every domain that constructive active learning, independent learning, contextual, collaborative, interpersonal behavior, and the value of total general score. However, the tutor with age> 40 years, and more often absent more often looking for a replacement. This is similar to the opinion by Robbins [17] older age showed more frequent absences from duty. However, Mundarti [18] said that older age show lower performance than age. However, in general the results of the study are consistent with research Chung, et al. [15] which states that the tutor aged> 40 years have a high value in nearly all domains except the domain of collaborative learning. Likewise, according to Wilkerson [9]

which states that the tutor of the clinic and educated tutor and senior tutor more students preferred and can assist students in developing problem-solving skills.

Multiple liner regression test showed that jointly background factors affecting the quality of tutor to the value of F = 1.329 and R = 0.589. The results are consistent with research Chung, et al. [15] which states that there is a positive relationship between the background and the quality of tutors tutor with a value of F = 2.5 and R = 0137. According to him, the characteristics affecting the valuation tutor. It can be used as the basis for policy and design tutor recruitment tutor training program.
Limitations of this study are the sample size is not big enough tutors and different numbers of each group as well as the uneven distribution is less homogeneous. Future studies are expected to use a large sample with a uniform distribution of each group and across institutions. This study only assessed the quality of tutors based on their ability to constructively encourage active learning, contextual learning, collaborative learning, independent study, and interpersonal behavior. Tutor assessments done by students who are assessments are subjective. There needs to be compared with the assessment and evaluation of student achievement by itself or peer tutor.

5. Conclusion

In general the quality of the tutors in the Faculty of Medicine, UMS is relatively high. Absenteeism tutor at the Faculty of Medicine UMS is still quite high and often find a replacement tutor is still quite high. In general, there is a difference in quality between the various backgrounds tutors such as differences in gender, age, education level, employment status, duration of work, and graduates. However, the difference is not large and less meaningful only on the difference between the value of contextual learning levels S1 and S2 that show significant values.

Tutor of the men had a total value of tutors higher than female tutor. Tutor Staff tutors tutor has a total value higher than the tutor professor. Tutor with the level of education tutor S1 has a total value higher than the level of education tutor S2. Non-medical tutor has a total value higher than the tutor working with the old medical professional. Tutor <1 year tutor has a total value higher than the old tutor to work> 1 tahun. Tutor with age> 40 years had a total value of tutor higher compared with age <40 years. The quality is influenced by variables of tutors's backgrounds.

6. Advice

For institutions: tutor absent is high enough so that the necessary mechanism of reward and punishment accordingly. Need a tutor training program conducted periodically at least 2 years. Recruitment of tutors needs to consider background factors in a more comprehensive and proportional.

For tutors: quality tutor needs to be improved, especially in interpersonal behavior tutor needs to be fixed. Motivation and discipline need to be increased. Tutors should be active in training programs organized institution.

For other researchers: qualitative research needs to be done that explores other factors that can affect the quality of the tutor in order to have complete and comprehensive information.

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THE DETERMINANT FACTORS INFLUENCING METACOGNITIVE ASPECT OF THE ICT-BASED DISTANCE LEARNING GRADUATES

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Abstract

This study was aimed at describing the quality of metacognitive BEPIT students based on the alumni assessment. In addition, the study tried to find determinant factors of the program participants' metacognition, and what variables can be included for effective treatments in order to improve the quality of the program. The problems in this study were 1) What is the success rate of Satya Wacana Christian University's ICT-based Open and Distance Learning (ODL) program in encouraging and supporting students' metacognition?, 2) What are the supporting factors that determine the development of metacognition? Factors in this research were limited to 1) enrichment, 2) a catalyst for change in education, 3) preparation of future life in society ICT, 4) economic development of the country, 5) gaps between campus lectures and off-campus lectures, and 6) curriculum. Knowing the quality of metacognitive development of the ICT-based ODL program will be very useful for managers as feedback in continuing such a program. Theoretically speaking, this study has found a determinant model for the development of program metacognition, in such a way that a program policy or its practice can be implemented to improve the quality of lectures in an effective way.

This study was conducted on the basis of the assessment of the alumni who had attended BEPIT. The source of data came from 33graduate alumni of BEPIT, Satya Wacana Christian University (SWCU). Data were collected through a self-rating scale consisting of 40 items that have been proven valid and reliable. Data analysis was descriptive and used the regression analysis aided by SPSS for windows version 20.

The performance of the BEPIT ICT-based program in developing the student's metacognition is 44.90% at the high level and 4.50% at the very high level. There are two determinants for the success of the BEPIT performance: 1) the narrowing down of the gap between on-campus and off-campus lectures as a result of the ICT access, and 2) the readiness of the student's life in entering the future ICT-based society. Both factors contributed as much as 48.90% influence. Other variables are 1) enrichment, 2) catalyst for educational change, 3) economic development of the country, and 4) curriculum, which is supported by data but does not affect the performance and success of conducting the BEPIT- ODL in the attempts to support and encourage the metacogninitive development. Therefore, the development of distance learning should be focused on the lecturer. Promoting lecturer is a more critical factor in order to teach more professionally, to become a curriculum developer, and a builder of teaching-learning process. It is suggested that future research and intervention programme be aimed at helping improve achievement among university students while taking into account the importance of metacognitive and other factors.

Keywords: ICT-based BEPIT-ODL Program, Metacognition, Preparation for Future Life, Reducing the Gap

1. Introduction

The classes of the Bachelor of Education Program for the In-service Teachers (BEPIT) that were conducted through Open/Distance Learning (O/DL) is deemed feasible to produce an undergraduate education equivalent to regular on-campus graduate programs. BEPIT is an acceleration program to increase primary school teacher's academic qualification to S-1 level. In Indonesia since 2009, as many as 55 universities have executed the program, using an open/distance learning system, known as ICT-based BEPIT (Kepmendiknas, 2011). To determine and to measure the feasibility and the success of the program, monitoring and

evaluation activities have been carried out in 2010, 2011, 2012 and 2013. One of the results of the monitoring and evaluation is that there was no significant increase in the number of participants. Therefore, it is reasonable if one has a doubt about the recognition of this program in its effort to upgrade the teachers' academic qualification [1].

ICT-based BEPIT provides education program that is specifically offered to permanent teachers in positions that do not have a Bachelor's degree. The program allows teachers to have a greater opportunity to comply with the duties and responsibilities [2]. In addition, the program is expected to fulfil the requirement of such a teacher education system that is efficient, effective, and accountable as well as offering wider access to educational services without sacrificing the quality. The completion of the ICT-based BEPIT is regulated and defined by the organizing university in accordance with the academic rules/guidelines in effect. Students who have completed this program are entitled to be a holder of Bachelor's degree and diplomas issued by the university.

SWCU has started organizing the ICT-based BEPIT since 2009. This improvement program in the academic qualifications of the primary school teachers through Primary Teacher Educational Program uses open/distance education system. Even if the monitoring and evaluation ever conducted by the Ministry of Education, there are still certain parties who doubted this program; so far have not done studies that specifically explore the various factors associated with the success of the program that can only be achieved through quality lectures. Thus, it is necessary to make a study of this kind.

The ICT-based learning intends to upgrade efficiency and access to knowledge and skills. This way, it will produce information for the inclusive community to enhance democracy, to increase social participation, to annihilate obstacles to modernization, and to empower citizens who are left behind in the process of development. Its success will depend on the acceptance of ICT by the citizens.

The main factors which can influence the extent to which ICT my create transparent culture include 1) access to ICT, 2) trust, 3) empowerment, 4) social capital, and 5) the acceptance of transparent bureaucracy. Metacognition refers to knowledge about cognitive processes, and active monitoring and regulation which results in the discussion of this process in achieving an aim or an objective. There are two dimensions of metacognition: 'self-assessment' and 'self-management'. Self-management cognition refers to 'metacognition in action' or, individual ability to make a plan and to apply an accurate strategy to do monitoring, to arrange and to discuss a problem in their performance. The important characteristic of the metacognitive approach is that the objective or a particular outcome is not imposed on the learners, rather the learners are encouraged to identify, articulate and pursue personal and relevant objective, including a study on things related to skills, attitude, values and understanding, integration and school leadership.

Metacognition is a term introduced by Flavell in 1976 which creates a lot of debates in his definition. The result is that metacognition is not always the same in a variety of research in the area of psychology, and it cannot be applied in only one area of psychology. However, the meaning of metacognition as explained by researchers in psychology generally gives emphasis on one's thinking awareness about his or her own thinking process [3]. Wellman [4] contends that metacognition is a form of cognition, the second order or higher in the process of thinking which involves active control on cognitive process. It can be defined as thinking about thinking or, one's cognition on cognition. Metacognition is a form of cognition, or a process of immunization, which includes a higher level of thinking, involving control on cognitive activity. Metacognition is an awareness on our own cognition, i.e., how our cognition works and how to control. This kind of ability is very important especially for the efficient use of our cognition in solving a problem.

Further, Flavell [5] states that metacognition is knowledge and regulation on one's cognitive activity in his or her learning process. Meanwhile, Moore [6] says that metacognition refers to one's understanding in his or her knowledge, so that a deeper understanding about his or her knowledge will reflect his or her effective use or a clear explanation about the knowledge in question. It means that cognition knowledge is one's awareness of what one really knows and cognition regulation is how one arrange his or her cognitive activity in an effective way. Therefore, cognition knowledge contains declarative, procedural, and conditional knowledge, while cognition regulation includes planning activity, prediction, monitoring, testing, revision, checking, and evaluation.

Metacognition [7] principally is a learning ability, i.e., how learning should be done including consideration for the following activities: 1) developing a plan for learning

activity, 2) identifying strengths and weaknesses in learning activity, 3) setting up a learning program for concepts, skills, and new ideas, 4) identifying and using everyday experiences as learning resources, 5) utilizing modern technology as learning resources, 6) leading and participating in group discussions and problem solving, 7) learning and benefitting from certain people's experiences who have been successful in a particular area, and 8) understanding supporting factors for successful learning. One's success in learning is affected by his or her meta-cognitive ability.

An important characteristic of the meta-cognitive approach is that, rather than specific objectives or outcomes being imposed on learners, participants are encouraged to identify, articulate and pursue personally relevant goals, including those related to skills, attitudes, confidence, values and understandings, integration and school leadership [8].

Research on metacognition becomes very important as seen in Saemah Rahman and John Arul Phillips' research outcome [9] which shows that metacognitive awareness had a direct, positive relationship with academic achievement while performance goal orientation had a direct but negative relationship with academic achievement. The results also showed that self-efficacy and learning goal orientation were indirectly related to academic achievement via metacognitive awareness.

Metacognition enables teachers to make a reflection on the process of teaching, both at individual and group levels (for example, in a conference and joint product in electronic/on-line self assessment). By stimulating teachers and students to think about teaching-learning process, ICT may make some aspects of the teacher's pedagogy more accurate and efficient.

RP. Alkadrie and A. Mirza [9] conducted a research on factors which influence level of metacognition in a problem solving and found that there is relative similarity in each score, namely internal factors, i.e., student's memory in the subject being mastered and student's learning strategy being applied) and external factors (availability of learning facilities at home, opportunity for expressing ideas or thoughts from parents in children's study hours, parents' attention to children's study hours, and student's participation in school organizations).

In the learning system perspective, metacognitive development as an output is influenced by the following process factors: 1) to what extent the ICT-based long distance classes are able to develop not only a remedial program for failing students, but also an enrichment for passing students, 2) the role of ICT as a change catalisator in education, 3) the role of ICT in developing the future of the students in the ICT community, 4) how the ICT-based classes support and encourage the country's economic development, 5) how the gap between on-campus classes and off-campus classes with access to ICT can be reduced, 6) the possibility of ICT for teachers to show any opportunity and implication in teaching-learning activities within the context curriculum: planning, executing, and evaluating.

This study aimed to describe the quality of student metacognitive BEPIT program based on an assessment of the alumni; In addition this study tries to find the determinants of metacognitive students participating in the program, is there any among the six variables mentioned above can be identified so that effective treatments can be done in order to improve the quality and results of the program in the future.

E-Learning is a learning resource both formal and informal, which is done by electronic media, such as Internet, Intranet, CDROM, video tape, DVD, TV, Handphone, and PDA. Cisco [10] explains that the roles of E-learning are: 1) to deliver on-line information, communication, education, training. 2) to provide a set of equipment which can enrich conventional learning values in order to answer challenges in the development of globalization, 3) E-learning will not replace conventional learning model in the classroom, but enhance the learning model by enrichment and development of educational technology, and 4) the variation of students' capacity on the basis of content and method of presentation. The development of ICT has enriched learning resources and media in a variety of forms, such as text books, modules, OHP transparancy, Power Point, pictures/photos, animation, films/ videos, television programs, radio transmission, hypertexts, Webpages, computer-based learning programs, and application softwares to support learning. With this development, a professional teacher must have the ability to select, develop and make use of the variety learning media by utilizing the marvel of the ICT. The advance of ICT has also enabled utilization of many varieties of media at one time in a form of learning multimedia. The use of interactive multimedia which have audio-visual components to deliver learning materials can attract students' attention to learn [11]. Interactive multimedia can also give opportunity to students to perform semi-experiments and exploration to enhance

learning experiences in a way more than just listening to the teacher's explanation [Var. X_1].

If the learning process is supported by technological competence without special teacher's need, the learner or the learning content refers to the *push education*. If the learning process is not supported by technology but is directed to teacher's request or needs, the learner or the learning material refers to the *pull education.* The technological concept of push and pull education is related with two famous positions of technology and education, that is, a belief which considers technology as a change catalisator in education in one hand, and another belief that technology must follow educational needs in the other hand.

During the last decade, such an approach has been dominant in many countries in relation to the introduction of information technology in education [12]. The consequence is that many schools have made investment in IT infrastructures and learning materials. They added their traditional learning materials and methods with IT without changing their educational practices. Furthermore, many countries have established national or regional portals which offer contents for teaching and learning. It is assumed that the provision of resources rich in digital information will increase transfer of knowledge. Easy access to a large number of educational contents is viewed as a possibility for schools to apply new pedagogical methods in their teaching and learning processes. The availability of information technology is expected to uplift its uses and transformation of learning at schools. With technological support, digital contents can provide easy discovery, access, manipulation, mixing and spreading information [Var. X_2].

An important finding in Zainal Arifin's study [13] was that the principal, teachers, and community at large put emphasis on the importance of using ICT in education as a preparation for future life in the 21st century. The 21st century skills include literacy in the digital era (functional literacy, visual literacy, scientific literacy, technological literacy, information literacy, cultural literacy, global awareness), inventive thinking, high level thinking and logic, effective communication, and high productivity. It is further stated that the perception of the principals, teachers, and community on the use of the ICT is very positive. There is a lot of the ICT to be used as learning resources an teachers have frequently made use of it in teaching. Eventually, it is also recommended that ICT be used in learning in congruent with the school vision and mission, inasmuch as the traditional teaching-learning orientation remain to be considered important and dominant. Some uses of ICT in teaching-learning process are, among others, presentation, demonstration, and virtual classes. By using ICT, we can develop creativity and eventually prepare ourselves to compete with global world which require us to immerse in the technology [14] [Var. X_3].

A Microsoft Corporation (2007) report on its ICT initiatives in Africa acknowledged that technology alone does not drive development but enables it. In the report, while noting that 300 million Africans live on less than $1 per day, it is asserted that ICTs offer special opportunities to stimulate growth and increase innovation in every local setting, thereby enabling individuals and institutions to interact more productively with the global economy and the wider world. But to realize their potential, technologies must be part of a mix of productive changes and supporting capabilities. Resources must be matched by resourcefulness – combined with other initiatives by local leaders, educators and entrepreneurs to achieve individual and institutional objectives. "ICT4Development" is therefore an effort to distinguish the most constructive opportunities to apply technologies for growth and poverty reduction. According to Sara Hennessy and Brown Onguko [15] used plans on the relevant vision for Rwanda mission strategies which in the case of ICT the third is to improve the human resource development capacity of Rwanda to meet the changing demands of the economy. Slameto's finding [16] shows that the performance of Satya Wacana Christian University's ICT-based ITEP supports and encourages the country's economy at the high and very high level [Var. X_4].

The ICT-based learning is a learning system which enables carryover of learning materials to students with the use of internet media, intranet or other computer network media [17]. The learning process which uses or utilizes ICT as a tool which is available anytime and anywhere needed, in a way that it can overcome problems of space and time. Viewed from learning effectiveness, e-Learning is an interesting thing and can motivate students to make a try so that the number of participants may be increased. E-Learning which is designed in an interesting instruction and equipped with multimedia-based materials can motivate comprehension of the learning content. As for time flexibility, e-Learning makes students adapt their study time so as to access learning materials whenever they want. Concerning space

flexibility, e-Learning learners can access materials wherever they can so long as their computer is connected with the internet network. The same is for speed of learning, e-Learning can be adjusted with each student's pace of learning. This way, the system is able to reduce the gap between on-campus and off-campus learning via access to ICT [Var. X_5]

UNESCO [16] has identified 4 (four) stages in the education system which adopts ICT, namely 1) emerging stage, 2) applying stage, 3) infusing stage, and 4) transforming stage. The infusing stage is integrating curriculum with the ICT. Universities and schools have developed computer-based instruction in labs, in classes, and in administrative work. Educators can explore things through new understanding, in which ICT makes a change in professional productivity (facilitating learning). To sum up, the advantages for teachers are (i) opening an opportunity to develop ICT-based teaching materials which are interesting, innovative, stimulating student's curiosity, (ii) helping to arrange lesson plans and providing comprehensive and the most recent multimedia resources, (iii) helping teachers to monitor student's learning progress, (iv) facilitating teachers to make reports and to communicate with parents, (iv) helping teachers to make assessment of learning outcome on the basis of authentic assessment. The use of ICT in the learning process is an integration of ICT and learning system. UNESCO [16] has claimed that curriculum integration is a form of utilization of ICT ability to give an added value to the process of learning. ICT enables teachers to understand opportunity and implication for teaching-learning in the context of curriculum, i.e., planning, performing, evaluating, and following up. Recently the use of ICT in education can be done through a variety of modes which is known as Open Education and Distance Education [Var. X_6].The problems of this research are 1) How successful is the SWCU's ICT-based Open/ Distance Learning in supporting and motivating student's metacognitive development? 2) What supporting factors determine the metacognitive development? The factors in this research are limited into 1) enrichment, 2) educational change catalisator, 3) future life preparation of citizens in the ICT community, 4) country's economic development, 5) gap between campus lectures and off-campus lectures, and 6) curriculum. Knowing the quality of students' metacognitive development in the ICT-based O/DL program and at the same time finding he supporting factors are very useful for a program manajer as a feedback in continuing such a program. Theoretically speaking, this study has found a particular determining model for the ICT-based metacognitive program so that further research and policy making and practice can be done to increase the quality of effective teaching by taking into account metacognition and its determinants.

2. Research Methods

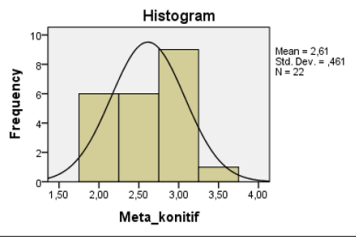
This study was conducted on the basis of the BEPIT alumni assessment. The data sources are 52 BEPIT graduates as SWCU alumni from Batang Distric, 2015. Data were collected through a self-rating scale consisting of 30 items that have been proven valid and reliable; Score validity is 0.192 to 0.502, with a reliability index by Cronbach's Alpha = 0.721. Data analysis used descriptive analysis and stepwise multiple regression models with SPSS for windows version 20.

3. Research Outcome

After a descriptive analysis of data collected for dependent variable is the results as follows.

Table 1 Results of a descriptive analysis of dependent variables studied

	F	%	Cumulative %
Low	6	27,3	27,3
Average	6	27,3	54,5
High	9	40,9	95,5
Very High	1	4,5	100,0
Total	22	100,0	



Based on the outcome of the descriptive analisis as shown in Table 1 above, it is apparent that 27, 3% if the respondents have developed their own metacognition at low and medium

levels. 40,9% of the respondents have developed metacognition at a high level and only 4,5% are at a very high level. Thus, most of ICT-based BEPIT graduates have mastered their metacognition at the medium and high levels, leaving only less than one third who developed at a low level.

Table 2 Results of a descriptive analysis of all variables studied

Variable	Mean	Median	Std. Deviation	Min.	Max.
X_1 Enrichment	2,8636	3,00	0,35125	2,00	3,00
X_2 Catalyst educational change	2,8182	3,00	0,79501	0,00	4,00
X_3 Preparation of future life	2,6364	3,00	0,65795	2,00	4,00
X_4 The economic development of the country	2,7727	3,00	0,61193	2,00	4,00
X_5 Reducing the gap: on, of-campus	2,6818	3,00	0,56790	2,00	4,00
X_6 Curriculum	2,6818	3,00	0,71623	0,00	3,00
Y Metacognitive	2,6136	2,50	0,46115	2,00	3,50

Based on the analysis presented in Table 2 above, it turns average value (mean) variables: Y (metacognitive), larger than the figure the median, this means that the spread of this variable has a tendency toward higher; While the average value of variables: X_1 (Enrichment lectures according the curriculum), X_2 (Catalyst educational change), X_3 (Preparation of future life in society ICT), and X_4 (Support and promote the economic development of the country) X_5(Reducing the gap between college-campus and off-campus with access to ICT), X_6 (the curriculum) is less than the median, this means deployment of each variable in question has a tendency towards lower. Furthermore, to determine the metacognitivegraduated Bachelor Degree conducted a descriptive analysis of the results are at the level of moderate and high (68.20%).There was 27,30% at the low level.

After testing for normality and homoginity met, then performed stepwise multiple regression analysis models the effect of 6 variable X to the the metacognitive (Y), the result is obtained as the following table 3.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,599[a]	0,359	0,327	0,37831
2	0,733[b]	0,538	0,489	0,32967

a. Predictors: (Constant), X_5 Reducing the gap: on, of-campus
b. Predictors: (Constant), X_5 Reducing the gap, X_3 Preparation of future life

Based on the results of the analysis as presented in Table 3 above, obtained a summary of that X_7 (Reducing the gap: on, of-campus) be the determinant of the metacognitive (Y) of 32,70% (Model 1), which when followed by the X_3 (Preparation for future life), its effect on the Y (metacognitive) amounted to 48.90% (model 2). This means that only less than 51,20% are influenced by the other variables that are not observed in this model. Other variables, namely: X_1 (Enrichment lectures according the curriculum), X_2 (Catalyst educational change),X_4 (Support and promote the economic development of the country), and X_6 (curriculum) supported the data does not affect the Y (metacognitive).

Further more, to determine significance of the findings of the above three models, the results of the ANOVA analysis can be examined in the Table 4 below.

Tabel 4: ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,603	1	1,603	11,204	0,003[a]
	Residual	2,862	20	0,143		
	Total	4,466	21			
2	Regression	2,401	2	1,200	11,045	0,001[b]
	Residual	2,065	19	0,109		
	Total	4,466	21			

a. Predictors: (Constant), X_5 Reducing the gap: on, of-campus
b. Predictors: (Constant), X_5Reducing the gap, X_3 Preparation of future life
c. Dependent Variable: Metaconitif

Based on the results of stepwise multiple regression analysis models as presented in Table 4 above, F = 11,204 was obtained with the significance level of 0.003 (Model 1), F = 11,045 with a significance level of 0.001 (model 2). This means that the two variables in Model 1 (X_5 = Reducing the gap: on, of-campus), and Model 2 (X_5 = Reducing the gap, and X_3 = Preparation of future life), become determinants of the student's metacognitive of the ICT-based with data support to meet the level of significance.

To build influential equation model of the 2 variables, i.e., (X_5 = Reducing the gap: on, of-campus), and (X_5 = Reducing the gap, and X_3 =Preparation of future life)towards the metacognitive of the ICT-based BEPIT (Y), observation on the Beta Coefficient (B) - both standard and non-standard -was performed. The result can be found by utilizing the results of such analysis in Table 5 below.

Tabel 5: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,309	0,398		3,287	0,004
	X_5Reducing the gap	0,487	0,145	0,599	3,347	0,003
2	(Constant)	0,580	0,439		1,321	0,202
	X_5Reducing the gap	0,467	0,127	0,575	3,678	0,002
	X_3Preparation of future life	0,297	0,110	0,423	2,709	0,014

a. Dependent Variable: Metaconitif

Based on the results of the analysis presented above, it turns out that the success of the ICT based ITEP in encouraging/supporting the metacognitive (Y) is not affected by X_1 (Enrichment lectures according the curriculum), X_2 (Catalyst educational change), X_4 (Support and promote the economic development of the country), and X_6 (curriculum), but is determined by the variation of ICT-based in: (X_5) Reducing the gap, and X_3)Preparation of future life.

4. Discussion

The success of the ICT based BEPIT in encouraging/supporting the metacognitive is determined by the variation of ICT-based inreducing the gap between college-campus and off-campus with access to ICT, and preparation of future life.

ICT has made the class-room transaction more interesting. It has extended the teaching learningprocess beyond the boundaries of classroom. Students are now able to use laptop computers andwireless networks anywhere. A computer allows high speed information exchanges tooccur with individuals within the institution as well as around the world. ICT can improve the quality of higher education by promoting experimentations, researches andinnovations, adopting the new strategies in the teaching –learning process and integrating the new information with the best practices. Recently ICT has becomesignificant tool in the field of education. ICT stimulates the learners to acquire quality researchthrough team work, time management, analytical thinking, global consciousness, basic communication, problem solving and guided instruction [18]. ICT has also

played a vital role in providing distance education very effectively. IT provides online delivery of courses, online assessment and online design courses to large number of students at atime. The ICT–based system like digital libraries; online courses, audio and video conferencingcontribute significantly to the area of E- Learning and have opened a new era in the area of ELearning.

According to Flavell [5], 'Metacognition' refers to knowledge concerning one's own cognitive processes, and the active monitoring and consequent regulation of these processes in the pursuit of goals or objectives [8]. There are two dimensions of metacognition: 'self-appraisal' and 'self-management'. Self-appraisal refers to reflections about one's knowledge state and abilities, including what you know, how you think, and when and why to apply knowledge and strategies. Cognitive self-management refers to 'metacognitions in action', or the ability of the individual to plan and implement appropriate strategies and to monitor, adjust and 'trouble shoot' their performance. Though infrastructure support is imperative, school technology leadership is a stronger predictor of teachers' use of computer technology in teaching [19]. These factors were ICT resources, ICT teaching, ICT leadership, general teaching and general school leadership. Yuen, Law & Chan [20] conducted a case study of 18 schools in Hong Kong. They found that in catalytic integration model schools, the school principal is the key change agent, exhibiting visionary leadership, staff development and involvement while in cultural innovation model schools, multiple leadership is exhibited where the school principal is not necessarily involved in ICT leadership, teachers are free to implement new ideas in supportive and enhancing culture. Also studies have shown that various levels of leadership such as principal, administrative leadership and technology leadership influence successful use of ICT in schools [19]. This aspect of leadership will help the principal to share tasks with subordinates while focusing on the adoption and integration of technology in the school.

Application of ICT in education and teaching learning process has changed the traditional system of learning to modern ICT based learning. Teaching- learning process is not now limited within the boundaries of classroom. ICT-based learning is reducing the gap between college-campus and off-campus.

The development of the information society and the widespread dissemination of Information and CommunicationTechnology (ICT) give rise to new opportunities for learning and acquiring new digital skills and competences that are necessary for employment, education and training, self-development and participation in society. As our societies become more knowledge-based, what people need to learn and know also changes. There is growing awareness in the world that there is a need for a new vision of ICT and learning that takes into account the shifts and trends that are transforming the way people work, learn, train, make sense of their world and have fun in a digitalised, networked and knowledge-based society [20]. Chwee Beng Lee, Timothy Teo, Ching Sing Chai, Doris Choy, Ashley Tan and Jimmy Seah [21] from Nanyang Technological University stated ICT as technology continues to influence many aspects of our social and work lives, it is important that school experiences equip students the skills and knowledge that will enablethem to develop into effective independent, creative, and lifelong learners to cope with the influx of changes.

5. Closure

ICTs are making major's difference in the teaching approaches and the ways students are learning. ICT–enhanced learning environment facilitates active, collaborative, creative, integrative, and evaluative learning as an advantage over the traditional method. ICT introduced innovative pedagogies into the classroom, creating network among educational institution, improving overall standard of education by reducing the gap between the quality of education inurban area and rural area, initiation of smart school with objectives to foster self-paced, self-assessed and self-directed through the application of ICT.

Based on the result of the descriptive analysis, there are 27,3% respondents have developed their respective metacognition at low and medium levels. 40,9% respondents mastered their metacognition at a high level, ad only 4,5% at a very high level. Consequently, most of the ICT-based BEPIT graduates have developed metacognition at medium and high levels and only less than one third developed at a low level.

The determining metacognitive factors of the ICT-based BEPIT graduates are their role in reducing the gap between on-campus and off-campus classes, which contributes 32,70% (Model 1). For the preparation of future life, its effect on the metacognition is 48.90% (Model 2). Other variables, namely X_1 (Enrichment lectures based on the curriculum), X_2 (Catalyst educational change), X_4 (Support and promote the economic development of the country), and X_6 (curriculum) supports the data but does not

affect the metacognition. Therefore, the development of the distance learning should be focused on the teachers; promoting teachers is a more critical factor and their teaching should be professionally based, i.e., to become curriculum developers and actors of teaching-learning process. It is suggested that future research and intervention program should be aimed at helping teachers and students improve their achievement while taking into account the importance of metacognition and its determinats factors.

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DEVELOPING MEASURING TECHNIQUE TEXT BOOK TO INCREASE THE STUDENT'S ACHIEVEMENT IN MUHAMMADIYAH UNIVERSITY OF PURWOREJO

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Abstract

This study is to 1) describe text book developing to increase the student's achievement in automotive technique program faculty of education and teacher training, 2) know the quality of developed text book, 3) find the efectiveness of text book toward experiment class and control class. This study is reseach development. Object of this study is first semester student class 1A and 1B. It is used questionaire for data collecting. The result of the study shows 1) the phase of text book developing focusing measuring technique on first semester achieved searching the problem, finding information, product design, design revise, test product, use of product and product revise; 2) the validation has been done by some experts. The test from first expert shows 96.5% suitable and the second expert displays 100% correct, the third expert indicates 75% fair and the small group test appears 92,25 % effective. The field test demonstrate 92,66 % usable; and 3) the statistic data class rate of activity between experiment and control class has been found by T-test and it is 5,614 by p=0,000<0,05. It shows there is significant result which differenciates experiment class and control class. The evaluation analysis proves 69,78 for average of class of experiment and 80,04 for the average of control class. There is significant point of achievement for student using text book. In the result of the study, the text book of measuring technique is able to increase the student's achievement and effectively stimulate the student's undertanding.

Keywords: developing, text book, student's achivement, student

1. Introduction

According to Evans *et al*. in Ralph (2011: 3), some skills in vocational school are: 1) re-contextualizing especially academic knowledge through the design of curricula to make it relevant to work; 2) Pedagogic re-contextualization through the explicit linking of contexts through teaching; 3) Workplace re-contextualization through which applications of knowledge are supported through mentorship; and learner re-contextualization through both shared experiences among learners and also the linking of prior experiences with new knowledge.

Vocational education based on Kuswana (2013: 157) pendidikan yang diselenggarakan pada suatu lembaga berupa institusi bidang pendidikan (sekunder, pos sekunder perguruan teknik) yang dikendalikan pemerintah, atau masyarakat industri.

> *Pendidikan kejuruan merupakan sebuah konsep pengalaman menyeluruh bagi setiap individu yang belajar untuk kesuksesan dunia kerja. Dalam hal ini, pendidikan kejuruan banyak belajar tentang persiapan-persiapan sebelum ke dunia kerja Pembelajaran itu mulai pembelajaran kognitif, afektif, dan psikomotorik (*Prosser, 1950: 2*). Pendidikan kejuruan adalah pendidikan yang mempelajari pelatihan secara spesifik yang dapat digunakan dalam dunia kerja* (Pavlova, 2009: 7).

Agreeing with the definition, vocational education can be held by government or non-government institution. It may be run by private institution. The fundamental thing is to build the skill to work according to the interest and ability.

The vocational education focuses on development and the achievement. The skill will be built by some efforts and finally achieve the competence. The quality is the measure of achievement. Finch (1999: 14) said the ultimate success of a vocational and technical curriculum is not measured merely through student educational achievement but through the result of that achievement-result that take the form of

performance in the work world. Thus, the vocational and technical curriculum is oriented toward the process (experience and activities within the school setting) and the product (effect of these experiences and activities on former student).

In learning and teaching on automotive eduction program, faculty of teacher training and education, Muhammadiyah University of Purworejo, The lecture still uses textbook from another university. The limitation of the textbook is actually in measuring technique. It tends to use speech to convey the lesson in class. Then they instruct to find other referent one in the same lesson. It made the student too maby jobs.

Therefore, it needs textbook which can be alternative reference for student to ease their learning and achieve the target.

2. Method

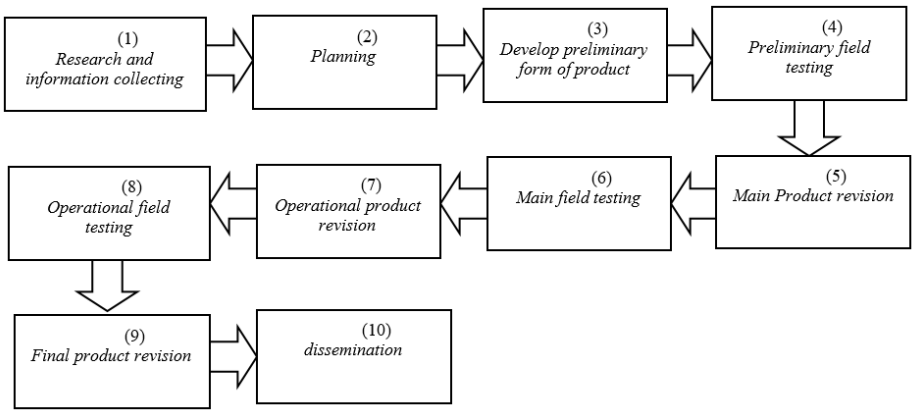
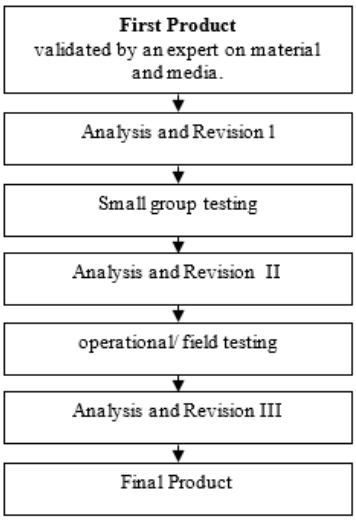


Figure 1. Development Model by Borg & Gall (1989)

This design study uses research and development to create such a model and test the effectiveness of the product. The location of the study is in automotive technique education program, faculty of teacher training and education, Muhammadiyah University of Purworejo. Model is sharply developed by Gall, Borg & Gall (1983:775). It consists on 10 steps:

1. Research and information collecting.
2. Planning.
3. Develop preliminary form of product.
4. Preliminary field testing.
5. main product revision.
6. Main field testin.
7. Operational product revision.
8. Operational field testing.
9. Final product revision.
10. Dissemination.

Testing after being validated by an expert on material and media. The design of testing is applied by following this scheme



Picture 2. Testing product

Population of the study is the first grade student in automotive education program. They are totally 60 students. They are divided on two class, 1 class = 30 students. Class 1A is the experiment class and class 1B is the control class. It is to find out the effectiveness by T-test and the average of the achievement among the classes.

3. Results

The data will be re-analyzed based on the component on each paper and observation sheet has submitted. Analysis to know how far the textbook can be developed and which part needed to revised.

3.1 The result of data analysis by expert of material

This is the final revised of the textbook analysis.

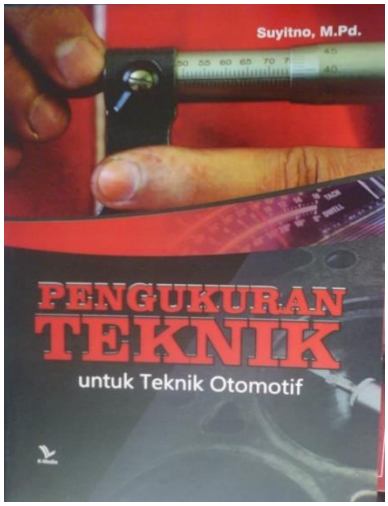


Figure 3. The textbook development, topic: technique measuring

Based on the expert analysis, it shows 85% for achievement. It means that the development textbook for measuring technique is valid and can be applied for teaching media.

These are the result of expert analysis:

1) The essential of the textbook is connected with its objective. The expert noted 'A' meaning relevant with the goal with score 4 or 100%. Based on data interpellation criteria, the percentage of 100% means valid because animation is needed.
2) The easiness to search the material by using the textbook, the expert gave 'B', with the score 3 or 75%. According to data interpellation criteria, it shows 100%, meaning valid because it uses narration and picture.
3) The arrangement of content got 'B' means good with score 3 or 75%. According to data interpellation, it shows 75% meaning fair. The material is well-systemic.
4) The material relevance shows A with score 4 or 100%, valid because the material is based on the student's need.
5) The linguistic feature is proper for the student. The analysis shows 'A' with score 3 or 75%. It is valid.
6) The form is appropriated with the focus theme. It shows 'A' with score 4 or 100%. According to data interpellation criteria, shows 100% valid. The form of textbook shows the presented theme. It also uses animation to help student understand. From the testing analysis, the expert gave the recommendation for the development animation; it need to attach the evaluation test. So I bring them into each chapter.

3.2 The effectiveness result of using the textbook

Table 1. Result Data

STATISTIC SOURCE		1A	1B	∑b
∑k	N	30	30	60
	$\overline{X}$	80,04	69,78	76,91

1A: Group of student with textbook measuring technique.

1B: Group of student without textbook measuring technique.

$\overline{X}$: average

n : the total of sample

From evaluation test, average score of class experiment (class A) is 80,04 and control class (class B) 76, 91.

In the process of making textbook, there are 3 steps; a) need analysis, b) product developing, consisting indext design, content and navigation, c) personal test, group test and using final product.

The effectiveness analysis, there is differentiation between small and large group. The class control shows the score 76, 91 and the experiment show score average 80,04. It means group using textbook is more effective than group without using textbook.

This result can be seen clearly in learning-teaching process. By using textbook, student are forced to study well. And the textbook itself can be used for reference or alternative book also give better contribution of student's understanding. In this study shows the measuring

technique using textbook give positive effect toward the learning and teaching process actually in gaining the achievement.

4. Discussion

The result of the study shows 1) the phase of text book developing focusing measuring technique on first semester achieved searching the problem, finding information, product design, design revise, test product, use of product and product revise; 2) the validation has been done by some experts. The test from first expert shows 96.5% suitable and the second expert displays 100% correct, the third expert indicates 75% fair and the small group test appears 92,25 % effective. The field test demonstrate 92,66 % usable; and 3) the statistic data class rate of activity between experiment and control class has been found by T-test and it is 5,614 by $p=0,000<0,05$. It shows there is significant result which differenciates experiment class and control class. The evaluation analysis proves 69,78 for average of class of experiment and 80,04 for the average of control class. There is significant point of achievement for student using text book. In the result of the study, the text book of measuring technique is able to increase the student's achievement and effectively stimulate the student's understanding.

5. Acknowledgement

Thanks to the dean of faculty of teacher training and education, the big support from the head of technique education program, and also the students who contributed all the research.

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THE ACTION FOR IMPROVING SCIENCE PROCESS SKILL OF STUDENTS' THROUGH SCIENTIFIC APPROACH AND THE USE ICT SUPPORT IN VOLUMETRIC ANALYTICAL CHEMISTRY AT SMK – SMAK BOGOR

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Abstract

The objective of this Classroom Action Research was to improve science process skill of students at SMK-SMAK Bogor in Volumetric Analytical Chemistry subject matter. The research method followed the CAR of Kemmis and McTaggart model with three cycles. Learning was conducted by scientific approach and assisted by information technology (ICT)-based media. The ICT-based media were power point, Learning Management System (LMS), and/or project video as relevant characteristics of subject matter and reflection finding. The samples were 28 students at the class of grade 11-1. In this research, there were eight aspects of science process skill that were observed, including 1) to observe; 2) to ask; 3) to calculate; 4) to communicate/to answer question; 5) to associate; 6) to respond; 7) to design the experiment; and 8) to conclude. The improvement of science skill process could be seen from the activity of students during learning processes which were observed using checklist paper. The results of the activity observation were 33.90%, 65.18%, and 88.39%, in the end of Cycle I, II, and III, respectively. Therefore, it can be concluded that scientific approach and the use of media can increase scientific skill process of students in 11th grade of SMK-SMAK Bogor.

Keywords: scientific skill process; scientific approach; ICT support.

1. Introduction

In the era of science and technology scientific knowledge has grown exponentially, and technology has progressed at a rapid pace. It has affected all aspects of lives. Science education plays a key role for the futures of societies. As consequently, countries particularly developing countries like Indonesia have been challenged continuously to improve the quality of science education.

According to Indonesian Ministry of Education and culture, curriculum 2013 instructs every school to improve the skill of science during students' learning. By applying scientific approach, three aspects of competencies, e.i. knowledge, skill, and behavior aspects are measured. Chemical Volumetric subject in SMK – SMAK Bogor also applies Curriculum 2013. Basically, Ministry Education and Culture gives its own conception stating that scientific approach on the study includes five components: observing, asking, reasoning, trying/ discovering, and serving/communicating. With such approaches it is expected to improve student's skill on processing science. Scientific process itself focuses on involving students actively and creatively on the process of gaining learning outcome [1], thus the study has to be student centered.

Acquiring science process skills is considered as "learning how to learn" because children learn how to learn by thinking critically and using information creatively and they continue to learn when making discriminating observations, organizing and analyzing facts or concepts, giving reasons for particular outcomes, evaluating and interpreting results, drawing justifiable conclusions and predicting what will happen if anything were to be changed [2].

Process skills describe the types of thinking and reasoning required in learning. Process skills can be divided into two categories, basic and integrated process skills. Basic science process skills help children to expand their learning through experience. Children begin with simple ideas, and expand to form new and complex ideas. It is hoped that emphasis on science process skills helps children discover meaningful information and accumulate knowledge by

constructing their understanding within and beyond the science classroom [2]. And the latter is called integrated science process skills (ISPS), such as controlling variables, formulating hypotheses, and experimenting. These skills are structured on basic skills. Some studies have indicated that there is a positive relationship between SPS and Piagetian development level and finding supports the separation of process skills into a two-level hierarchy, namely basic and integrated [3].

Naturally, the outcome of someone's learning is obtained, start from the direct event, the reality in its environment then through the imitation sign, to the verbal (abstract) expression. One of the most frequent depictions that is used as reference on theoretical basis based on learning process media is Dale's Cone of Experience on [4].

Development of technology in education has ability to answer the questions about the impact of technology in reconstruct the education system and the use of technology, in line with learning theory. While, expanded use of computer facilities and other mass media will lead to the rapid transfer of information. Questions about the use of computers and its relation to aspects of teaching, the ability of students to think actively and critically, and to the formation of a spirit of cooperation among students often occur [5,6]. Educational Technology Media can be categorized from the most common equipment used in schools which is textbook and whiteboard, to modern media such as high-tech computer equipment, LCD, Internet and digital cameras. Multimedia use computers to present, with the integration of text, audio, video with links and tools that allow users to navigate, interact, create and communicate. It is well known that teaching can be vastly amplified when it is not done in full theory, but also in visualization and interaction instead. By use this way of teaching-learning, students can obtain a deeper understanding of the subject being taught [7].

Based on that analysis, researcher argued that it is needed to facilitate scientific approach and innovation on instructional media that is used on teaching Volumetric Analytical Chemistry. The instructional media also has to utilize ICT that enables students to understand the materials of learning. As the consequences, science process skill of the student is expected to improve significantly.

This research was done by Classroom Action Research following Kemmis & Mc Taggart model. Kemmis & McTaggart model is naturally in the form of devices or chains with one device consist of four components, which are: planning, acting, observing and reflecting. The four components that form the chains are seen as one cycle [8].

2. Method

The subject of this research was the student on class XI-1 in SMK-SMAK Bogor. While the object of this research is the increase of student's science process skill on Volumetric Analytical Chemistry subject through scientific approach and assisted by ICT-based media. The research of this class chose Kemmis & Mc Taggart method as it was easier to be applied on the research. The research plan is seen through Figure 1.

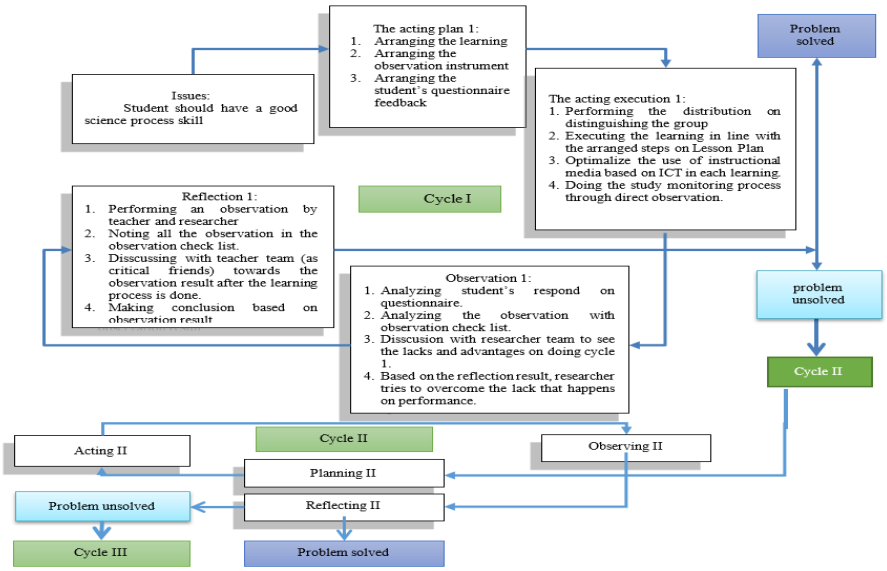

Figure 1. Procedures of research based on Kemmis and Mc Taggart's Model

The instruments that were used in this research was observation checklist. The data was descriptive qualitative from observation checklist. Science process skill is observed through observation checklist paper. There were eight aspects that were observed. The components were activities of students; to observe, to ask, to calculate, to communicate/answer the question, to associate, to respond, to design the experiment, and to conclude. These eight aspects can be observed during learning process, report of scientific activities, and media that were generated by the students. The enhancement of scientific skill of students was obtained from observation of students in each learning activity in every cycles, and the data were calculated using the equation:

$$\%Activity\ of\ student\ through\ science\ process\ skill = \frac{\sum students\ do\ activity}{\sum student's\ total\ x\ science\ process\ skill\ aspect}$$

From the observation of the activity, it can be concluded that students have done each aspect on science process skill. The success indicator of the research was shown by the criteria of at least 70% of students actively did eight aspects of science process skill in learning process.

3. Results

This research was conducted in three cycles with three different subjects and included three different multimedia of learning. The first cycle was applied on the Iodometry and Iodimetri subjects, the second cycle was applied on Argentometry, and the third cycle was on Water Analysis Application. The time allocation on the first cycle was 3 X 2 lesson hours, the second cycle is 2 X 2 lesson hours, while the third cycle is 2 X 2 lesson hours. The first cycle discussed the Iodometry and Iodimetry used learning media of Power Point presentation that was prepared and presented by the students based on the experimental data they collected in the laboratory activities. The second cycle was delivered by using e-learning with Learning Management System of Moodle platform administrated officially by the school and completed by power point presentation by the teacher. Third cycle was on the Water Analysis Application using the media of video project that was developed by students in a group. The samples on this research were 28 students at the class of grade 11-1.

Based on observations conducted by the researchers, the results obtained science process skills as follows:

a. Cycle I

By using the scientific approach in the cycle I consisting of 3 meetings, the results of science process skills of students on eight aspects that were observed were given in the Table 1 below:

Table 1. The Students' Activity or Students' Science Process Skill on each Aspect in the Cycle I

No	Science Process Skill	1st Meeting	2nd Meeting	3rd Meeting
1.	Observe	100%	36%	21%
2.	Ask	36%	36%	21%
3.	Calculate	61%	21%	18%
4.	Communicate / answer the question	0%	64%	36%
5.	Associate	100%	64%	36%
6.	Respond	36%	32%	21%
7.	Design the experiment	39%	43%	18%
8.	Conclude	100%	100%	100%
	Average	58.93%	49.60%	33.90%

Table 1 illustrates that the science process skills of students decreased from the first meeting to the third meeting. Through reflection conducted by Researchers reduction in science process skills of students due to the lack of motivation of students to play an active role in learning. At the first meeting of students enthusiastically participated in learning by using media presentations made by the students themselves. Because it is a new thing. So that the second and third meetings they feel less enthusiastic because there is no renewal of the first meeting. Therefore, researchers as teachers should look for alternatives of media that can increase the motivation of students in order to raise their science process skills.

b. Cycle II

The observation of science process skills in the second cycle on which learning was assisted by media of Power Point together with the LMS was depicted in table 2 below:

Table 2. The Students' Activity or Students' Science Process Skill on each Aspect in Cycle II

No	Science Process Skill	1st Meeting	2nd Meeting
1.	Observe	43%	64%
2.	Ask	11%	21%
3.	Calculate	18%	93%
4.	Communicate / answer the question	32%	43%
5.	Associate	32%	93%
6.	Respond	11%	21%
7.	Design the experiment	100%	93%
8.	Conclude	100%	93%
	Average	43.30%	65.18%

Table 2 shows that there was the increase of science process skills in the cycle II from 43.30% to 65.18%. In this cycle II, beside the use of another instructional media, researchers also provide rewards in the form of value to generate science process skills of students. By using LMS, students become more active. The students even had high curiosity due to the combination of the use of media of LMS and attractive presentation in this cycle. The increase of the skill had yet to fulfill the minimum criteria of 70% of students. So the cycle still needs to be continued into the next cycle.

c. Cycle III

In the cycle III the results of science process skills using video project media can be seen in Table 3 below:

Table 3. The Students' Activity or Students' Science Process Skill each Aspect in Cycle II

No	Science Process Skill	1st Meeting	2nd Meeting
1.	Observe	100%	100%
2.	Ask	11%	54%
3.	Calculate	18%	100%
4.	Communicate / answer the question	0%	100%
5.	Associate	100%	100%
6.	Respond	11%	54%
7.	Design the experiment	100%	100%
8.	Conclude	100%	100%
	Average	54.91%	88.39%

Table 3 shows that there is a significant increase of up to 88.39 % for the second meeting. The results indicate the science process skills of students successfully improved. Although the first meeting of science process skills was still relatively low but with the presentation of a video project that students have built in the laboratory make them enthusiastic. It can be seen from the aspect of observe, calculate, communicate, associate, designing experiments, and conclude with a percentage of 100 %. It means that all students perform these activities. It can be concluded by the media that students were required to directly take part to build and to use it, such as to create video projects, science process skills of most students especially on designing experiment, observing directly, finding out the results of the experiment, associating it and communicating these results in the class can be achieved.

Based on the research results obtained from cycle I to the cycle III indicated that science process skills of students might not grow itself, but it should be practiced and inculcated so that it become habit. The use of multimedia in lab. works can engage science process skills of students. The data on every aspect in three cycles were as the following:

a. At the end of the cycle I, activity or science process skills that have been mastered by students (over 70%) is the aspect concludes with a percentage of 100%. While aspects of the science process skills the least is designing experiments and calculate.
b. At the end of the cycle II, students did more aspects of science process skills in which the

aspects of calculate, communicate, design experiments and conclude has the percentage of 93%. While the aspects that poorly observed from students were aspects of asking and responding.

c. At the end of the cycle III almost all aspects have been mastered by students, including aspects of observe, calculate, communicate, associate, designing experiments, and conclude. While the lowest aspects observed from students were aspects of asking and responding with percentage of 54%.

It can be concluded that the aspects that still need to be improved was the aspect of questioning and responding, which were an important aspect because asking and responding would cause a critical attitude which can bring many creative ideas to solve a scientific problem. If the terms of instructional media and approaches used in this study by Rose Amnah Abd Rauf et al. [9], the discussion approach managed to inculcate the most science process skills and from the figure it showed that all types of teaching approaches incorporate discussion making it the most suitable teaching approach to provide opportunities for the inculcation of science process skills. The use of various media in teaching approaches, for instance when the teacher uses the discussion, he or she needs to ask question to explore students' ideas and stimulate their thinking while doing the activities. Similarly, the use of open laboratory inquiry, discussions among students, discussion between students and teachers can facilitate explorative questions.

According to Ahamad Asmadi Sakat *et al.* [10], Computer usage can stimulate effective learning and improve the performance of subjects Jawi, enhance high level of interactivity among students. Importance of computers as teaching aids need not be overstated. Ordinary teaching method is no longer relevant today. The teacher's role is no longer as a presenter of information but has become a facilitator for learning and teaching process. The use of computers is not intended to replace the role of the teacher, but it is actually intended to create an atmosphere of teaching and learning more fun and interesting. Computer is used to facilitate teaching and learning process, to enrich teaching techniques and to help teachers in teaching and learning objectives, when it is used in a systematic and sustainable.

4. Conclusion

Based on the analysis of the result and the discussion, it can be concluded that by scientific approach and ICT media support, students' science process skill increases. The increasing can be seen from percentage of activity was 88.39% in cycle III. It indicates more than 70% students actively do eight aspects of science process skill in the learning process.

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ONLINE QUIZZES FOR E-LEARNERS: THE STUDENT FEEDBACKS

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Abstract

Student feedback is a useful source of input in improving the quality of a teaching approach. In this paper, an analysis on student feedbacks on an online quiz is reported. Although having a quiz in a conventional classroom setting is a common experience for many students, taking an online quiz is considered a relatively new experience for students, especially for those who have never been in an online course. Although many students nowadays are familiar with the various online applications such as e-banking and e-shopping, their response towards experience in taking online quiz is mixed. This paper reports e-learner feedbacks on an online quiz in a distance accounting course. Based on the student feedbacks provided through a forum space in an e-learning portal, students have visibly reported that the online quizzes had helped them improve their motivation in learning. The online quiz is also a useful monitoring tool to keep track their progress in the subject. However, for the first time student, taking the online quiz was considered a challenging experience. Technical problems of the web and the slow internet line were among the major identified problems associated with the online quiz. This paper also suggests an effective way of conducting online quizzes, derived from an analysis on student feedbacks discussed in this article.

Keywords: online quiz, accounting education, e-learning

1. Introduction

The lecture is one of the most common approaches to teaching. However, the lecture alone has been consistently criticized as an ineffective way of transforming information and knowledge to the student. The lecture is considered a less interactive, teacher-centered approach while most of the teaching experts suggest that classes should be student-centered learning. Therefore, a more interactive approach to teaching is necessary, e.g., quizzes. Conducting quiz is found to be effective in motivating students to possess continuous effort in the mastery of a subject, rather than just doing last minute preparation for examinations. As an assessment tool, the quiz has various roles to play, like to help learners identify their strengths and weakness and also to help teachers monitor the progress of their students (Devi, 2014). In a study on medical students, Devi (2014) found that the student's response to the quiz was that it was an interesting and useful learning tool, which suggested that the quiz could also be applied to other courses. The significant role of quizzes as a learning tool is also acknowledged by researchers in the area of distance education. As such, the researchers used student performance in quizzes as a predictor in developing a model to predict the academic performance of distance learning students (Yildiz, Bal, & Gulsecen, 2013).

Conducting online quiz brings numerous benefits, such as eliminated printing costs, lowered handling costs, increased time flexibility, productivity and consistency (Sondos, 2006). Online quizzes allow students to take quizzes at any place and at any time, subject to the time scheduled in the computer systems. A lecturer or course coordinator does not have to be online during the quiz, and the computer systems allows various settings for quiz operation, e.g., timing, question sequence, feedbacks schedule to the student, grade calculation and many more. All of these enable a development of a more interactive quiz with fewer hours of human commitment. Although the quiz is known as an assessment tool, the benefits of quizzes to the students are far above that. As such, the quiz encourages interactions between the students and the lecturer. The lecturer can use the quiz results to have discussions with students on the strength and weakness of the student. The discussion will be useful for the lecturer to plan on how improvements should be taken, so as to improve the performance of the student. The quiz also promotes active learning depending on the type of questions asked in the quiz. The question could be in multiple choice, short answer, matching or short essay formats. The open book

quiz also encourages students to do further reading over the subject they learn. In conducting online quiz, the lecturer has options to use any available online quiz applications; some of them are available for free. Examples of widely used online quiz applications are PollEverywhere, ClassMaker and Edmodo. In this paper, the discussion focuses on the student experience of taking online quizzes on the e-learning platform of Moodle. Moodle is a free and easy to use e-learning platform that has been increasingly used worldwide. An examination on the web of Moodle on 7 September 2015 indicated that Moddle has more than 77 million users while 347 million quiz questions have been created in Moodle. Although the number of quizzes created in Moodle is huge and the number in the future is expected to increase, there is a limited number of published reports on the experience using quizzes as a teaching and learning activity on Moodle. Therefore, this paper aims to report student feedbacks on online quizzes organized on Moodle, for distance education students in a financial accounting course.

2. Method

This section discusses the process of organizing quizzes and getting student feedbacks. The course discussed in this paper refers to a financial accounting course offered to the first year distance education students of the Bachelor of Management degree in Universiti Sains Malaysia. Two trial quizzes were done to introduce the online quiz application to the students before they embarked to the official quizzes. For these two trial quizzes, marks and grades obtained were separated from their official course grade. After each of these trial quizzes, a forum space was offered for students to share their experience, comments, problem, or suggestions. All students were invited to participate in the forum, and the participation was on voluntary basis. Student feedbacks on quizzes that were posted on the forum space were classified and analyzed. Their feedbacks were categorised into favourable and unfavourable feedbacks. Figure 1, 2 and 3 shows print screen of e-learning portal about the activity of online quiz.

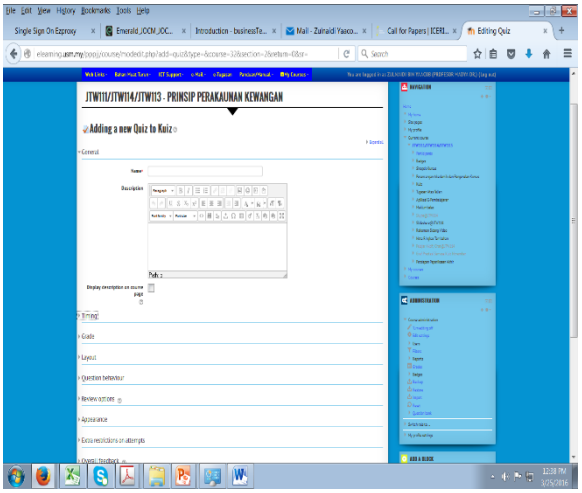

Fig 1: The first step of creating an online quiz

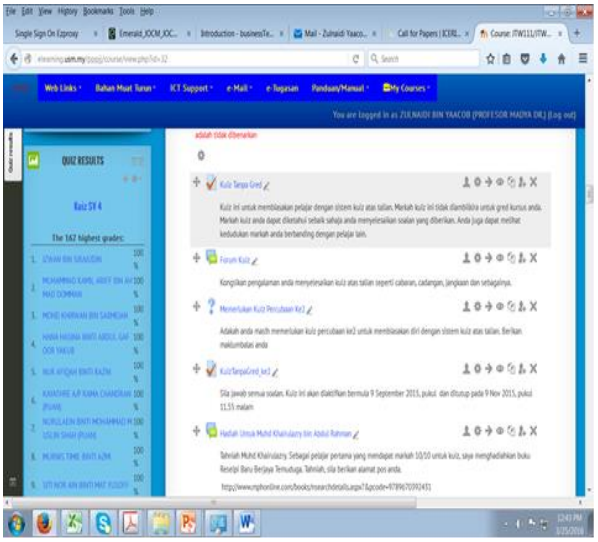

Fig 2: Displaying the quiz results on the e-learning portal

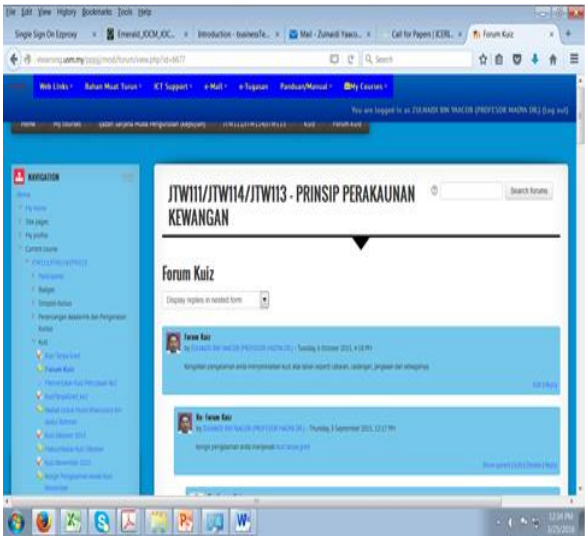

Fig 3: The 'Forum' was used to getting feedbacks from the students

3. Results

This section reports the summary of the student feedbacks. All the student feedbacks can be grouped into two categories, namely favorable and unfavorable feedbacks. The summary of the feedbacks is listed in Table 1 and Table 2. In conclusion, student feedbacks on online quizzes are related with technical issues, the personal limitations of the students themselves, learning style, and the readiness of the student towards online learning. The student feedbacks reported in this paper did not differentiate between common and peculiar feedbacks. Some feedbacks is repetitively mentioned by different students while other instances of feedbacks are only mentioned once by a student. The student feedbacks were not compulsory, so the repetitive feedbacks do not necessarily reflect the seriousness of the issues. There is tendency for students not to write the same feedbacks if other students already mentioned the feedbacks. Students were able to read the feedbacks of other students before they voluntarily write their feedbacks.

Table 1: Favorable Student Feedbacks

A good preparation for exam. The quiz helps us to finish answers on time. Time limit was control automatic.
A good practice for faster decision-making. The quiz requires students to provide answers in a stipulated time
Motivational tool. The quiz encourages students to study in a team and motivates them to interact between each other
New experience. The online quiz is a new experience to students
A useful self-study approach. The online quiz encourages distance education students to study persistently
Attracted to browse the portal. The quiz requires students to browse the portal frequently, to get information on the latest or the future quiz
A trial online quiz was beneficial to help them familiarise with the systems
Time savings and effective. The online quiz allows students to participate in quizzes from any place at any time
Enjoy doing quizzes. Enjoy doing quiz even fail to score full mark
Review is useful. Review session is useful for students to learn from their mistakes

Table 2: Unfavorable Student Feedbacks

Technical Issues - Problem of internet connection, by the time the internet could be reconnected, the time limit was over - Slow internet loading but the time continues
Cannot understand how the quiz systems work - Forgot to click the 'submit' button. Thus, the quiz was not marked.
Not a real-time alert system - There was no alert notification from the portal. A notification alert to handphones was expected.
No clear information on 'extra features' of the quiz - Student requires clear information on extra features of each quiz such as having only one attempt, automatic submissions, one question on one page, and turning back to the previous question not being allowed.
Afraid of the time limits - The computer screen displayed the time limits. This feature created feelings of anxiety for the students.

4. Conclusion

The quiz continues to receive increasing attention from the e-learning community. It offers various benefits, both for the lecturers and the students. Although the online quiz is not free

from technical issues and limits on student readiness, its advantages outweigh its weakness. For the newcomer to the online quiz, basic training is necessary to equip them with necessary basic knowledge before the quiz can be fully used. Although there are many free available online quiz applications on the website, the lecturer should choose the application wisely. Knowing the purpose of the quiz, knowing student readiness and knowing the limit of the available computer systems are among the best pieces of preparation advice that can be suggested from this paper.

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THE AUTISTIC INDIVIDUALS' STATUS OF COMPLIANCE WITH SOCIAL RULES

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Abstract

Autism has not become a problem only limited to individuals but also it has become a social phenomenon affecting communities as a whole. Thus, it has issued an invitation to sociological studies and has been the subject in this research. This study that has been in the form of a field study involving autistic individuals and their families in Turkey, that aims to point out "The Status of Autism Individuals' Compliance with Social Rules". This research is the matter of a qualitative research based on interviews with 42 participants who are the families of an autistic child and serve on the boards of two foundations and 15 associations aiming to fight with autism from Turkey's seven regions and 14 provinces. In this study, it is consulted to the knowledge, manners, basic perception and approaches of the participants having an autistic child. Data obtained from the participants has been transcribed and subjected to descriptive analysis. The data has been evaluated in 15 different categorizes. There are different results obtained; autistic individuals haven't obeyed social rules, imposed their request to social environment by crying, disliked social surroundings and behaved improperly, made trouble while they are guests, and wanted the guests of their family to go out. Therefore, this has been a distinctive study by discussing a topic that has not been analyzed before in terms of sociological aspects, and collecting first-hand data, and drawing striking conclusions/findings. Moreover, it has been assumed an important study as it indicates the presence of a deep link between autism and sociology.

Key Words: Autism, Social Interaction, Obeying Social Rules

1. Introduction

The word autism, consists of a combination of the Greek word "autos" (itself), and the Latin word "ismus" (a suffix regarding to an opinion, process, or procedure) [1]. The concept of autism, at first, has been described as the failure to establish relationships with reality and was called as childhood schizophrenia. The idea that autism is the onset of schizophrenia has changed by identifying the absence of hallucinations and delusions while they are seen in schizophrenia [2]. Since the persons with autism are constantly show communication disorders [3] their interaction and communication with other individuals gains a new qualification. Also, since; the persons with autism are hard pressed in interrelating between the events occurring in their interior world and the exterior world, their lack of forecasting skills [4], and also they fail "to comment on" or "share" their own experiences appropriately according to their age groups [5], their social interactions are weak. Thus, the term autism in this study is defined as; some repetitive behaviours those affecting individuals throughout life, limited communication skills and the lack of social interaction, [6], as well as a disorder disrupting individual's socializing function and alienating the individual in against their own nature and also society, in other words "that negatively affects the socialization of individuals and marginalizing (othering, externalizing) them against the outer world" [7].

1.1 Social Interaction Problems

Individuals of autism have limited attention to social stimuli. When called with their names they give very little response. They rarely establish eye contact with others [8]. Such non-verbal form of communication has a great effect on social behaviours. It is rare for them to walk up to someone, to respond to others' feelings and imitate them, do something with social insights as well as to communicate with them are weak [9].

1.2 The Language and Communication Problems

A significant proportion of individuals with autism do not have natural speaking skills enough to meet daily communication needs [10]. They are limited to express their wishes, and to share their experiences or they show a symptom

that is repeating what others say outside the actual context, or what they hear on television or around them, and what they read, which is called echolalia [11]. They have hard times to use personal pronouns like “I” or “you”. They either reverse the personal pronouns or use them in their entirely literal meanings, or they confuse them [6]. They need combined attention to make a functional speech, or such lack of attention may help to make sure they are different/special [5]. For example, they look at the pointing hand instead of the object that is wanted to be shown [8], and fail to "comment" or "share" their experiences in respect to their age levels [5]. Persons with autism has difficulty in games that require high level of imagination, and in translating symbols to spoken words [12].

1.3 The problems behaviour Which Affect the social interaction negativly

As well as some deficiencies in autistic individuals, some undesirable behaviour is observed. This behaviour is regarded as problematic behaviours. These problems are the behaviours of autistic individuals affecting to learn new skills, use their existing skills, and interact with their social environments, thus their social harmony, in a negative way. Especially behavioural and emotional problems are common among these individuals. Self-injurious behaviours, temper tantrums, and repetitive behaviours are some of the behavioural problems seen intensely. These kind of problems make it difficult the lives of individuals with autism, and prevent gaining new skills and interacting with the environment. Moreover, it is known that having eating and sleeping disorders are very common among them as well. They can face problems like having difficulties to fall asleep, waking up frequently at night, and waking up early in the morning [13].

1.4 Compliance with the rules of social status of individuals with autism

Every human learn the social rules with the help of socialization tools, during socialization process. Within this process, public rules of the social life are taught to individuals. Thus, individual’s social cohesion is tried to be gained since their younger ages. It is expected from them to exhibit appropriate behaviors fitting to the social rules/norms. However, if they do not demonstrate such kind of expected behaviors, it leads to a sort of fear or panic in social situations most of the time.

For example S1 stated that their child did not participate to the the social environment because they throw their saliva around or spit around randomly. Another example is that, when the child of K11-K12 (20 years old) attended a family wedding with them, he suddenly unbuckled his belt, dropped his pants down to the knees, and faced towards the bathroom because he needed to pee, caused people around laugh loudly with shocked and terrified faces. And this prevented the family going to such kind of events naturally. These examples illustrate that these kind of behaviors lead to a tension or fear-panic situations in social environments for the both sides in society. This causes, on one hand, families to become an object of derision, and lead them get embarrassed, hurt, or angry, on the other hand, causes in public some adverse reactions such as; fear, panic, negative views, or verbal abuse. So, this makes the families stay away from the social environment, as well as the public stay away from the individuals with autism with fear and panic. The expressions of K27 can be given as an example to this kind of situation. "We can not go and enter into any place… I cannot take my child with me to somewhere… We got so much of distress. When people see them they get afraid. They do not let their kids to play with them because they think their children’s psychology will get worse then. Things like these happen a lot ... We can not get on the public vehicles. We use our own cars to take them out. Like we do not have another choice... "(K27-Jale). Sometimes the society's response occurs as labeling or social exclusion, rather than fear and panic. The individuals or families faced such kind of attitude either hold themselves out of the society or narrow their social areas down. Therefore, the situation of individuals with autism and their families in the social environment show significant parallelism with each other. Persons with autism have difficulty of socialization at the beginning. Few of these can socialize in their later lives and act in accordance with social norms. Most of them lives without socializing and having difficulties in social adaptation. Persons with autism lives away from social rules, exhibiting unique behaviors that are unique to each of them.

2. Method

This research benefited from qualitative data collection techniques. In the study, observation and in-depth interview technique was used for qualitative study. Therefore, in-depth interviews were conducted through unstructured interviews with the individuals’ status of compliance/non-compliance to the rules of society who are the object as well as participants that are the subjects of the research

(parents of autistic individuals) in order to describe with all its simplicity. Alongside with the interviews and observations, it is tried to figure out how much the individuals with autism conform to social rules with the help of the various notes taken during the interviews, and some determinations during the data analysis performed. In field research, interviews were conducted with a total of 42 participants in 33 sessions. The talks began in 28.07.2012 and ended by 03.03.2013.

Autism is not just an issue where the children live. Perhaps families suffer more than the children with this problem. Therefore, parents know closely how their children behave in society. That's why it is assumed that the families a high awareness level regarding to autism, and they can express what is happening in the social universe in a better way. It is expected that the sample of this research will be more appropriate because the families are volunteers in the fight against autism and their high experience interest, information, and manners in this issue. In short, the participants with sufficient information equipment who are available for the field research are determined and who can provide necessary data for research, while the research sample is determined. It has been identified as the universe; 2 foundations and 15 association executives and members that can be accessed from a total of 25 foundations and associations established in 14 different provinces and Turkey's seven regions that will reflect the scope within and scope of features and by the families of autism individuals. In the selection of the sample it has been paid attention to three criteria. First, to interview at least one member plays a part in the management and the chairman of the foundations and associations board with among the sample; second, preferring a family that has an older (at least 10 years of age) child with autism can be members; and the third, carrying out the negotiations with members who has particularly older (at least 10 years old) female child with autism. In this election, it is especially taken into account that the families of children with autism that have acquired a certain social experience after living with them for a while.

First, it was determined to sample a total of 42 participants, coinciding with the first of the three criteria. During the talks, data were collected by asking the following questions abide by the social rules.

How is your child's abiding by the rules of society in social environment?

2.1 Social and Demographic Characteristics of Participants

Table 1 below shows the age, gender, education, marital status, income and occupational status on socio-demographic characteristics of the participants is given in a general framework.

Table 1. Participating Socio - Demographic Characteristics

Variable	Gender		
Age	Female	Male	Total
26-35	1	-	1
36-45	8	2	10
46-55	12	11	23
55- +	6	2	8
Education			
Graduate	2	3	5
Master	10	9	19
High School / Middle School	4+7	2+1	6+8
Primary	4	-	4
Marital Status			
Married	19	21	40
Single / Divorced	1	-	1
Widowed	1	-	1
Job			
Housewife	13	-	13
Teacher	1	1	2
Academician	-	3	3
Nurse	1	-	1
Tradesmen / Free	-	3	3
Farmers	-	1	1
Retirement	7	3	10
Officer	-	3	3
Doctor	-	1	1
Private sector employees	2	1	3
NGO Manager	2	-	2
Monthly Income			
500-1000	-	-	-
1001-2000	3	-	3
2001-3000	6	7	11
3001-4000	3	3	6
4001-5000	4	3	7
5001-+	6	2	8

As shown in the table above, participants consist of the families that are the members of different age, education, profession, and income groups. Only in marital status it is different; forty out of forty two members are married. The ages of most of the participants are being over thirty and the average age is being around fifty shows that the majority of the families living with autism for many years. This means that they have enough social experience.

3. Research Findings

3.1 Social Status of Compliance with Rules for Individuals with Autism

To be better understood what is desired here, this question was asked to the participants: "Autism is how states comply with the rules of society in a social environment for your child?" The answers to the questions have been tried to be presented in 15 sub-categories.

Strese yol açma (ebeveynlerin sosyal ortamlarda strese girmesine yol açma): "Bir kere en önemli şey strese yol açıyor. İstediğin bir ortam içinde sadece 3 saatlik olman gereken bir yerde 1 saat bulunuyorsun ve ayrılıyorsun. Bu da senin sosyalleşmeni engelliyor, sınırlandırıyor ve strese sebep oluyor ve gevşeyemiyorsun, rahatlayamıyorsun ve ertesi güne enerji toplayamıyorsun. Günlük yaşam içinde istediğin gibi var olamıyorsun. Kendini var edemiyorsun (K9-K10)."

Causing stress (Causing stress to the parents in social environments): "The most important thing is, it leads to stress. There is a place you need to stay 3 hours but you just stay 1 hour and you're leaving. And this prevents you to be social, limiting and causing stress and you cannot not ease off, can not relax and collect energy for the next day. You can not be as a person that you want to be in your daily life. You can not bring yourself into being (K9-K10)."

Not to know what is shame (exhibiting inappropriate behaviors in social environments): "For example, they do not know what shame is. That such a thing can get naked everywhere if they get wet... (K31)."

Failure to comply with social rules: "Social cohesion is already subject to our biggest problem. For example, they do not have anything to do with their peers. When we enter a society they sometimes can be very awkward. For example, he loves to hop and jump around. By hopping, he can walk through crowd while shouting. Or go forward in a rush... (K11-K12)."

Impose their demands by crying out: "When he sees things like books, or just a fruit juice, you have to buy them, or he throws himself on the ground and starts beating the floor ... (K26)."

Since they do not socialize preventing you to do that too: "Since he does not socialize he makes us asocial too. Frankly, we are very compelling. But we are resisting. He does not like to visit their homes. We're doing it again, trying again. He has been crying at malls, goes out, and then we go get him back inside again. For now, we are pushing it because we are strong enough and healthy. But that also cuts us down, I'm doing 2 instead of 10.(K33)."

Getting bored in wherever they are: "She does not want to stay there when you take her out somewhere. For example, I cannot take my kid and go to a wedding or an event… To stay still at somewhere … There is no such thing for them… (K30)."

Dislike behaviors in social surroundings and Acting contrary: "When we go to places that I know and I like, she shows a great resistance. So never enjoys ... Collects all the pictures in people's homes. Opens women's dresses. There are nonsense movements of her (K34)."

Inability to spend time alone: "She can not spend much time with herself, so we have to make programs on her behalf. Then also restricts us to go somewhere. Let's not go, I sit at home, we either go to the same restaurant always or just not go anywhere ... (K38)."

Making trouble while at somebody else's house: "When we go to a place, he wonders the man's bedroom even. Fiddles with every single room. Looking in the fridge... (K6)."

The whole world is being his mother only, nothing else: "The whole world is his mother, he gets bored when he is out of that world. Makes noise with his mouth, turns around in his axis ... or when he wants something that he wants to throw himself on the ground ... (K20)."

Not accepting guests to home: "In the past you could bring home guests. Now he does not want anyone to come. Gets annoyed. Because you must sit and constantly deal with him. When someone else comes he does not want me to chat with him (K16)." "He does not want guests. If someone comes home, he would done anything to disturb... (K30)." "When someone comes as a guest, he asks when they will leave, and will not want them to stay at night... (K38)."

Not being able to abandon the plan: "Our biggest problem is our social cohesion. There are difficulties in socializing. (What kind? Researcher) I mean, we can not go to a too noisy place. I mean we go there but we can not stay for long. We do not like such places (K18). And you must tell him what to do and not to do prior to going somewhere… Or it is even more difficult for him ... Well, you can that like: "Melik! We'll go to Tekirdag tomorrow. There we'll do some shopping. Then we are going to the village; to grandmom... "And now you have to practice what you just said. Tomorrow you go and do your shopping, no problem so far. So if you take him to a different place he can give you a slightly different reaction. So if you said that you will go

to grandmother, you have to go there. We are a little prescriptive… (K19)."

Blocking to meet a friend: "I have friends with children of autism. In the past we'd go to the park together with Hakan, not developing an obsession against other children. We'd visit each other's houses. We'd go swimming or we were together in the course. Now Hakan does not want to see my friend's daughter because she screams. This made things complex with our friend. Let's say there is a dinner all together, we do not participate if he does. We participate if he does not. (K16)."

Not to enter crowded and noisy places: "His social interaction has been restricted a little in recent years. Because there are a lot of things with Hakan; cry, scream sounds etc. He feels uncomfortable. If that continues, he gets nervous. That's why we can not go to markets when crowded, or the playground. We're going to the market during weekdays except rush hours instead of weekends. Behold, I can say we are running a little crowded. That's why we reduced social interaction ... (K16). "" Oh there is a difficulty in social life given by environmental factors. To turn off the ear is very sensitive to loud noises Atahan wants to get out of there as soon as possible. You know, and he does not want to be touched in the crowd. (K21). "" Even the wedding of a relative does not like to share that we go environment. He does not want to enter crowded areas ... (K39)."

Narrowing the social space while growing up, and unnecessary fears: "We were going to everywhere when he was a kid. But now he does not go anywhere. He can not take the bus. But now I had a car, thank God. He goes where I want to go if I get him in the car. I can not ever go around the streets holding hands with him. It is because it was very difficult to catch him when he suddenly runs away. This happened a couple of times. Sami also has a fear of doctors and hospitals. He is having something like a panic attack, so intense. He thinks everyone will give him injection. He is even so afraid that his heart beats so fast I think he will have a heart attack. This is so serious but when I tell it to doctors they don't understand. They tell me to take the child to them. I cannot go walk on the street because of this reason. If he sees a large building, he thinks it's a hospital ... "Oh my God, they will do injection!" He says and starts running. He maybe will go around normally but he scares of such things a lot. So we just come and go somewhere by driving... (K31)."

4. Results

This study has come out to enlighten the complience/non-compliance situation of individuals with autism to social rules, mostly of the individuals that show more intensive behavioural problems. The negative impact of autism on individual's behaviours and the outcomes resulted from it, has led to the situation described as "abnormal". Because individuals with autism, as they are deprived significantly from lifelong communication skills, , they have difficulties in nourishment, self-care and cleaning, tend to be limited daily living habits, sleep patterns, socialization, and also go through a natural alienation. As a result of all these deficiencies, independent lives of autistic individuals cannot develop. Their social cohesion is being very weak, and they are deprived of the culture of living together with other individuals. Thus, autism, has taken the family members (parents, siblings) of these individuals and their relatives to a limited social life that surround them and keep them away from the center of social life. As a result, this causes a significant and negative distance between those affected by autism and the community and social life in terms of social interaction and relationships. That's to say, with autism, individuals, cannot have a chance to get involved in social life by their own efforts, yet they are not allowed to be included in social life by society as well. In both ways, due to having very poor ties that bind them to social life, it is possible to describe autistic individuals as "those outside the society" or "lost groups in society". Because the features of behavioural range of these individuals with autism that are specific to each individual significantly differed from the social behaviour patterns. This has emerged as a result of a reflection that these individuals' interaction or non-interaction with the community they live in. Autism in this sense; leads to significant results such as; parents to get stressed out in social environments, autistic individuals having lack of social manners and the feeling of shame in front of public, the failure to comply with social rules, imposing their requests in public spaces by crying out, getting bored easily in social settings, showing dislike behaviours in social situations and improper actions, being unable to spend time alone, making trouble as being guests of others, rejecting guests at their home, seeing the whole world as their mother and unable to live without her, not being able to flexible to get out of the plans that were already done, failure to enter the crowded and noisy environments, narrowing

down their own social area while they grow up, and having unnecessary fears.

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BIOLOGY MODULE USING THINK PAIR SHARE STRATEGY TO IMPROVE THE LEARNING MOTIVATION OF THE VOCATIONAL HIGH SCHOOL STUDENTS IN MALANG

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Abstract

The research was conducted with the objectives of finding out 1) the appropriateness of the Biology module using think pair share strategy on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme 2) the improvement of learning motivation of vocational high school students in Malang.

The population of this research was the students of vocational high school in Malang. The sampling technique applied was purposive sampling. The variables of the research were the appropriateness of the module and the learning motivation score. The data collecting technique used was questionnaire which was filled in by the experts of education and the learning motivation test on Biology with the topic of virus, archaeobacteria and eubacteria, fungi, and enzyme. The data gained was analyzed descriptively.

The result of the research revealed that the Biology module using think pair share strategy on Virus, Archaeobacteria and Eeubacteria, Fungi, and Enzyme was appropriate to be used as the teaching and learning material for the vocational high school students in Malang. 2) The learning motivation of vocational high school students in Malang could be improved by the Biology module using think pair share strategy on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme. The gained score was 0,655.

Key words: Module, Think, Pair, Share, Learning Motivation

1. Introduction

The enclosure IV of Permen Diknas Number 81A, 2013 states that the learning process needs to use principles: 1) The student centre 2) The improvement of students' creativity 3) creating fun and challenging condition 4) Containing value, ethics, aesthetics, logic, and kinesthetic, and 5) supplying various learning experiences by applying fun, contextual, effective, efficient learning strategy and method. One of the cooperative learning strategies which can be applied and make the principle of learning run well is Think Pair Share. TPS was chosen in the process of Biology learning in Vocational High School because it stresses on the thinking process, teamwork and sharing ideas.

Biology is not the compulsory subject for all vocational high school students. It is only compulsory for students in Agricultural Business, Agricultural Technology, Fishery, Nautical and Nursing Department. In each department, the basic competencies which the students learn are different. Based on the interview result with the teachers of SMKN 13 Malang which has three department : Agro Business, Nautical, and Nursing, it can be concluded that the students' weaknesses are 1) low motivation in gaining high achievement because their orientation is only to graduate and get jobs. The questionnaire in the previous study revealed 37.7 % students highly agree that the targets of the vocational high school students are to graduate and get jobs and 25.5 % agreed to the statement, 2) 22.1 % are not interested in learning Biology because it is not tested in the final examination, 3) Low learning motivation in Biology because it is not productive subject. 41.2 % students highly agree. 23.5 % students agree to this statement. The students' respond toward high learning motivation is only 7,4 %. It means

only 7.4 % students like to learn Biology. (Chotimah, 2014)

One of the learning strategies that can create collaborative situation in learning Biology is Think Pair Share. It is hoped that TPS can improve the learning motivation, social attitude and critical thinking. These three abilities should be owned by the vocational high school students. The reasons to use TPS are 1) the steps are easily conducted, 2) It is easy to apply in the classroom or laboratory, 3) it is a simple learning strategy, 4) it provides equal participation. Each group has equal opportunity in sharing ideas, 5) it creates intensive interaction among the group members to give and listen ideas or opinions.

Those statements are coherent with Sumale Siksen's opinion (2013) which stated cooperative learning in TPS is a simple type with many advantages because it can increase the students' participation and build their knowledge. The TPS procedures make the students learn each other. They will try to give opinions in non-competitive situation before they present their opinions in front of the class,

TPS is one of cooperative learning strategies which emphasizes on thinking process, grouping, pairing and sharing. The previous research shown that TPS or the combination of TPS with other strategies help the students to improve their cognitive learning result, critical thinking ability, interest, and team working in the group. (Suyanik, 2010, Haerullah, 2012, and Chotimah, 2014).

Module is chosen because it guides the students to learn Biology by themselves and apply the knowledge to their working area. The students who are on job training can learn the material in the module by themselves. It can be said that the module helps the teacher in providing a qualified learning process. It presents a well-planned, independent, thorough learning activities and a clear output. (Depdiknas, 2008).

The research was conducted with objectives of 1) finding out the appropriateness of the Biology module using think pair share strategy on Virus, Archaeobacteria and Eeubacteria, Fungi, and Enzyme, 2) improving the learning motivation of the vocational high school students in Malang.

Module is one kind of teaching and learning material which is composed wholly and systematically. It consists of at least the learning objectives, the learning substances, and evaluation. It functions as a learning media which is independent so that the students can learn own their own speed. (Daryanto, 2013)

Depdiknas 2008 defines module as a tool or learning media which consists of material, method, topics, and ways to evaluate. It is designed systematically and attractively to gain a wanted competency which is relevance with its complexity. In short, module is a learning package which consists of a concept unit from teaching material and is composed to help the teacher and students to achieve certain objectives which are formulated specifically and clearly.

The scopes of the module writing are 1) it is used by the students, 2) Hopefully it can change the students' attitude, 3) it is suitable with the students' need characteristic, 4) it copes specific objectives and learning operation, 5) it covers all material items in details and supports the objectives achievement, 6) the evaluation in the module can measure the students' success, 7) the draft of module writing is suitable with the requirement, 8) there had been trial, validation and improvement so that the module is ready to be produced and multiplied. (Depdiknas, 2008)

The module writing objectives are 1) it clarifies and eases the presentation of the message which is too verbal, 2) it resolves the time, space and sense power limitation, 3) the data is used properly and variously, such as to improve students' learning motivation and passion, to expand students' ability in interacting directly with the environment and other learning process, to enable the students to learn independently, and to correspond with their ability and interest, to enable the students to self measure or evaluate the result of the study. (Depdiknas, 2008)

Module should be designed and improved using the required elements. There are six required elements to compose a module. They are consistency, font size, and space. (Depdiknas, 2008). The improvement of the students' module covers the knowledge, skill, and attitude which are required to master a competency.

Motivation in learning has some functions such as: 1) boosting human being s to do or act. Motivation is the booster that will make human beings do activities, 2) determining the purpose of the deed which will be acquired, 3) solving problems which is related to the objectives of motivation by culling the useless deeds (Purwanto, 2002)

2. Methodology

The design of the research can be seen in the following chart. The population is the students of vocational high school in Malang. The sampling technique is purposive sampling. The variables are the appropriateness of the module and learning motivation score. The data collecting technique used questionnaire which

was filled by the experts of education and learning motivation test on Biology with the topic of Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme. The data gained was analyzed descriptively.

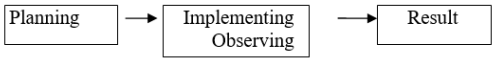

Figure 1. Steps of Research

3. Finding

The appropriateness of the Biology module using think pair share strategy on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme which had been validated by the experts can be seen in Table 1.

Tabel 1. The appropriateness of the Biology module using think pair share strategy on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme which had been validated by the experts

No	Aspects to be scored	Score Scale			
		1	2	3	4
1	**Self Instruction**				
	1. Stating the objectives of learning activity clearly and enabling the students to picture the achievement of the basic competency.			√	
	2. Stating the learning material which is serried into small units in order to make the module easy to be learned			√	
	3. There are examples and illustration supporting the clarity of the material		√		
	4. There are exercises and assignments which enable to measure the students' achievement				√
	5. It is contextual. The material presented relates to the situation, assignment, activities context, and students' environment			√	
	6. It uses simple and communicative language				√
	7. It stimulates students to make summary		√		
	8. It provides self-assessment instrument				√
	9. the feedback so the students can measure their level of achievement			√	
	10. There are information from references and reinforcement which support the material			√	
2	**Self Contained**				
	11. It is self contained. It loads all learning material			√	
	12. It gives the students the opportunity to master it thoroughly			√	
3	**Stand Alone**				
	13. It stands alone. It does not depend on others text books or medias. It does not need them in the same time		√		
	14. Students do not need other books or medias to learn and do the exercises		√		
4	**Adaptive**				
	15. It is adaptive. It adjusts to the development of knowledge and technology			√	
	16. It is flexible to be used with various hard wares			√	
5	**User Friendly**				
	17. Every instruction and information help and are friendly to the user			√	
	18. It is easily used, responded, and accessed in accordance with the user's desire. The language and terms are easily understood			√	
	19. The language and general terms are simple and easily understoond			√	

The experts scored 3.3. This score is classified as highly approved (Adriyana, 2004).

The result of the research related to the learning motivation can be seen in Table 2.

Table 2. Pre-test and Post-test for learning motivation on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme.

No	Material	Pre-test	Post-test	Gained score
1	Virus	51,20	87,20	0,655 (high)
2	Archaeobacteria and Eubacteria	44,80	83,80	
3	Fungi	51,20	74,00	
4	Enzyme	48,60	84,60	
5	Average	48,95	82,40	

Based on the table 2, it can be revealed that the gained score is 0,655. It means that the Biology module using think pair share strategy on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme can improve the learning motivation of the vocational high school students in Malang.

4. Discussion

Based on Table 1, the appropriateness score for the Biology module using think pair share strategy on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme is 3.3. It means that the module is deserved to be used as the learning media by the vocational high school students. This module has been revised by 1) adding the examples and illustration which support the clarity of learning material, 2) changing the sentences in order to make the students easy to summarize, 3) completing the module with more concepts so that the students do not need to find other books. Those facts are accordance with Darmiatun , 2013. She stated that to produce a module which can improve the students' learning motivation should regard the following characteristic: 1) self instruction, 2) self contained, 3) stand alone, 4) adaptive 5) user friendly. The module was implemented to 59 students after it was revised. The module can be individual module or series of module. The activities in module consists of inquiry oriented process, problem solving, the opportunity in using social skill. Besides, there are experiment activities, role play, group discussion using concepts and facts provide in the module. The learning system using module has been develop in this country and abroad (Vembrito, 1985)

Setyowati's research (2011) shows that the implementation of module on the garbage management using society science and technology can improve the students' behavior and learning motivation. According to Utomo (2012) the students' worksheet in a module has power not only focusing on cognitive part but also affective and psychomotor. Module can be also used inside and outside the classroom, with or without teachers' guidance, and facilitates students to learn by themselves and develops the students' creativity and potency to reach the learning objectives.

Nasution (2000) thought that a module which is composed well can give a lot of advantages, such as: 1) it can improve the maximum teaching and learning activities, 2) students ar more active because they have to solve problems and do some activities in the learning process, 3) it can give much feedback sooner so that the students know their mastery level, 4) they can do the exercises directly because the module supplies clear instruction, 5) the students can learn by themselves without the teacher or other textbooks because it arranged well.

SBB (Sistem Belajar Bermodul) is a learning system using module had been developed in various shapes and names, such as Individual Study System, Self –Passed Study Course, Keller Plan (Tjipto Utomo and Kees Ruijter, 1990, in Santyasa, 2009). Each of them uses different learning activities plan, but the objesctives are just the same. These objectives are 1) to shorten the time needed by the students to master the learning assignment, 2) to supply time as much as they need but it is still limited by the regular organized education.

The implementation of module using TPS has been able to improve the students' social ability because they feel a) there are positive dependency among classmates since they learn from each other, b) they respect individual accountability for they have to share ideas to their pair, pair to the other pair, and pair to the whole class, c) they have the same opportunity to participate. There is no domination. d) The interaction is high because they will be actively involved in deliberated speaking and listening.

Jones (2002) suggested that the module using TPS strategy which is made the researcher has given opportunity to the students to write the answer and solve the problem by their own thinking (in the thinking level). It also suggested the teacher make the students more aware about giving logical answer for the questions although there is no the most correct answer. Next, every

student discusses the answer with his/her pair to get the comprised answer. Together they will formulate their answer based on the comprised point of view (pair level) and the last step is the pair has to join other pairs to share and combine their previous answer before they share it with a larger group (share level). The arrangement of small group is less frightening for the individual. The grouping will encourage them to speak. It will be different if they have to speak directly in front of the class. In this last level of implementing the module using TPS, the students will get advantages in the form of listening various opinions about the same concept which will be presented in the different point of views. It happens because every student has a unique way to answer the teacher's questions presented in the module. Moreover the concepts revealed in the students' answers use their own language which is more communicative compared with the language in the textbook or the teacher's language.

Module using TPS has changed the learning environment from the classroom which is arranged formally, quiet, and the teacher's voice dominates into the learning environment in which each student has to defend his/her opinion when they work in pairs. It also helps the teacher to motivate the students to participate and create a collaborative community. The students' role gives direct impact to the final result of the learning process and their motivation. (Fitzgerald, 2013)

Keller (1983) had arranged a set of motivation principles which can be applied in the learning process. It is called ARCS model (Attention, Relevance, Confidence, Satisfaction). This model expresses four categories of motivational condition which should be looked by the in attempt to produce interesting learning activities.

Attention has indicators such as 1) liking the lesson, 2) having curiosity, 3) awareness toward assignment, 4) finishing assignment punctually, 5) the class tranquility. Relevance has indicators 1) understanding what the students are learning, 2) there is a connection between a given material with the material they are learning, 3) the material is suitable with the students' desire, 4) relating the lesson with their daily life, 5) the suitability of learning method, 6) the feeling compelled to learn, 7) the usefulness of the teaching material. Confidence has indicators 1) a belief to be successful, 2) a belief toward learning material, 3) a belief to understand the material, 4) having ideals, 5) reading books related to Biology, and 6) self-confidence. Satisfaction indicators are 1) the satisfaction toward learning result, 2) pleased with the reinforcement, 3) willingness to help classmates who are still unsuccessful, 4) the presence in the classroom, 5) the desire to get the best achievement, 6) the pleasure in learning, 7) the satisfaction in joining the class, 8) satisfaction every time they get tests. Table 2 shows that the gained score is 0,6555. It is got from 59 students as the sample of the research. It means that the Biology module using think pair share strategy on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme can improve the learning motivation of the vocational high school students in Malang.

Learning motivation is psychological factor which is non-intellectual. Its specific role in the learning process is to improve the passion, pleasure and spirit. It is the booster which pushes and forces the students to learn. It is a respond from the students as they are in the process of learning. It gives power to boost the attitude toward certain direction. It is measured by the students' motivation questionnaire which is filled by the students. The four components of motivation are attention, confidence, satisfaction, and relevance. The learning motivation is a factor which influences the effectiveness of students' learning activity. Psychology experts define motivation as a process within an individual that will boost, direct, and keep the students' attitude at any time. (Slavin, 1994). Motivation is also defined as the influence of the needs and desires toward intensity and direction of someone's behavior.

Motivating students means move the students to do something in order to achieve the objectives. The teacher who is successful in making his/her students happy, feel accepted, and respected as an individual has a great chance to bring out the students' enthusiasm to learn and willingness to be creative and open to explore new bright ideas and innovation (Nur,2003).

5. Conclusion

Based on the research, it is found out that 1) the Biology module using think pair share strategy on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme is deserved to be used as the learning material for the vocational high school students in Malang 2) the learning motivation of vocational high school students in Malang can be improved by the Biology module using think pair share strategy on Virus, Archaeobacteria and Eubacteria, Fungi, and Enzyme.

THANK-YOU NOTE

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PERFORMANCE OF THE BASIC EDUCATION PROGRAM IN THE IMPLEMENTATION OF EDUCATION FOR ALL SALATIGA CENTRAL JAVA - INDONESIA

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Abstract

This study aims to analyze the basic education program as the implementation of education for all. Evaluation of the program by using the model CIPP (context, Input, Process and Product). The study was conducted with a qualitative approach conducted in Salatiga. Technical data collection using documentation studies, interviews and focus group discussion. Which is the source of information is the officials of the Department of Education, Regional Development Planning Agency, the Office of Management and Financial Policies in Salatiga. Research. The results showed that the primary education program in Salatiga has managed to create the access and equity. The gross enrollment rate (GER) at primary school level of about 115,53 % and junior high school of about 125,43 %. While the net enroollment rate (NER) on SD / MI approximately 110,20 % and SMP : 93,80 % . Evaluation of basic education programs still show problems in terms of quality and support costs. Improving the quality of education has not been backed up with the kind of teacher education that is relevant to elementary and Subjects. School Operational Cost sourced from state and local budgets can not meet the needs of the school budget.

Keywords: Evaluation, Basic Education Program, CIPP

1. Introduction

Quality of life is determined by education attained by a person. Education will change in a positive way (to improve and develop) the ability to match a person's potential. The ability to read, count and write the basis for understanding, explaining, analyzing, evaluating up to troubleshooting.

The relative definition of quality has two aspects to it. The first is concerned with *measuring up* and ensuring conformity to a predetermined specification. In an industrial setting quality is achieved by products or services meeting a predefined specification in a consistent fashion. Quality is demonstrated by a producer having a system, known as a *quality assurance system*, that supports the consistent production of the good or service to a particular standard or specification (Sallis 2002: 13)

The Indonesian government to guarantee basic education to the population without exception. It is mandated in Article 11 of Law No. 20 of 2003 follows:

The Government and local governments have to provide services and facilities, and ensure the implementation of quality education for every citizen without discrimination. The Government and local governments have to ensure the availability of funds for the implementation of education for every Indonesian citizen from aged seven to fifteen (Article 11 The Law 20/2003).

The Indonesian government along with 189 other countries have agreed to realize the millennium development goals. The second g*oal of MDGs is Achieve Universal Primary Education.* Target 2.A: Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling. The measurement for this target in Indonesia uses the following indicators: (1) Primary school net enrolment ratio (NER) 7–12 years); (2) Junior high school net enrolment ratio (13–15 years); and (3) Literacy rate of the 15–24 year age group.

Education is one of the authorities handed over to the district / city of the autonomous regions that began in 2001. Under this policy, the local government is expected to solve the problem of human resource development through education. Riel issues in education are access, quality and equity of education. It as the implications of the differences in resources, the availability of budget, public awareness and commitment from the leader of the regional government.

Indonesia's ambitious decentralization program is transforming the nature and level of public service delivery, including education. How decentralization applies to the education system has been defined in Education Law 20/2003, which transfers the principal responsibilities, authority, and resources for the delivery of education to lower levels of government, while some decisionmaking power is transferred to schools themselves. There are four key conditions for decentralization to overcome barriers and stimulate educational development: (i) clear division of responsibilities and power among the different levels of government, (ii) greater decisionmaking power and autonomy to local governments, (iii) greater voice of teachers and parents on how schools operate, and (iv) effective accountability mechanisms and financial structures that are consistent with educational goals (The World Bank : 2004:15).

In terms of financing basic education, Ismanto states that The government guarantees the implementation of decentralization by allocating government budget (Budget). Financial balance between the Government and the local government as the distribution system based on the principles of fairness, proportional, democratic, transparent, and accountable in the funding of decentralization, taking into account the potential, conditions, and needs of the area and the amount of funding of deconcentration and assistant task.

Education in Indonesia is strategically aligned with the achievement of Education for All (EFA) goals as agreed by UNESCO Member States on Dakar convention in Senegal, 2000. The Education for All goals to be achieved in 2015 as stated in Dakar agreement are: First, expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children. Second, ensuring that by 2015 all children, particularly girls, children in diffi cult circumstances and those belonging to ethnic minorities, have access to and complete, free and compulsory primary education of good quality. Third, ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programs. Fourth, achieving a 50 percent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults. Fifth, eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality. Sixth, improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

Based on the results of the 1945 amendments IV (fourth) in 2002 is about education, forms of government support has poured in Article 31, paragraph 1, 2, 3, 4, and 5. Especially for financial support explicitly stated in Article 31, paragraph 4, which reads "The State prioritizes education budget at least 20% of the State Budget (APBN) and of Revenue and Expenditure (APBD) to meet the needs national implementation ".

Strategic Plan of the Ministry of Education and Culture of the Republic of Indonesia Year 2015-2019 prepared by several paradigms that are universal, national, in accordance with the values and the condition of Indonesia. Paradigm is meant Education for All; Lifelong Education; Education as a movement; Produce Education Learner; Shaping Character Education; Exciting school; Building Education Culture; This paradigm is the basis for the determination of personnel and formation of Vision Ecosystem Education and Culture Based Character with the Mutual Cooperation. Seven educational ecosystem elements are as follows: 1. Schools Conducive; 2. Teacher as encouragement; 3. Parents Involved On; 4. People are Very Concerned; 5. Important Role Industry; 6. Professional Organizations Contribute to the Great; 7. Optimal Role of Government.

Indonesia will increasingly depend on greater levels of educational attainment and a more highly skilled workforce if it is to develop a more advanced and diversified economy and improve its international competitiveness. The trend towards greater open trade within ASEAN and with People's Republic of China and other nations, will intensify the need for Indonesia to catch up. Resorting to protectionist economic policies would only hold Indonesia back by sheltering its firms from competition that drives innovation, reducing its attractiveness to foreign investment, and encouraging an outflow of its most highly skilled people (OECD : 2015:28).

Strategic Goal 4 on a plan of Strategic Ministry of Education and Culture is the Quality Improvement and Relevance of Learning Oriented Character Formation Improving the quality and relevance of learning at all jenjeng education in the next five years focused on character building of students, trainees and courses, as well as adults. Improving the quality of early childhood education is one key to the

success of education at the next level, so that the focus of improving the quality of early childhood education in the next five years is to increase compliance with the standards of early childhood services. Improving the quality of basic and secondary education learning supported by more and more involvement of students in the class interactively, so as to encourage students' creativity, the power of critical thinking and analytical skills. Targeted increase in significant gains in national test results and the results of international tests. Quality improvement in primary and secondary education is closely related to the development and implementation of the curriculum as well. Character education is meant to build character, build character, and develop the personality of students. Meanwhile, citizenship education is intended to increase national awareness in among school-age children, thus forming an understanding of the social plurality and cultural diversity in the community, which affects the willingness to build social harmony, cultivate an attitude of tolerance and maintain unity in diversity (MoEC:2015).

Evaluation of the performance of basic education in Salatiga be of strategic importance. Basic Education SD / MI and SMP / MTs is mandatory for the entire population aged 7-12 years. Government provides learning facilities and the operating budget for the provision of basic education. Primary education became a priority program in the vision of the development program of Salatiga Year 2011-2016. Evaluation of the program implemented by the CIPP method. According to Stufflebeam (2007: 331), states that The CIPP Model has a strong orientation to service and the principles of a free society. This models is based on learning by doing and an ongoing effort to identify and correct mistakes made in evaluation practices. This means that the core values of the CIPP includes 4 key importance is the context (goals), Input (plans), processes (actions) and products (outcomes). CIPP is relevant to the evaluation of educational programs as a strategy for human resources development in the era of regional autonomy. Decentralization, local government and the community having an ample opportunity to identify needs and potential resources to improve the welfare and quality of life. Basic education becomes an important and strategic, performance will determine the quality of basic education students go on to high school or vocational school.

2. Method

This study was conducted using a qualitative approach to the evaluation of basic education programs in Salatiga. The evaluation was done by the context, input, process and product (CIPP). According to Stufflebeam (2007: 126), The CIPP model's core concept are denoted by the acronym CIPP, which stands for evaluation of an entity's context, input, processes and products. Contex evaluations assess needs, problems, assets and opportunities to help decision makers define goals and priorities and to help the relevant users judge goals, priorities, and outcomes. Input evaluations asses alternative approaches, competing action plans, staffing plans, and budgets for their feasibility and potential cost – effectiveness to meet targeted needs and achieve goals. Process evaluation assess the implementation of plans to help staff carry out activities and, later, to help the broad group of users judge program implementation and interpret outcomes. Product evaluations, identify and assess outcomes – intended and unintended, short term and long term – to help a staff keep an enterprise focused on achieving important outcomes and ultimately to help the broader group of users gauge the efforts succes in meeting targeted needs.

Technical data collection is done through the study of documentation, interviews and Focus Group Discussion (FGD). Documents sourced from the basic educational performance Education Profile, Performance Report on Education for All, Report on Accountability Description Salatiga Mayor of the Year 2015. Interviews were conducted with officials of the Regional Planning Board and the Department of Education, Youth and Sports, Department of Regional Financial Management, Salatiga , FGD conducted with officials related to planning and monitoring the implementation of educational programs, community, Supervisor and Principal, and NGOs in Salatiga. Data analysis was conducted according kosepsi (Miles and Huberman: 1984), with the steps of data reduction, data display and conclusion / verification.

3. Results

Vision Salatiga in 2011-2016 was "Salatiga as a prosperous, independent and dignified". Based on this vision, there are three focus areas of development: education, health and small and medium enterprises. In the field of education, especially with regard to quality improvement at every level of education, development of educational facilities, the availability of quality

education and equitable access to education, and the availability of scholarships for disadvantaged students. The field of education becomes the focus of the development program on the grounds that education is meeting the basic needs of society and improving the quality of human resources. Through qualified human resources can be used as capital for Salatiga for development towards the welfare of society.

Local Government Salatiga establish basic educational policy is (1). Improving access to and expanding learning opportunities for all school age children in quality either through formal education and non-formal education channels with the main target the poor, (2). Improving the quality and relevance of basic education, so that graduates have the basic competencies to live in the community and / or continuing education to higher education. (3). Improving the quality of school culture and school management efficiency, as well as governance and management accountability utilization of education resources so that all agencies can perform their roles effectively and efficiently. strategy implementation conducted, as follows: (1). Increasing the quantity and quality of compulsory education movement in Salatiga by involving various related elements. (2). Prioritizing programs that directly have a direct influence on improving access, quality and relevance of the implementation of the 9 year basic education program. (3). Enhancing the role and participation in various forms to support the 9 year basic education program.(4). Improving the curriculum and technical assistance to support its appropriateness. (5). Make special efforts more effectively and efficiently targets for working people who are not affordable by organizing a variety of alternative education, (6). Providing full authority and responsibility to the Government of Salatiga to support the implementation of the 9 year basic education (RPJMD Salatiga 2011-2016).

Population aged 4-6 years of school in kindergarten / RA 2015 approximately 72.34%, up 11.20 compared to 2014 (61.14%). This indicates that in Salatiga, still relatively many students of class 1 SD / MI who do not follow the pre-school. It also means that there are students in SD / MI were age 6 years or ineligible compulsory school age (7 years). This has implications for the management of SD / MI primarily grade 1 teacher to prepare specifically in reading, writing and arithmetic. Population aged 7 -15 years in Salatiga who attended classes SD / MI and SMP / MTs already reached the target. The gross enrollment rate of population aged 7-12 years enrolled in primary school / MI 2015 approximately 115.53%, up 5.33% compared to 2014 (110.20%). While the net enrollment rate in 2014 of about 94.18%, in 2015 rose approximately 16.02% to 110.20%. The gross enrollment rate of population aged 12-15 years were enrolled in SMP / MTs in 2015 approximately 125.43%, up 10.48% compared to 2014 (114.95%). While the net enrollment rate in 2014 of about 81.98%, in 2015 rose approximately 11.82% to 93.80% (Education Profile of Salatiga Year 2013). The increase in education NER in Salatiga relatively large as the implications of the increasing number of students who come from outside the city of Salatiga. Conditions as the implications of the geographical location of Salatiga is located in the middle of Semarang District administrative area and the quality of education. The existence of basic education facilities in Salatiga relatively affordable so rely more efficient for the people of the District of Semarang, Boyolali and Magelang regency. In addition, the quality of basic education development Salatiga become strategic considerations surrounding communities.

4. Discussion

Discussion of the research conducted by the evaluation approach to context, input, process and product (CIPP) of the Basic Education Program as the implementation of education for all in Salatiga. Evaluation is based on a critical review conducted by the performance targets of compulsory education and development programs in 2015 compulsory basic education into a determinant of success in entering secondary education. Evaluation is also linked to the quality of management education SD / MI and SMP / MTs in Salatiga. The issue of quality is essential and strategic autonomy. This is relevant to the study of the World Bank (2014: 19), which states that :

Improving education quality across the system is the key educational challenge for Indonesia today, and even concerns about equity and serving the poor must be couched in terms of universal access to education of acceptable quality. Decentralization can potentially help to meet this quality challenge—by spreading the governance and managerial responsibility for improving better education across different stakeholders, by strengthening accountability mechanisms, and by enhancing incentives to innovate.

The context of the basic education program in Salatiga as the implementation of compulsory

education is mandated by the Constitution of 1945, Act No. 20 of 2003 on National Education System, the government's commitments in the Declaration Development Goals Millennium especially Education for All and Development Priorities Salatiga in 2011 - 2016. This means that the basic education in SD / MI and SMP / MTs in Salatiga inplementasi national program. Decentralization of educational programs to local governments mendinamiskan Salatiga in the implementation of educational programs. In the context of regional development, education as the implementation of the Development Vision for the Year 2011-2016, which Salatiga as a prosperous, independent and dignified. More specifically, the implementation of the vision of education as a "prosperous" in improving the fulfillment of basic services. As a priority development, education becomes the focus in the setting of Medium Term Development Plan, Work Plan and the Local Government Development Budget and Expenditure. It is as the implications of Salatiga as Education City. In an effort to improve access, equity and quality of basic education, the Government outlines RPJMD Salatiga, and the Education Strategic Plan to the Regional Action Plan for Education for All. This plan describes the output (target) EFA into the activities to be carried out the Department of Education, Youth and Sports Salatiga. It can be concluded, in the context of the basic education program as the implementation of a national education program, the focus of the MDGs and Local Government in improving the quality of human resources.

Input basic education program in Salatiga relevant to Education For Alls.Jumlah SD in Salatiga as many as 107 units with as many as 19 232 learners. Total SMP / MI 41 units with as many as 11 071 learners. All students TK / RA is accommodated as a learning group in SD / MI. Similarly, graduates SD / MI prepared to enter the SMP / MTs. The ratio of students per teacher in elementary school in 2015 around 14.13 and SMP / MTs: 13.35. Feasibility teachers teach in SD/MI, SMP/MTs and SMA/SMK is certified Bachelor Degree or Diploma IV and higher (Act 14/2005: Teachers and Lecturers). The number of teachers teaching in primary schools worthy of 1,064 people or 79.40%. Teachers are not worth teaching at primary school level by 276 people or 20.60%. Teachers eligible to teach in junior high as 726 (89.52%) and inadequate teaching: 85 (10.48%). Low teacher eligible in elementary, because most teachers are still educated Diloma II. Classrooms as a vital infrastructure of the school is divided into three conditions, namely good, slightly damaged and severely damaged. At the elementary level good infrastructure amounted to 611 spaces, or 86.06%. The number of classrooms in the SMP was good for room 357 or 89.92%. Meanwhile, the number of classrooms in elementary heavily damaged by 19 spaces, or 2.68%. The amount of space the computer in elementary good by 61 or 81.33%, damaged by 14 spaces or 18.67 while the computer room at the SMP was good for 24 spaces. Primary education budget is still a problem in Salatiga. Interviews and focus group activities concluded that the free education policy at the level of SD / MI and SMP / MTs constraint management. The whole school is prohibited charge fees to parents. In fact Assistance Operational Costs can not meet all the needs of education in schools. Restrictions on the use of BOS also an obstacle for schools in allocating to implement programs that are especially relevant to quality improvement. Most SD / MI and SMP / MTs in Salatiga has an obligation to pay the honorarium for temporary teachers, security personnel and administration. On the Organizational Structure of SD / MI there are no administrative personnel and security. This has implications, recruitment of permanent and paid with non budgetary. In addition, due to inconsistent Local Government to replace teachers who have retired resulted School recruiting temporary employees. From the discussions, it can be concluded that the issue of basic education inputs in Salatiga is the policy of free education, teachers and education personnel and budgetary support from the local government. Meanwhile, the allocation of Salatiga city budget constrained Regulation and limited sources of revenue. Most of the revenue budget (> 75%) from the state budget. The entire budget allocation provisions stipulated by the Act and Regulations and the Decree of the Ministry of Finance, Education and National Development Planning Agency. Community empowerment in education funding relative face constraints formation of perceptual free compulsory education. On the other hand, not all schools have the teachers and the support of the School Committee who have competence in planning quality based education programs. From this discussion it can be concluded that the input requires more thought in improving the quality of basic education is the fulfillment of a qualified teacher, the education budget and community support.

The process of primary education program in Salatiga arranged in the Education Strategic Plan, Work Plan of Regional Development and Education for All. Planning basic education program involving the Department of Education,

Youth and Sports, Board of Education, Principal and coordinated the Regional Planning Board. Planning documents in accordance with the educational program and the regulation of regional finance. Each school is required to draw up a School Development Plan and Activity Plan and Budget School. In an interview with the Principal concluded that management of SD / MI experiencing difficulties in preparing the plan (program and budget). According to them, not all of the Principal have competence in planning educational programs and school budgets. In general, the head of SD / MI and SMP / MTs have never attended a special training as a structural position. Principal is not official structures, but rather as an additional task for teachers with the main task of teaching. In addition, the absence of administrative personnel in SD is also becoming a bottleneck in the planning process. Relatively complex bureaucracy in program planning and management commitments less budget support SD / MI and SMP / MTs in improving the quality of education. School management had trouble following the process of planning, coordination and bureaucratic administration and finance program. Meanwhile, the FGD stated that the Department of Education and Bappeda facing constraints to optimize access to the program and budget, especially for SD / MI. Permasalahnya relatively large and relatively complex. To solve this coordination Regional Technical Implementation Unit should be able to coordinate. Thus, the problem (need) each school can be identified, proposed activities can be accommodated, realistic budget calculation and guaranteed to be allocated in the budget plan Salatiga. The process of education SD / MI and SMP / MTs relatively accordance with the provisions set minimum service standards. Implementation of the program is implemented in accordance Salatiga City budget implementation document after approval of Parliament with the mayor of Salatiga. Supervision of the program carried out by the Inspectorate of Salatiga. Some programs that diaalokasi of the budget supervision by the Financial Supervisory Board and Audit Board Pembangan. It can be concluded that the process of planning, implementation and monitoring of programs implemented according to regulations and the terms of financial management.

Evaluation of the output of the basic education program shows achieving the target of basic education gross enrollment rate both SD / MI and SMP / MTs. The geographical position amid Salatiga Semarang District and other districts affecting NER. Residents on the outskirts of Additional District utilizes basic education facilities in Salatiga. National exam graduation rate at the primary level of 100% and SMP: 99.91%. Meanwhile, the average test scores in basic education since the year 2013 - 2015 exceeded the national target. The quality of education is also the appeal of residents of other regions to school in Salatiga. Performance levels of basic education is supported to continue in secondary education (SMA / SMK) in 2015 was 100% .The level of gender parity indicated by GER at primary school level of 0.08%, which means men are better than women with a difference a little. Gender parity index (GPI) APK best also at primary school level is 1.00, which means balanced between men with women. One of the outcomes of primary education Salatiga is the highest achievement of Human Development Index in Central Java province. HDI of Salatiga 2014 about 79.98, while the HDI Central Java Province: 68.90 and National: 68.78. Still not optimal output due to unmet basic education standard of educational inputs such as teachers, educators, educational infrastructure and limited education budget.

Increasing participation in senior secondary education is vital for Indonesia: currently fewer than one-third of Indonesians complete secondary education. Increasing this proportion necessitates increasing its relevance to the life, work and further learning prospects of students. This in turn means paying greater attention to the development of cognitive and interpersonal skills. It will also be necessary to allow students flexibility to enter, exit and re-enter education depending on their financial and social circumstances, and to create pathways between academic and vocational tracks (OECD 2015:24).

Indonesia faces important decisions as to the most cost-effective balance of future investment across the different education sub-sectors. The review team examined each of the education sub-sectors with a view to identifying the promising areas for future investment. There are concurrent imperatives to raise educational quality and relevance, increase effectiveness, improve efficiency, and expand equity of opportunity in all education sub-sectors. Gains made in one sub-sector will benefit the others. For instance, increased readiness of children through early childhood learning will raise the success rates of their participation in basic education, reduce dropout and grade repetition rates, and widen the participation of young people from under-represented groups and regions. The increasing success rates in basic education will lead progressively to higher rates of participation in senior secondary education

and tertiary education, both academic and vocational. Graduates of tertiary education who are roundly educated and skills relevant to the job market will boost productivity and economic growth, thereby increasing capacity for greater investment in education and other services. Improvements in teacher education, in part resulting from better-prepared entrants to pre-service training, will promote better teaching and learning at all levels of education (OECD : 2015:29);

5. Conclusion

Based on the discussion above study it can be concluded that the performance of basic education corresponding city EFA targets. Not to mention the entire population of women and men have to follow basic education. Evaluation of context, basic education level SD / MI and SMP / MTs as the implementation of Article 31 UUD 1945, the National Education System, Commitment of MDGs and the implementation of the Government's vision of Salatiga. Education as a form of basic needs. Evaluation of educational inputs indicate they have not met the number of qualified teachers diploma IV / S1 and budget support and regional governments as well as community participation in meeting the operational needs of the school. Management process evaluation of basic education in Salatiga carried out according to regulations and the terms of financial management. Complex bureaucratic process and limited human resources into obstacles and constraints of planning and implementation of basic education programs. Output education shows the entire population aged 7-12 years was registered at the level of SD / MI and SMP / MTs. Outcome of primary education is the achievement of HDI which exceeds the achievements of Central Java Province and National.

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THE IMPLEMENTATION OF INTER-RELIGIOUS EDUCATION FOR SUPPORTING STUDENTS' CAPACITY IN INTER-RELIGIOUS TOLERANCE IN HIGHER EDUCATION (A CASE STUDY IN SANATA DHARMA UNIVERSITY)

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Abstract

Religious Education (hereafter RE) is a strong source of identity formation in Indonesia. RE also has a strategic position since it reaches many generations of Indonesians all over the country at every level from elementary to higher education. This study aims to investigate the implementation of *Inter-religious Education* in supporting students' inter-religious tolerance in Sanata Dharma University. Since 2014/2015 academic year, Sanata Dharma has implemented a new approach in RE which invited the students to construct a personal religious identity, but in dialogue with other religious traditions. Inter-religious tolerance studied in this research consists of three aspects: cognitive aspect, affective aspect and attitudinal/behavioral aspect. This research employs a case study with qualitative approach. The sample students are 52 students from Catholic Religious Education Department and 78 students from Guidance and Counseling Department of Sanata Dharma University. These students are the first semester students who take RE course in 2015/2016 academic year. The data collection technique: (1) interviews, (2) questionnaire which is part of Sanata Dharma evaluation process for RE.

The result showed that 90% students agree that Interreligious Education has supported their capacity for inter-religious tolerance. Comparing to those who disagree, the implementation of Inter-religious education is positively supported and appreciated by students. Among the three aspects, the cognitive aspect shows the highest result. Therefore, there is a need to be more focus on the other aspects, especially attitudinal/behavioral aspect so that inter-religious tolerance will not be reduced to a concept, but it will be a value that can be applied in the real situation. As a conclusion, by knowing and learning other religions, students have a new perspective in understanding their own faith. Therefore, it can be said that the implementation of Inter-religious Education in Sanata Dharma supports students' capacity for inter-religious tolerance.

Keywords: Religious Education, Inter-religious Education, inter-religious tolerance

1. Introduction

Religious Education (RE) is a strong source of identity formation in Indonesia. Since 1966, students in all grade levels have been required to take RE subject. There are two roles expected from religious education at school in the context of education in Indonesia namely, internal aspects of strengthening faith and piety and external aspects in developing tolerance [1]. However, in Indonesia as a religiously and ethnically pluralistic country, RE is more expected to contribute to the second role, fostering the capacity of inter-religious tolerance. Based on the research from Islamic Studies for Indonesian Peace conducted in Jabotabek in 2016, radicals and fundamentalist ideas are more common among the young people and students: 52 percent students support violence for religious solidarity, 14 percent students agree for bombing, 21 percent students said that Pancasila is not relevant in Indonesia [2]. Moreover, the Wahid Institute recorded 190 violations against freedom and faith in 2015, a 23 percent increase from 154 cases in 2014. The National Commission of Human Rights (Komnas HAM) shared the similar data that there are 87 cases in 2015, from 74 in the previous year [3]. Both institutions agree that promoting tolerance among people of different faiths is more difficult because of the growing influence of radical or intolerance ideas and fanaticism. These situations have brought the question to the role of RE in Indonesia. Those data also affirm the importance of RE to educate young people in building openness and inclusive

attitude so that, in a long term, RE helps to eradicate religious fanaticism and religious conflicts in Indonesia and build religious harmony.

The English word "tolerance" comes from the Latin "tolerantia" which comes from the verb "tolero." The Latin word can mean active support, as well as passive endurance. There are three typologies of tolerance, namely tolerance as endurance, tolerance as being unprejudiced and tolerance as openness [4]. *Tolerance as endurance* is a practice of merely letting others be and of letting them having their own way, not out of respect or sympathy but because of indifference or laziness" [5]. *Tolerance as being unprejudiced* is the minimum tolerance when that it can only tolerate tolerant people [4]. People who are not tolerant are not tolerated. Therefore, this kind of tolerance easily becomes very presumptuous, repressive and intolerant toward radical forms of life. In Indonesia, the logo "Bhinneka Tunggal Ika" or unity in diversity is one of the examples of this type of tolerance especially during Soeharto's era. This logo was used to guarantee that difference is allowed as long as it creates harmony and unity. *Tolerance as openness* can be translated with empathy and learning; therefore difference and pluralism is not necessarily a treat or something on which I have to take a stand. Tolerance means engagement, trying to understand and learn, and in order to do that I have to open up. Tolerance is considered as positive.

There are two types of RE currently in operation in pluralistic educational settings Mono-religious education and Inter-religious education [6]. Mono-religious education focuses on one religion and aims to transmit a particular tradition to pupils. The goal is to construct a religious identity in line with one's own religious tradition. Through this model, students can grow deeper in their faith and in their sense of belonging to a specific religious community. Inter-religious education model is the most suitable model in Indonesia as the pluralistic country because in this model, the goal of RE is building inter-religious tolerance. Inter-religious education model focuses on religious identity formation through dialogue between the adherents of different religious traditions. The goal in this model is to construct a personal religious identity, but in dialogue with other religions. Interreligious education calls for a dialogue between adherents of different religions from their own particular point of departure. The four key principles in inter-religious education are: (1) study in the presence of the other is fundamental to interfaith education; (2) process and the content must be inextricably connected; (3) the leader must provide the environment, experiences and resources to enable participants to risk crossing religious borders and integrate their learning into their own religious identity; (4) interfaith education necessitates helping participants "get inside" the religious tradition of the other [6].

RE in Indonesian schools applies the Education Law No. 20/2003 which states that students should be taught religion by teacher of their own faith. Religion is taught so that students may become religious. The curriculum clearly adopts the "mono-religious education model" or confessional model which emphasizes that norms and values of religion being taught for students to comply with. Students therefore are not to learn religions of others. A major movement in RE in Indonesian pluralistic context is to enhance mutual understanding, respect for difference, honest discourse about controversial questions, skills in negotiating problems and building community, and collaborative work for the common good. According to Zakkiyudin Baidhawy, RE in Indonesia has to discourage "dogmatic, indoctrinating approaches to education and recommends "a dialogical approach with materials that can support pupils' and teachers' diverse religious beliefs and practices [7]. RE has to focus on how to live together with others in the collective consciousness of religious diversity." Magnis Suseno suggests that the capacity for religious tolerance does not come from within, but it has to be learnt and practiced [5]. The school, especially RE, has the opportunity to instill values of tolerance in children. Therefore, RE in Indonesia has to develop RE that helps the students to develop the capacity for inter-religious tolerance or Inter-religious Education for Inter-religious tolerance. Recently, "Religiosity Education" has been introduced in some Catholic High schools in Yogyakarta. This model shows the need and the urgency of RE for religious pluralism in Indonesia.

This study is aimed to discuss the implementation of Inter-religious Education as a model of RE in supporting students' capacity for inter-religious tolerance in Higher Education, particularly in Sanata Dharma University. Most of studies on RE in Indonesia more focus on the implementation of RE in High School than RE in Higher Education [1], [8], [9], [10], [11]. Moreover, it is difficult to find scholarly works on how education in Indonesia can contribute to promoting religious tolerance and, hence, minimize the potential for conflict. Some latest researches can be referred, such as: "the Future

of Religiosity Education in Catholic Schools in Yogyakarta" [10] and "Preferences for Religious Education and Inter-Group Attitudes among Indonesian Students" [11].

Inter-religious Education as a model in RE supports students' capacity for inter-religious tolerance in three aspects: (1) cognitive aspect or awareness of religious pluralism; (2) affective aspect or empathy and (3) attitudinal aspect or respect and willingness to engage in dialogue. These three aspects are considered as the "inter-religious competence for inter-religious tolerance" or the desired and factual outcome of the process in RE (Fig. 1). This result follows the research of Stephan Leimgruber [12] who introduced the competences in Inter-religious education. Leimgruber identified *three aspects* in interreligious education for inter-religious tolerance, namely the cognitive aspect, affective aspect and behavioral/attitudinal aspect. The cognitive dimension refers to learning about the world of religion it its many dimensions, and its focus may encompass breadth or depth of studies in religion or both. Affective aspect is a process of appropriating the cognitive at a personal level. Finally, interreligious education has a dynamic, experiential dimension or attitudinal aspect which immerses the students into the religious world of the other. This includes interaction among people of different faiths.

2. Methodology

This study was designed as a case study research design. Case study was appropriate because it allowed the researcher to focus on a unit to produce an in-depth description by looking at a process with a small amount of respondents. This study is focused to the implementation of Inter-religious education which supports students' inter-religious tolerance. Thus the study employed a qualitative method. To collect the data, there were two instruments used in this research, those are questionnaire and interview. The questionnaire is part of Sanata Dharma University evaluation procedure for RE course. Therefore, the data are taken from the documentation of administration staff in Sanata Dharma. In addition, this research is equipped with interview to the students and lecturers. An interview is used to gain deeper information from questionnaire.

The site of this research is in the Faculty of Teacher Training and Education (*Fakultas Keguruan dan Ilmu Pendidikan*), Sanata Dharma University, Yogyakarta. The sample of the research is 130-first semester students from Christian Religious Education Program and Guidance and Counseling Program. However, there are 102 from 130 students who answered and returned the questionnaire to the administration staff. The selection of respondents is based on the accessibility of the researcher to both places, the willingness of the students to be observed and the similarity of both programs on their curriculum.

The questionnaire applies a 7-point scale Likert with "1" being "strongly disagree" and "7" being "strongly agree." This 7-point Likert is an alternative of the common 5-point Likert [13] which certainly can give a more detail result. Likert scale is used in this research to help in describing and measuring character and personality traits.

The data obtained through the questionnaire were organized and analyzed quantitatively and qualitatively. The questionnaires were calculated in percentage to find the frequency of the data. And then they were described qualitatively. The data analysis was aimed to find students' respond to the Inter-religious Education model as the way to support inter-religious tolerance.

Table 1. Cognitive, Affective and Attitudinal Aspect

Aspects	Statements
Cognitive	Religious Openness
	Willingness to learn other religions
	Understanding the differences among religions
	Common ground among religions
Affective	Enthusiasm to learn other religious traditions
	Sense of empathy toward other religions
	Critical toward fanaticism and radicalism
	Spiritual depth
Attitudinal	respect other believers
	the spirit of dialogue

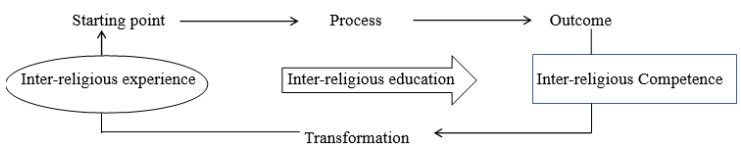

Figure 1. Competences in Inter-religious Education

3. Results

The overall result of this study indicates that most of the students agree that inter-religious education supports their capacity for inter-religious tolerance. Overall, there are 90% students who agree to the implementation of inter-religious education.

The result from each aspect (cognitive, affective and attitudinal) is described below in table 2, 3 and 4:

Table 2. Descriptive statistic of Cognitive Aspect

Statement	M	SD	Max	Min
Religious Openness	5.99	19.50	52	0
Willingness to learn other religions	5.86	17.26	44	0
Understanding the differences among religions	5.57	16.36	43	0
Finding the common ground among religions	5.74	16.59	45	0

Table 3. Descriptive statistic of Affective Aspect

Statement	M	SD	Max	Min
Enthusiasm to learn	5.77	16.70	46	0
Sense of empathy toward other religions	5.71	16.59	46	0
Critical toward fanaticism and radicalism	5.82	16.39	43	0
Spiritual depth	5.56	17.88	46	0

Table 4. Descriptive statistic of Attitudinal Aspect

Statement	M	SD	Max	Min
respect other believers	5.54	18.26	50	0
the spirit of dialogue	5.73	18.98	53	0

Mean or average from each statistic can be categorized in scale 5 to 6 which means that most of the students "agree" that Interreligious education has support students' capacity for religious tolerance.

4. Discussions

This research is focused on the implementation of Interreligious education model in supporting students' capacity for inter-religious tolerance.

An overall summary, there are 90% students who agree that Interreligious Education has supported their capacity for interreligious tolerance. This data proves that Inter-religious education is applicable and relevant in a higher education as a model for supporting inter-religious tolerance. RE in higher education should teach students to develop their openness and tolerance [14]. RE in higher education is no longer doctrinaire, but it should be more scientific and empirical in order to teach students to be more critical and open towards religious pluralism in Indonesia [8]. Through RE, the students can learn and nurture a "healthy truth claim" and avoid dogmatism and fanaticism. According to Knitter, in todays' world, many religions are a newly experienced reality, through television programs, new immigrants, new neighbors, visits to local book stores and dialogue [15]. Globalization has helped people, especially young people to be more aware of other religious traditions in the world. Therefore, truth claim and religious exclusivism has to be interpreted in the context of religious pluralism. RE in Indonesia has to focus on how to live together with others in the collective consciousness of religious diversity." Today, to be religious is to understand the inextricably interreligious nature of life in the twenty-first century.

Among the three aspects, the cognitive aspect, especially the religious openness aspect shows the highest result (M=5.99). This result is supported by the interview where the students shared that most of them are willing to learn other religious traditions. This result is consistent with other empirical research in RE showing that the cognitive aspect is the first step in learning how to live together with other believers [11]. Without the cognitive aim, an important element is missing from the inter-religious education model namely, the objective to cultivate the capacity to exchange religious perspectives: How can one learn to live with others without knowing the religious teachings of other religious groups? Knowing and understanding other religious traditions is primary basis for inter-religious relationship. Moreover, based on Good and Willoughby research, young people have an increased capacity for abstract thought, deductive reasoning and metacognition. Given challenging moral and social issues or 'big' questions on life [16], young people are capable of critically evaluating their own and other's ideas about themselves, the world around them and about God.

Cognitive aspect basically is an aspect that tries to understand other religious traditions

through "hermeneutic". Berling argues that a course or program on other religion should stretch and challenge the ways in which learners think and only then will the 'otherness' or the 'differences' of the religions properly being introduced [17]. In this point, hermeneutic plays an important role because hermeneutics is not merely the method of interpretation and understanding, but also an attempt to describe and explain the circumstances within which understanding must be able to take place [18]. Hermeneutics teaches us to begin with I before I/we engage with the other. By having a "positive" hermeneutics, students will be able to understand the uniqueness of the other. The action (praxis) that they apply thus becomes a direct product of a hermeneutical exercise in the classroom.

Interwoven with the cognitive aspect is the affective process of appropriating the cognitive at a personal level. In all of education, the student learns not only at an intellectual level but inevitably seeks to extract meaning from content. This affective process consists of reflecting on the implications of the content, integrating the content with life experience, being challenged by the content to deeper awareness or sensitivity, responding in a personal and creative way to the content. Inter-religious tolerance is not merely an abstract concept, but it is a value that has to be internalized and practiced in daily life. Research has shown that learning religious tolerance in the classroom can be problematic because it will reduce values to concepts that have to be "analyzed and memorized by the students to get a good mark" [19]. Students perceive religions in RE as a "symbolist-ritualistic" without being able to relate and actualize it values in their ordinary life [20]. This study shows the same tendency; since the result in affective and attitudinal aspect is lower than cognitive aspect. Therefore, inter-religious tolerance should not only be taught in the classroom through RE, but it has to be practiced concretely outside the classroom [21], [22]. The school has to facilitate the students with activities which help them to practice religious tolerance.

Related to cognitive aspect is attitudinal/behavioral aspect. Attitudinal aspect is experiential dimension which immerses the students into the religious world of the other. This includes interaction among people of different faiths, listening to people describe their experience of their religions, visiting their places of worship, and many other. This aspect is important because RE has to be practical which means that RE contributes in building religious harmony in the society. Bagir criticizes that RE in Indonesia tends to be doctrinaire but forgets its role in building social harmony [20].

There are 2% students who disagree to the implementation of interreligious education in supporting students' capacity for inter-religious tolerance. There are several reasons to explain this fact. *First*, inter-religious education is not common to the students. Based on the interview, they prefer "mono-religious education" because this model is more helpful to them in deepening their own faith and enhancing their religiousness than Interreligious education model. This preference is not surprising considering that RE curriculum in Indonesia applies "mono-religious education" model in all grade levels [1], [8], [23]. It proves that mono-religious education model in Indonesia has influenced students' perspective that learning other religions is not relevant in deepening one's faith and religiosity [11].

Second, there are clearly *inherent* difficulties that can be a challenge in inter-religious education. Robert McKim in his research shows that the inherent difficulty happens when student's starting point is to claim particular soteriological privilege that makes it impossible to dialogue with respect with adherents of other religions or adherents of no particular religion [24]. While respect is demanded of these students in the classroom, it may take some time. It seems that being tolerant makes the adherents of one religion disavow the distinctive features of their religion. Some scholars claim that to insist on this is to evince true lack of respect [25].

Third, teachers/lecturers are not ready to apply this model in their RE class. Research has shown that the social identity of the teachers from so-called mono-cultural environments (religious culturally) in multicultural societies, influences the meeting space in the classroom and determines the outcome of the religious and value construct [26]. This means that every curriculum designed for diversity and inclusivity in religion or values education has to take cognizance of the social construct of the teacher as the interpreter of the curriculum. The situation of the classroom is also important; therefore, classroom as a meeting place should be on equal grounds when mutual understanding and respect, either for the other, or for one's self, and understanding should be the outcome of this meeting.

What kind of tolerance that inter-religious education in this study is able to reach? Based on the interview, it is showed that the students are able to realize the difference of religions; they are able to respect other religious uniqueness and also willing to learn and deepen their knowledge

on other religions. Thus, it can be concluded that the students perceive inter-religious tolerance as an act of "being unprejudiced" which is the type 2 of inter-religious tolerance as it is mentioned in the beginning of this study. It means that inter-religious tolerance is primarily an act of "acceptance toward differences in the society" [4]. According to Lyn Parker's research in RE for inter-religious tolerance in Indonesia, the most suitable inter-religious tolerance in Indonesia is not theological, but non-theological which means that it has to be practical in order to help students to live together in harmony. This is a model of good citizenship that uses the ideology of the nation-state, the Pancasila, rather than within-faith teachings.

5. Conclusion

Based on the discussion above, it can be concluded that the implementation of Inter-religious education model has supported students' capacity for religious tolerance, especially in cognitive aspect. Therefore, the curriculum of Inter-religious education has to facilitate students with other activities that help them to actualize their capacity for religious tolerance in the daily life. RE has to be practical which means it helps the students to respect and relate with other religious believers.

In the context of Indonesia, RE needs to apply an Inter-religious education perspective where the goal is to construct a personal identity in dialogue with other religious traditions. Other religious traditions can enrich and deepen students' religiosity. Inter-religious education is more than learning other religious traditions. It requires deepening our knowledge and learning from difference.

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PEDAGOGICAL PARADIGM OF REFLECTION AS A METHOD OF LEARNING TO BUILD CHARACTER

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Abstract

Indonesia today faces many difficult problems, such as corruption, horizontal and vertical conflicts, sectarian and tribal conflicts, conflicts among students, violence, criminals, vandalism, terrorism, intolerance, injustice, instant cultures, violation of laws, consumerism, weak perseverance, egoism, and so on. To solve these problems, we need to develop some attitudes, like appreciating other human rights, willing to live with other groups, ethnics, or religions, willing to live in the spirit of *Bhineka Tunggal Ika* (unity in differences), willing to sacrifice and to struggle for the nation. Amidst these situations, we need to develop character education for young generation. Education is the best means to build good character of young generation. Character education, therefore, becomes one of the important issues to deal with in university curriculum. Character education can become one aspect of each class to build an active integration of moral and learning across the entire curriculum. The aim of this writing is to strengthen character education in general education and in every major offered. Pedagogical Paradigm of Reflection is presented as a pedagogy which can help students growing more holistic, because this paradigm can help students being competence in their fields, help them to build their conscience, to have good will, good character, and especially to have social awareness to think and to act for both others and the nation. The Pedagogical Paradigm of Reflection will help students growing more holistic in study, not only in cognitive aspect and skills, but also in morality, spirituality, emotion, psychic, and their inner life.

Keywords: action, character, compassion, competence, conscience, context, evaluation, experience, Pedagogical Paradigm of Reflection, and reflection.

1. Introduction

Indonesia today faces many difficult problems, such as corruption, sectarian and tribal conflicts, conflicts among students, violence, criminals, vandalism, terrorism, intolerance, injustice, instant cultures, violation of laws, consumerism, weak perseverance, egoism, and so on. To solve these problems, we need to develop some attitudes, like appreciating other human rights, willing to live with other groups, ethnics, or religions, willing to live in the spirit of *Bhinneka Tunggal Ika* (unity in differences), willing to sacrifice and to struggle for the nation. In other words, we need to develop character education for young generation. Education is the best means to build good character of young generation.

In this writing, I would like to present Pedagogical Paradigm of Reflection as a pedagogy which can help students growing more holistic, because this paradigm can help students being competence in their fields, help them to build their conscience, to have good will, good character, and especially to have social awareness to think and to act for both others and the nation. The Pedagogical Paradigm of Reflection will help students growing more holistic in study, not only in cognitive aspect and skills, but also in morality, spirituality, emotion, psychic, and their inner life.

First of all, I will explain the goal of education, followed by exploring the Pedagogical Paradigm of Reflection. Then I will explain the process of the Pedagogical Paradigm of Reflection. Finally, I will present the application of the Pedagogical Paradigm of Reflection in Social Analysis subject, followed by conclusion.

2. The Goal of Education

The goal of our education is to form men and women for others. In other words, our education should form a person who is “well-

rounded, intellectually competent, open to growth, religious, loving, and committed to doing justice in generous service to the people of God" [1]. We aim to form leaders in service, men and women of competence, conscience and compassionate commitment.

This goal requires a formation of the human person, an educational process of formation that calls for excellence – a striving to excel, to achieve one's potential – not only in intellectual dimension, but also in moral dimension. Thus, the goal of education is not only to educate the mind, but also to change the person into a better, more caring human with a developed conscience.

Our education must be *integral*. Living in a busy world, in intimate contact with people and the events of the world, students must be able to embrace all things, but made them fit into a pattern of life that was consistent. Students are to receive a comprehensive education, but also an integrated education. The students are to strive to attain excellence in all studies, but each branch of the curriculum is to be integrated into the others, so that each one of them makes its proper contribution toward the goal of the curriculum as a whole. We need to rediscover the value of interdisciplinary study and to analyze the "core curriculum" to discover how to make it more integral [2].

A good education means more than acquiring knowledge. The students are encouraged to grow personally and spiritually, testing their values, developing a sense of responsibility for themselves and their community, and learning about making ethical choices in their lives. They learn to balance self-reliance with interdependence, knowledge with spirituality, and mind with heart [3].

Pancasila is the official philosophical foundation of the Indonesian state. In line with the first principle, Believe in the one and only God, the goal of our education includes to develop faith. Our education is committed to the religious development of all students [4].

Being aware of the situation in Indonesia, which is marked by poverty and injustice, we need "educated persons of competence, conscience and compassion," men and women who are ready to embrace and promote all that is fully human, who are "committed to working for the freedom and dignity of all peoples, and who are willing to do so in cooperation with others equally dedicated to the reform of society and its structures" [5].

3. Pedagogical Paradigm of Reflection

The Pedagogical Paradigm of Reflection (PPR) is a way of learning and a method of teaching, which has been applied in Jesuit education since 1586. In Indonesia, there are many Jesuit schools and university, like Sanata Dharma University and John de Britto High School in Yogyakarta, PIKA Vocational School and Loyola High School in Semarang, St. Michael Vocational School and Academy of Technical Mechanical (ATMI) in Solo, and Canisius College High School in Jakarta.

The concept of Pedagogical Paradigm of Reflection is taken from the principles, values, and actions practiced in the Spiritual Exercises (retreat) of St. Ignatius of Loyola (1491-1556), the founder of the Society of Jesus, known as the Jesuits, priests of the Catholic Church. Therefore, the Pedagogical Paradigm of Reflection can also be called Ignatian Pedagogical Paradigm. Ignatius Loyola adapted the *modus Parisiensis* (the method of Paris University), the ordered pedagogical approach employed at the University of Paris in the sixteenth century. Ignatius integrated the *modus Parisiensis* with some methodological principles in the Spiritual Exercises [5].

During the Spiritual Exercises, a retreatant (who is, in essence, a learner) is guided through a process of reading, reflection, and prayer by a spiritual director (who is, in essence, a teacher). The director guides the retreatant through a series of prayer activities, such as contemplation, repetition, and reflection as a process for deepening one's experience and understanding of God. The method of Pedagogical Paradigm of Reflection takes the general principles and approach of the Spiritual Exercises and translates them into a process for educational practices more generally [6].

The Pedagogical Paradigm of Reflection comprises three main elements: experience, reflection and action. To be a successful learning process, it must include a pre-learning element, that is context, and a post-learning element, that is evaluation [7].

Here I will explain the process of each element of the Pedagogical Paradigm of Reflection.

a. Context

This is concerned with all the factors that help or hinder the learning process. From the teachers' points of view this means:

i) Personal knowledge of and care for the student by the teacher.

ii) A conducive environment for learning and growth in commitment to values.

From the students' points of view, it is related to readiness to learn and readiness to grow [6].

As teachers, we need to understand the world of the students: their family, friends, peers, youth culture and mores; social pressures, school life, politics, economics, religion, media, art, music, and other realities impact that world and affect the student for better or worse [5].

We can invite students to reflect on the contextual realities of our worlds: What are forces at work in them? How do they experience those forces influencing their attitudes, values and beliefs, and shaping our perceptions, judgments and choices? How do world experiences affect the very way in which students learn, helping to mold their habitual patterns of thinking and acting? What practical steps can they take to gain greater freedom and control over their destinies?

We need to build a relationship of authenticity and truth between teacher and student: mutual trust and respect that grows out of a continuing experience of the other as a genuine companion. Therefore, we need to be conscious of and sensitive to the institutional environment of the school; being alert to the complex network of norms, expectations, behaviors and relationships that create an atmosphere for learning.

We need to build a conducive environment of the school for integral human growth, in which the moral development and religious formation of adolescents takes place and authentic personal relationship between teachers and students may flourish. There is concern for quality learning, trust, respect for others despite differences of opinion, caring, and forgiveness. Thus, a genuine love and personal care for each student (*cura personalis*) is essential for a conducive environment of the school.

Praise, reverence and service should mark the relationship between teachers and students, and among all members of the school community. The school becomes a place where people are believed in, honored and cared for; where the natural talents and creative abilities of persons are recognized; where individual contributions and accomplishments are appreciated; where everyone is treated fairly and justly; where there is sacrifice on behalf of the economically poor, the socially deprived, and the educationally disadvantaged; where each of us finds the challenge, encouragement and support we need to reach our fullest individual potential for excellence; where we help one another and work together with enthusiasm and generosity.

We also need to know the points of view and the insights that the students may have acquired from earlier study or picked up spontaneously from their cultural environment, as well as their feelings, attitudes, and values regarding the subject matter to be studied.

We need to talk about values that we want to develop, such as brotherhood, solidarity, respect for others, responsibility, hard work, love, shared interests, respect for the environment, and other values of humanity [8].

We also need to be aware of the context of education in Indonesia: 1945 Constitution and *Pancasila* as the foundation of our study. We need to apply some principles of the Constitution and Pancasila to foster the character of the nation, such as the unity of the nation, appreciation of differences, promotion of human rights, and responsible freedom. We need to know the laws of national education (*Undang-undang Sistem Pendidikan Nasional*): the goal of our education, the model of curricula, the quality and character which need to develop [7].

Some challenges of Indonesian situation need to be handled to help the students avoiding those challenges, such as enforcement of one culture, corruption, plagiarism, copyright violation, the lack of ethos of study, creativity and critical thinking, looking for certificate instead of competence, instant culture, passivity in class, copy-paste culture, feudal relationship between teachers and students, and so on.

b. Experience

Here the term 'experience' describes "any activity in which in addition to a cognitive grasp of the matter being considered, some sensation of an affective nature is registered by the student" [5].

In any experience, data is perceived by the student cognitively. Through questioning, imagining, investigating its elements and relationships, the student organizes this data into a hypothesis: What is this? Is it like anything I already know? How does it work? Then there is an affective reaction: I like this. I'm threatened by this. It's interesting. I'm bored.

The Pedagogical Paradigm of Reflection aims to ensure that the student will have a full learning experience of mind, heart and hand [6]. The learning experience is expected to move beyond rote knowledge to the development of the more complex learning skills of understanding, application, analysis, synthesis, and evaluation.

The affective/evaluative stage of the learning process is very important, because the 'sense and taste' can deepen one's experience. Affective feelings are motivational forces that move one's understanding to action and commitment.

The task of teachers is to provide 'experience' for students so that the students can experience by themselves as well as learn and find the meaning of the experience [7].

Human experience may be either direct or indirect [5]. *Direct experience* is experience engaged by students so that they are involved fully. Thus, direct experience usually is fuller, more engaging of the person. Direct experience in education usually occurs in interpersonal experiences, such as conversations or discussions, laboratory investigations, field trips, service projects, participation in sports, and the like.

Indirect experience is achieved in reading or listening to a lecture. In order to involve students in the learning experience more fully, teachers can stimulate students' imagination and use of the senses precisely so that students can enter the reality studied more fully. Simulations, role playing, use of audio visual materials and the like can help students to feel as real "historical settings, assumptions of the times, cultural, social, political and economic factors affecting the lives of people" [5].

c. Reflection

This is the key to the Pedagogical Paradigm of Reflection. Reflection is "the process whereby the student makes the learning experience his/her own, gets to the meaning of the learning experience for self and for others" [6].

The term 'reflection' means "a thoughtful reconsideration of some subject matter, experience, idea, purpose or spontaneous reaction, in order to grasp its significance more fully" [5].

At this level of reflection, "the memory, the understanding, the imagination and the feelings are used to capture the meaning and essential value of what is being studied, to discover its relationship with other aspects of knowledge and human activity, and to appreciate its implications in the ongoing search for truth and freedom."

This reflection is a "formative and liberating process" [5]. It forms the conscience of students (their beliefs, values, attitudes and their entire way of thinking) in such a manner that they are led to move beyond knowing, to undertake action.

In reflection, students are impelled to consider the human meaning and significance of what they study and to integrate that meaning as responsible learners who grow as persons of competence, conscience and compassion [6].

Reflection is the process by which meaning surfaces in human experience:

- by understanding the truth being studied more clearly;
- by understanding the sources of the sensations or reactions I experience in this consideration;
- by deepening my understanding of the implications of what I have grasped for myself and for others;
- by achieving personal insights into events, ideas, truth or the distortion of truth and the like;
- by coming to some understanding of who I am (What moves me, and why?) and who I might be in relation to others.

A major challenge to a teacher here is to formulate questions that will broaden students' awareness and impel them to consider viewpoints of others, especially of the poor [5]. It is important to note that teacher may not impose his/her viewpoints. Thus, teacher respects the student's freedom. It is possible that, even after the reflective process, a student may decide to act selfishly and to reject growth.

At this stage, students and teachers can have reflection together, to share their reflections and thereby have the opportunity to grow together. In this case, teachers and students make reflection orally in class. Meanwhile written reflection can also be done as homework.

d. Action

Reflection in the Pedagogical Paradigm of Reflection would be a truncated process if it ended with understanding and affective reactions. The Pedagogical Paradigm of Reflection, just as it begins with the reality of experience, necessarily ends with that same reality in order to effect it. Reflection is only useful when it fosters decision and commitment [5].

Action is not mere activity. It refers to "the student's attitudes, priorities, commitments, habits, values, ideals, internal human growth flowing out into actions for others" [6].

The term 'action' refers to "internal human growth based upon experience that has been reflected upon as well as its manifestation externally" [5]. It involves two steps:

i) *Interiorized Choices*: After reflection, the student considers the experience from a personal

point of view. Here in light of cognitive understanding of the experience and the affections involved (positive or negative), the will is moved. Based on the meanings perceived, the student will make some choices. Such choices may occur when a person decides that a truth is to be his or her personal point of reference, which will affect any number of decisions. At this point, the student chooses to make the truth his or her own, while remaining open to where the truth might lead.

ii) *Choices Externally Manifested*: In time, these meanings, attitudes, values which have been interiorized, made part of the person, impel the student to act, to do something consistent with this new conviction. If the meaning was positive, then the student will likely seek to enhance those conditions in which the original experience took place. For example, if the goal of physical education has been achieved, the student will be inclined to have some regular sport during his free time. If the student appreciates better the needs of the poor after service experiences and reflection on those experiences, this might influence his or her career choice or move him or her to volunteer to work for the poor. If the meaning was negative, then the student will make some changes, avoid the conditions in which the original experience took place. For example, if the student appreciates the reasons for his or her lack of success in school work, he or she may decide to improve study habits in order to avoid repeated failure.

From the process of deep experience, reflected deeply, the students will arrive to action which will change their lives and their attitude to others and to environment. In this ongoing process, the students will be really competent in their fields, being able to explain the matter and to find its meaning. Their conscience will grow. They will be aware of the good and the bad values, and can decide for the better life. Finally, they become persons who have compassion for others as well as for environment. They are helped to grow more holistic in study, not only in cognitive aspect and skills, but also in morality, spirituality, emotion, psychic, and their inner life. They will not think for themselves, but they will have good will, good character, and especially to have social awareness to think and to act for both others and the nation [7].

e. Evaluation

It is important to evaluate a student's progress in academic achievement. Daily quizzes, weekly or monthly tests and semester examinations are familiar evaluation instruments to assess the degree of mastery of knowledge and skills achieved. Periodic testing is useful for the teacher and the student both to intellectual growth and to the shortages which are necessary to be improved. Feedback can alert the teacher to improve methods of teaching and the student to be encouraged and adviced for academic improvement.

The Pedagogical Paradigm of Reflection, however, "aims at formation which includes but goes beyond academic mastery. Here we are concerned about students' well-rounded growth as persons for others. Thus periodic evaluation of the student's growth in attitudes, priorities and actions consistent with being a person for others is essential" [5]. Comprehensive assessment needs to be planned at intervals, at least once a semester.

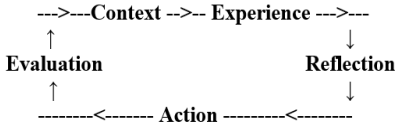
There are many ways to assess the fuller human growth. All must take into account the age, talents and developmental levels of each student. Useful pedagogical approaches can be applied, such as mentoring, review of student journals, student self-evaluation in light of personal growth profiles, as well as review of leisure time activities and voluntary service to others.

Based on the above exploration on the Pedagogical Paradigm of Reflection, we can summarize that learning is:

- situated in a specific context;
- rooted in previous experience and the result of new learning experiences;
- dependent upon – and deepened by – reflection about those experiences;
- made meaningful when new knowledge is put into some kind of action;
- reinforced by explicit evaluation (and ultimately, self-evaluation) of those actions and the degree to which learning has occurred [6].

Ultimately, these five elements should be understood as representing a process, not a prescription, for teaching. They function not as discrete segments or stages of a linear process, but as interdependent facets of any deep learning experience.

The Pedagogical Paradigm of Reflection can become an effective ongoing pattern for learning as well as a stimulus to remain open to growth throughout a lifetime [5].



4. The Characteristics of Pedagogical Paradigm of Reflection

The continual interplay of context, experience, reflection, action and evaluation provides a pedagogical model that is relevant to our cultures and times. It is a substantial model of the teaching-learning process [5]. It addresses the importance and integrity of the interrelationship of teacher, learner and subject matter within the real context in which they live. It is comprehensive and complete in its approach, explaining the method of teaching in practical and systematic ways while, offering the means of our educational mission of forming young 'men and women for others.'

Here are some characteristics of the Pedagogical Paradigm of Reflection:

a. The Pedagogical Paradigm of Reflection Applies to All Curricula

As a consistent approach which permeates all our teaching, the Pedagogical Paradigm of Reflection applies to all curricula. It is easily applicable even to curricula prescribed by the Government. It does not demand the addition of a single course, but it requires the infusion of new approaches in the way we teach existing courses [5].

b. The Pedagogical Paradigm of Reflection Is Fundamental to the Teaching-learning Process

It applies not only to the academic disciplines but also to the non-academic areas of schooling, such as extra-curricular activities, sports, community service programs, exposure, live-in, working service (KKN), and the like. Within a specific subject (history, mathematics, language, literature, physics, art, etc.), the Pedagogical Paradigm of Reflection can serve as a helpful guide for preparing lessons, planning assignments, and designing instructional activities. The Pedagogical Paradigm of Reflection helps students to make connections across as well as within disciplines and to integrate their learning with what has gone before. Regular application of the model in teaching contributes to the formation for students of a natural habit of reflecting on experience before acting [5].

c. The Pedagogical Paradigm of Reflection Helps Teachers be Better Teachers

It enables teachers to enrich the content and structure of what they are teaching. It gives teachers additional means of encouraging student initiative. It allows teachers to expect more of students, to invite them to take greater responsibility for and be more active in their own learning. It helps teachers to motivate students by providing the occasion and rationale for inviting students to relate what is being studied to their own experiences [5].

d. The Pedagogical Paradigm of Reflection Personalizes Learning

It asks students to reflect upon the meaning and significance of what they are studying. It attempts to motivate students by involving them as critical active participants in the teaching-learning process. It aims for more personal learning by bringing student and teacher experiences closer together. It invites integration of learning experiences in the classroom with those of home, work, peer culture, and so on [5].

e. The Pedagogical Paradigm of Reflection Stresses the Social Dimension of Both Learning and Teaching

It encourages close cooperation and mutual sharing of experiences and reflective dialogue among students. It relates student learning and growth to personal interaction and human relationships. It proposes movement and progress toward action that will affect the lives of others for good. Students will gradually learn that their deepest experiences come from their relationship with and experiences of persons. Reflection should always move toward greater appreciation of the lives of others, and of the actions, policies or structures that help or hinder mutual growth and development as members of the human family. This assumes, of course, that teachers are aware of and committed to such values [5].

5. Implementation of the Pedagogical Paradigm of Reflection in Social Analysis Course

In this section, I will give an example how to implement the Pedagogical Paradigm of Reflection in the course of Social Analysis. Social Analysis is a skill that needs to be mastered by students as candidates of catechists and Catholic religion teachers.

This course presents an understanding of social analysis from the structural perspective. Students are introduced to the ways of working of social analysis through analyzing texts and simple observation of social problems in society. At the end of the course, students are expected to

understand basic theory of social analysis and to able to implement it in the context of catechesis.

This course is given to students of the fifth semester. Implementing the Pedagogical Paradigm of Reflection, we need to explore the context of the students, such as their background, their motivation, their ability, and their expectation to this course.

Through this course the students are expected to grow in their sense of social awareness on social problems that occur in society. Thus, this course serves as a means to foster a sense of social awareness to others, through the implementation of the Pedagogical Paradigm of Reflection.

The Pedagogical Paradigm of Reflection is expected to generate students to have competence, conscience and compassion. Social Analysis course is believed to be able to help students optimally in improving their understanding and skills in social analysis (competence), in fostering a sense of awareness to social problems (conscience) and concern to engage in efforts to enhance the situation in society (compassion).

Implementing the Pedagogical Paradigm of Reflection in Social Analysis course is very relevant and strongly supports the vision and mission of the Religious Education Department, Sanata Dharma University. Its vision is being institution that educates prospective Bachelor of Catholic Religious Education who is professional and has strong faith for the realization of the Church that fights for Indonesia people who is increasingly dignified.

While its mission is to educate students to become Bachelor of Catholic Religious Education who can have profession as teachers of Catholic religion, Catechists and Developers of catechesis in the context of the Indonesian Church. The skill of social analysis will help the graduates to increasingly know the context of the local Church. To be able to do pastoral work well, the basic skill of social analysis serves as a good means to increasingly know the situation of the people who are served.

Thus, the benefit of the implementation of the Pedagogical Paradigm of Reflection in Social Analysis course is to prepare students to become prospective teachers of Catholic religion and catechists who have professional competence, good character, and concern to social problems faced by learners and the community. Lecturers may increasingly provide experience and improve their competence in organizing the course, not only emphasizing the cognitive aspect, but also the aspect of social concern.

Here I give an example of basic competencies to learn and their indicators in Social Analysis course:

Table 1. Basic Competencies and Indicators

Subject	Basic Competencies	Indicators
Social Analysis	Students have knowledge, understanding and skills to analyze social problems in society (competence)	Students can make social analysis in society and to find the problems that are happening in the community.
	Students have a sense of awareness to social problems (conscience)	Students can reflect the problems in society as well as reflect them theologically.
	Students have concern to engage in efforts to enhance the situation in society (compassion).	Students can think of a way to solve the problems in society and can do something to relieve the suffering of others

Table 2. Learning Process

Subject	Learning Process	Time
Social Analysis	**Context:** Students' background, motivation, and their expectations	1 hour
	Experience: Social analysis simulation; Watching video about poverty and environmental issues; Field observation in group; Group presentation Lecturer serves as a facilitator	20 hours
	Reflection: On Social Analysis simulation; On students' experience in the field.	5 hours
	Action: Based on their reflection, students make a plan of action, that is a preparation for social catechesis which	2 hours

	will be practiced in a place where they are sent. Lecturer gives advices to students when they go to the field.	
	Evaluation: Lecturers evaluate the simulation, field observations and group presentations related to their sense of social problems (conscience) and social concern (compassion). Related to competence, there is evaluation on group presentation as well as mid-term test and final test	3 hours

6. Conclusion

In our contemporary world, the Pedagogical Paradigm of Reflection can be an immense help in winning the minds and hearts of new generations; for the Pedagogical Paradigm of Reflection focuses upon education of the whole person, heart, mind and will, not just the intellect [5]. It challenges students to find meaning in what they study through reflection rather than rote memory. It encourages adaptation which demands openness to growth in all of us. It demands that we respect the students at varied levels of their growth; and the entire process is nurtured in a school environment of care, respect and trust, where the student can honestly face the challenges to being human with and for others.

Thus, the Pedagogical Paradigm of Reflection is a pedagogy which can help students growing more holistic in study, not only in cognitive aspect and skills, but also in morality, spirituality, emotion, psychic, and their inner life, because this paradigm can help students being competence in their fields, help them to build their conscience, to have good will, good character, and especially to have social awareness to act for others.

Hopefully with the cooperation and the seriousness of the lectures and students in implementing the Pedagogical Paradigm of Reflection, the students are helped to become a whole person and devoted to others [7]. In the midst of the Indonesian situation that needs people who are sensitive to the needs of others, especially those who are poor and displaced, hopefully with this approach, many students are increasingly sensitive to others and are involved in developing our nation. Hopefully there are more students who have good characters to enhance the unity of the nation.

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IMPROVING TRAINEE'S CHARACTER THROUGH SOFT SKILLS PROGRAM IN VOCATIONAL TRAINING CURRICULUM

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Abstract

World industry requires prospective workers disciplined, punctual, have a work endurance, able to communicate and work in teams according to the occupied areas of expertise. These professional working characters were required by every workforce candidates in order to meet the minimum standards of work behavior required by the industry. Soft skills which contain physical, mental and discipline activity became one of the pillars of the establishment of professional work character. Soft skills also became the dominant factor that indicate the success of the training program at vocational training institutions. Vocational curriculum were co-developed by vocational training center and expert from various industry which has aim to provide appropriate character from vocational training center to the workplace in the respective industries. In simple word, improving trainee's character will deliver and promoted trainee meet industry qualifications.

A case study approach has been adopted to examine soft skills impact in fulfilling competent workforce market. Primary data were derived from observations, and conduct focus group interviews with trainees. Secondary data were obtained from websites, policy documents, curriculum and syllabus documents and teaching materials. This study focused on understanding of vocational curriculum and implementation of soft skills during training period.

Our finding highlight the importance of soft skills programs in vocational training curriculum integration play an important role in improving the character of the trainees to meet the needs of the workforce market. In delivering soft skills process activity required additional material variation to the trainees knowledge and stimulated either with team building games or brain activity. It results either increasing of motivation of the trainees to follow training program continuously and enthusiasm, also increasing trainee character.

Keywords: character, trainee, soft skills, vocational training curriculum.

1. Introduction

Training institutions as entities with capacity to provide employment training, have a role in shaping attitudes and professional work. Implementing four types of learning in training institutions which can affect to attitudes, affect to professional and develop organization ideas include experiments, skill competency, and continuous improvement [1]. And what was the type of learning which will be taken in training institutions in accordance with the needs of industry? Were implemented all types or applied some of them ? Or choose the one that best assessed in accordance with the internal and external conditions?. Management should be able to examine which of the four types most commonly applied . Then look for where the most feasible. In the case of this type of experiment should be supported by the type of competency proficiency. However, that type should also be related to the continuous improvement. The things that are known as the dual approach in finding the type of learning new ideas about the process and output..

So, the soft skills activities that include physical activity , mental and discipline will need to use multiple learning approaches , to find new ideas as continuous improvement through experimentation to achieve competence working attitude (attitudes) in accordance with the requirements of the industry. One idea to consider is to look at the requirements of the needs of the industry related to work in a team (team work) . This requirement can be bridged by a charge material in building the team through the game or interactive games.

Future employment challenges increase heavily and more complex. Availability of employment opportunities in accordance with the level of workforce education increased in line with the opening of the free market. So, it was be mandatory to improve quality in order to compete in the international market and domestic market [2] [3]. Improving quality of labor is done by holding a job training that aims to improve

and develop competence, productivity, discipline, attitude, and work ethic at a certain level of skill and expertise and qualifications in accordance with the level of office or employment. The Association of Southeast Asian Nations (ASEAN) concentrates its emphasis on regional cooperation on security, sociocultural and economic integration with ASEAN Economic Community (AEC) since 2015. Establishing the AEC creates additional values in regional scope such as a common market economically connected through the basis of consistent production, free trade investment, capital transfer, labor market based on common and same for all ASEAN member countries. By 2015, ASEAN will have become a community. In place of ten heterogeneous labor markets there will be a large labor market in which nations recognize one another's qualifications [4].

Vocational training programs should be developed base on labor market demands and needs of the industry. Thereby industry will get advantages directly when hire competent worker from vocational training programs. If the graduates have a high quality, the industry will get benefits directly, because at initial time of recruitment, industry no need to spend more cost to provide industrial training. Therefore it is proper if the industry has a responsibility to care, concern and take charge together with vocational training institutions.

From the description above defined problem statements as follows.

1. Vocational training curriculums were needed to enhance with soft skills as basic requirement in industry.
2. Different type of soft skill activity among vocational training providers.

2. Methodology

A case study approach has been adopted to examine soft skills impact in fulfilling competent workforce market. Primary data were derived from observations, and conduct focus group interviews with trainees. Secondary data were obtained from websites, policy documents, curriculum and syllabus documents and teaching materials. This study focused on understanding of vocational curriculum and implementation of soft skills during training period.

3. Soft Skills Programs in Vocational Training Institutions.

Soft skills was a personal and interpersonal behaviors that develop and maximize the performance of a person. Soft skills are all self-development skills that are not of a technical nature, such as financial management ability, quality of life, critical thinking skills and others [5]. Meanwhile, in order to understand "soft skills" would be easier if we understand the word which is the opposite he said, are "hard skills." Hard skills are skills that can immediately be seen in a learning process, immediately after the process is completed. Learning outcomes will easily be defined, easily seen and involves the mastery of an object that is not alive. While soft skills is an ability that is superficial, the results are not immediately visible, and has a strong relationship with one's personal and interpersonal abilities.

Public non-formal vocational training providers (known as Balai Latihan Kerja / BLK), that are under the responsibility of district governments or Ministry of Manpower and Transmigration, provide training programs for poor individuals who dropped out of primary or secondary school [6] [7]. BLKs are also divided into 3 types:

1. Type A (largest training providers located in urban areas)
2. Type B (training providers located in smaller urban centers)
3. Type C (the smallest training providers located in rural areas

Larger centers provide industrial and service skills training, while smaller ones offer training in different technologies and skills for self-employment. There are 4 types of training offer by BLK:

1. Institutional training (job training programs which aim to increase the skills of job seekers)
2. Non-institutional training (training programs for people in remote areas organized through Mobile Training Units)
3. Apprenticeship programs
4. Demand-based trainings (trainings based on the demand of industries)

The success of vocational training can be measured from the absorption rate of graduates in the work market. If graduates have the capabilities as required work market, it can be said vocational institution learning process have direct and prepared learners for entrance work market. To achieve this, vocational training provider, i.e. BLK, always improved the quality of learning through the curriculum in accordance with the demand of job markets [8].

Four types of training that be held in BLKs will succeed attempts aiming at measuring training provided by the employers tend to focus on formal training only and to neglect therefore the informal learning processes we can approach

informal training using information on whether young workers declared they learnt their job on their own, and not through the three other forms of training. The categorization of vocational education and training was described in Figure 1. Soft skills program can be did both during formal training in vocational training institution and on the job training in industry.

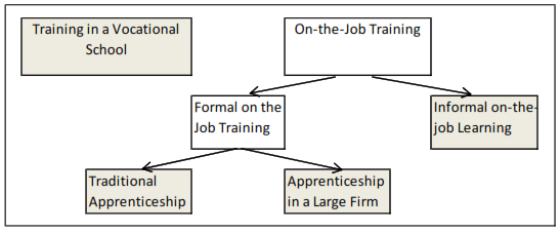

Figure 1. Categorization of vocational education and training

3.1 Vocational Training Curriculum

Vocational training curriculum must accommodate all of the needs of both the physical needs of learners, non-physical, and moral as well as their future to be able to live a safe, comfortable, good welfare, and harmony with nature and the surrounding communities. On the other hand based vocational training curriculum needs matching with job markets (demand-driven by job markets). The emphasis was on the mastery of the competencies required by industry job markets [9]. The world of work requires seven basic skills as follows [10]:

1. Critical thinking and problem solving.
2. Collaboration across networks and leading by influence.
3. Agility and adaptability;
4. Initiative and entrepreneurship.
5. Oral and written communication effectively.
6. Accessing and analyzing information.
7. Curiosity and imagination.

Competent graduates must have good fundamental skills and generic work skills. General skills consist of basic skills, thinking skills, and personal qualities [11]. Basic skills include listening skills, reading, writing, speaking, and math. Thinking skills include how to learn, how to create and solve problems , and make decision. Personal qualities affect in the form of responsibility, integrity, confidence, moral, character, and loyalty. In vocational training scheme, we called basic skills as soft skills. Theoretically, the basic skills will support and become foundation of development individual career. Vocational training curriculum development, teaching and learning should provide a sufficient portion for the development of basic skills. Over fundamental skills were built generic work skills, industry-specific skills and company/employer specific skills as shown in Figure 2.

Competency-based curriculum can be developed with a "field research" or a "benchmark, adopt and adapt" as well as a combination both of them [12]. Field research done by conducting research in the job markets to collect primary data on the jobs that exist and then formulated into a draft of competency standards, validated, tested, reviewed, and establishment. Benchmark, adopt and adapt was a way to study and compare the standards of competence which has existed in various developed countries or develop the required standards adopted and adapted to the needs. After passing the validation, testing and reviewing, these standards could be set as the first edition of the competency standard. This combination approach was to combine the two methods above, to reduce weaknesses and improve the advantages of both methods.

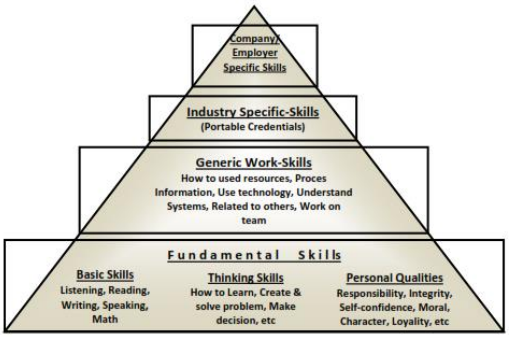

Figure 2. Structure development of vocational education and training skills

President Decree No. 8, 2012 for Indonesian Qualification Framework has been a basic rule to develop competency based curriculum matching with job level in various industry. IQF provide qualification level framework of competency which can be equivalent and integrate among education, vocational training and work experience in order to give work competency recognition in various sector. IQF consists of nine (9) qualification levels. Stage of levelling up of IQF can be shown in Figure 3.

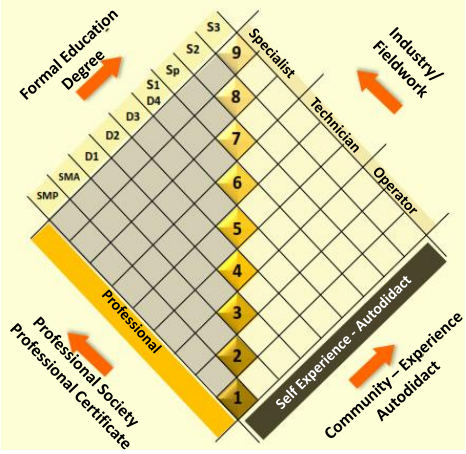

Figure 3. IQF Levelling up stage

Each BLK has develop its own programs base on levelling of IQF appropriate with its district characteristics. Now, some of BLKs type A (large training provide) try to standardize training program which be held in BLKs. Curriculums were be derived from these programs. The structure of each core training programs consists of eight parts: (1) training program tittle, (2) training program code, (3) training program level, (4) goals, (5) list of unit competence, (6) duration of training, (7) trainee pre requirement, (8) instructor requirement. Over 80 training programs at BLK are now listed in the field of creative industry, business and management, automotive, electrical, construction, welding, information technology and manufacturing technology [3].

In general, vocation training programs in BLKs can provide competent workforce until level 5 which able to complete the work in extensive scope, select the appropriate method from various options. In managerial competency, able to manage group work and prepare a comprehensive written report. Training duration vary from 40 hours (equivalent with 1 weeks), 160 hours (equivalent with 1 month), until 640 hours (equivalent with 7 months). Trainee education requirement as a pre requisite vary from elementary school (SD), junior high school (SMP), senior high school (SMA/SMK), Diploma and Bachelor. It means, vocational training programs with Indonesian Quality Framework scheme were a flexible process in giving competency recognition.

3.2 Soft Skills Programs Model in BLK's

Soft skills are at least as critical as technical skills to entry level employment. Local businesses surveyed overwhelmingly stressed that soft skills matter a great deal, not only in obtaining a job but also in the success of a business. More than 75% of businesses surveyed stated that soft skills were as important as or more important than technical skills in securing entry-level employment as shown in figure 4. A similar percentage of businesses (71%) stated that soft skills are equally or more important than technical skills in carrying out company goals [13]. Hence, vocational training institutions must try to held training programs which include soft skills activity.

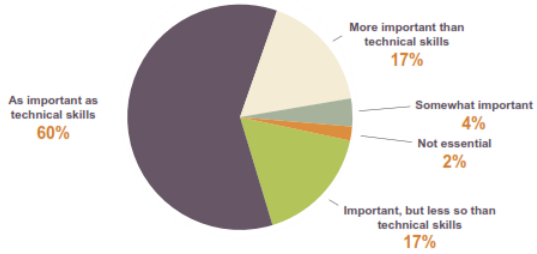

Figure 4. Importance soft skill for entry level employment

Vocational training attempts to support both curriculum ideologies but through its alignment with industry is oriented more towards vocational educational outcomes than higher education [14]. Model of vocational training scheme needs to be reviewed and re-developed. BLKs have many dual system vocational training programs in collaboration with industry with apprenticeship scheme as a benchmarking and reference in curriculum development processes.

Training with team building games activity increasing popularly among practitioners of human resource training. Many large companies , and small companies take advantage of the games team building management training in human resource development. Here are some reasons why team building game methods used.

1. This method was a simulation of complex life became simple,
2. This method use learning approach through experience (experiential learning),
3. This method was full of excitement because done with the game.

Famous program was competency based training with 1 month on the job training or off the job training. For example in Surakarta Vocational Training Center has trained 2531 trainees (165 packages) at 2013 **[15]**. Most of trainees did off the job training during following training programs in BLKs, others follow on the job training in industry to absorb working culture

that reflect soft skills requirements. During 2013 Surakarta Vocational Training Centre did 4 packages (64 trainees) competency-based training programs (CBT) integrated with industry curriculum in field of Welding and Automotive. Programs held on 3 months training in BLK and 3 months in industry apprenticeship. This scheme give excellent result in outcomes workforce absorption and assure trainees competency both technical and soft skills.

In the collaboration between training provider and industry, all programs must be formulated with the same cooperation between industry and the training provider. Programs consist of curriculum, teaching materials, evaluation, recruitment of participants, instructors, funding, and execution time. Vocational education will be efficient and effective if **[16]**:

1. environment where trainees trained was a replica environment in which trainee will work.
2. tasks given to the trainee were done in same way, tools and machines which appropriate with workplace.
3. conduct by instructors who have experience and success in applying the skills and knowledge of the work operations and processes.
4. could foster effective work habits to trainees. This only happen if the training was given in the form of a real job.
5. trainings given only to someone who needs it, who wants it and who can get benefit from it.

Trainees will adapt, adopt and absorb soft skills from environment place. Not only when did work activity, but also when held a meeting, made report, and other interpersonal communication between employee with others.

In business, soft skills may thus characterize a certain dimension of the career attributes which an individual may possess (such as team skills, communication skills, leadership skills, customer service skills, and problem solving skills). Such skills can serve to integrate fragments of technological discourse into a unified field of behavioural praxis **[17]**. In addition, soft skills will maximise the diverse functions of communication, such as enlightened listening, team problem solving, cross cultural relations and customer service, have a dramatic impact on encouraging within the workplace a unified sense of mission and shared vision, both of which maximise performance outcomes **[18]**. Since the job market for business graduates is steadily becoming more competitive, business programs must endeavour to develop creative and innovative ways to provide soft skill training for their students which are specially designed to enhance their competitive edge **[19]**. We have observed that acquiring technical skills alone does not guarantee that a trainee will be a good employee or a good leader and that communication skills, teamwork capabilities and leadership skills are decidedly important in determining success in the workplace.

4. Integrating Soft Skills Programs in Training Curriculum

Vocational training curriculum must accommodate all of the needs of both the physical needs of learners, non-physical, and moral as well as their future to be able to live a safe, comfortable, good welfare, and harmony with nature and the surrounding communities. On the other hand based vocational training curriculum needs matching with job markets (demand-driven by job markets). The emphasis was on the mastery of the competencies required by industry job markets **[9]**. From employer or industry side, soft skills competency became a vital element because they have invested tools, machines, buildings, workforces, management systems, etc. Each employees from top managements until cleaning services must have technical and soft competency to ensure achievement of company visions and missions target.

Integrate soft skills training into every element of the curriculum should be woven through an entire training program and not relegated to a separate one-week seminar or a special hour of the day. Trainees need to have repetitive practice to master certain skills like responsibility and time management

Over 80 training programs at BLK are now listed in the field of creative industry, business and management, automotive, electrical, construction, welding, information technology and manufacturing technology [3]. In general, vocation training programs in BLKs can provide competent workforce until level 5 which able to complete the work in extensive scope, select the appropriate method from various options. It means, vocational training programs with Indonesian Quality Framework scheme were a flexible process in giving competency recognition. Table 1 describe integration of soft skills activity into BLK's curriculum. The body of BLK's curriculum consist of 3 group of competency units : group of competency units, group of non competency unit and on the job training. We found soft skills activity placed at group of non competency units during 80 hours.

Equivalent to 20% of total training hours when follow training at BLK's.

Table 3. Sample of integrating disaster risk education into BLK's curriculum

KURIKULUM PELATIHAN BERBASIS KOMPETENSI
OTOMASI INDUSTRI

NO	UNIT KOMPETENSI	KODE UNIT	PERKIRAAN WAKTU PELATIHAN (JP)		
			Pengetahuan	Keterampilan	Jumlah
1.	**KELOMPOK UNIT KOMPETENSI**				
	1.1 Menerapkan Prinsip-prinsip Keselamatan dan Kesehatan Kerja di Lingkungan Kerja	LOG.OO01.002.01	6	2	8
	1.2 Menerapkan Teknik Listrik Dasar di Tempat Kerja	IND.LS01.001.00	18	6	24
	1.3 Mengukur Listrik/Elektronik	LOG.OO12.002.01	8	24	32
	1.4 Memasang dan menyambung sistem pengawatan	KTL.IO02.040.01	4	20	24
	1.5 Menerapkan asas digital di tempat kerja	BSDC-0051	12	24	36
	1.6 Memasang Instalasi Otomasi Listrik Industri	KTL.IK02.234.01	16	44	60
	1.7 Mengoperasikan Programable Logic Control (PLC)	KTL.IO02.214.01	22	52	74
	1.8 Memasang Instalasi PLC	KTL.IK02.229.01	12	50	62
	Jumlah I		**98**	**222**	**320**
2.	***ON THE JOB TRAINING* (OJT)**				
	-	-	-	-	-
	Jumlah II				
3.	**KELOMPOK NON-UNIT KOMPETENSI**				
	3.1 Motivasi Kerja		6	-	6
	3.2 Sikap Etika		4	-	4
	3.3 Tata Graha (5 S)		2	2	4
	3.4 Wawasan Industri		6	16	22
	3.5 Kewirausahaan		6	-	6
	3.6 Kerja Bangku		4	36	40
	Jumlah III		**26**	**54**	**80**
	Jumlah I s/d III		**124**	**276**	**400**

Surakarta Vocational Training Centre have implemented this curriculum integration by 2015. Programs held on 3 months training in BLK and 1 months in industry apprenticeship. This scheme give excellent result in outcomes workforce attitudes in improving trainee characters.

5. Increasing Trainee's Character through Soft Skills Activity

Local employers rank professionalism/ integrity, reliability, communication, and teamwork as the top soft skills priorities for entry-level employment. Conversely, creativity/innovation and self-direction were viewed as the least critical of soft skills. The soft skills categories that are both high priorities for local employers and most lacking in job applicants are communication, problem solving/adaptability, and reliability. Communication was by far the most common skill lacking in job applicants as reported by 55% of employers surveyed [13].

Observation and focus group conduct to confirm soft skills activity in training program curriculum appropriateness with questionnaire. Six questions were asked to trainees after they completing training and apprenticeship programs. Questionnaire questions as below.

1. Soft skills activity have matched with training program goals.
2. Quality of soft skills activity contents increase trainee's skill and knowledge.
3. Soft skills activity contents schemes have been arranged from basic until advanced.
4. Soft skills activity contents were easy to be learnt and understood.
5. Soft skills activity contents have fulfill your expectation.
6. Appearance, and training content format.

Measurement of soft skills activity which integrated in training program acceptance from trainees side use 4 scales, that were 4 (very good), 3 (good), 2 (enough) and 1 (poor). Thus, expectation was 4 (very good). After calculated the results of questions 1-6 were good in majority. It means soft skills activity included in competency-based training program curriculum could improve trainee's character and give good impact for trainees.

6. Conclusion and Future Works

It should be evident that a considerable literature has now accumulated to show that soft skills are far more important to education, workplace and life-performance outcomes than has previously been recognized.

Vocational training was the training for workforce to provide skilled workers / professionals who have a key role in industry. Vocational training institutions can not only organize the learning with school-based learning, but also have to work-based learning scheme which enhanced with soft skills activities to prepare competent graduates for fulfilling job market demand. Partnership between vocational training institutions and industry was a necessity to adopt, adapt and absorb technical skills and soft skill. Appropriate knowledge and skills were necessary to implement those scheme for each trainee during learning process. Policy and the curriculum can be taken to improve trainee's character through soft skills activity. This would provide enough space for government training institutions to develop a relevant curriculum related to it, train the instructors and management staffs. This integrated system provides many advantages for government, industry and workforce. Involvement of stakeholders and industry partnerships in integrating vocational curriculum with soft skills activity were co-developed by vocational training center and expert from various industry which has aim to provide appropriate skills at in the respective industries. For further research it is recommended to make curriculum comparison between BLK's and training center in industry

and also measure level of acceptance of BLK's management in soft skills activity curriculum integration.

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AN INTEGRATED LOCAL WISDOM LEARNING AS A MODEL OF DEVELOPING MORAL CHARACTER

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Absract

The purpose of this research is to develop learning models for developing moral character based on local Wisdom elementary school students Bengkulu. In this study, researchers applied a type of development reseach. *Subjects of this research were teachers and elementary students*. *Data collected through interviews, observation, documentation and forum discussion (FGD*). Methods of *Interview*, *observation, documentation, forum group discussion (*FGD), *and analysis of the theories of the values development were used as methods of data collection*. *The data were analyzed* with *descriptive qualitative argumentative.* Based on the data analysis of Research and Development, reseachers found a learning model for moral character development in the form of an integrated local wisdom learning.

Keywords: Local wisdom, moral character, and integrated Local Wisdom Learning

1. Introduction

As the impact of the development of science, technology and art (science and technology), especially at this time, there was a revolutionary in all aspects of life, both in political, economic, social, cultural, behavioral and other dimensions of life [1]. These changes occur in both developed and developing country. Reportedly, the students United Kingdom for example, that the impact of science and technology as an increase in harmful behavior, anti-social behavior, indiscipline, underachievement, [2], drunk - drinking, unsafe sex [3] and the increase in juvenile delinquency in society. Even in remote villages and major cities particular, the phenomenon has come to the extent of very disturbing.

In connection with this, many parties today demanded an increase in the intensity and quality of the implementation of character leraning in formal educational institutions. Formal educational institutions, especially primary schools, as the container of coaching children and young people might be able expected to play an increasing role in shaping the character of students through increased intensity and quality of character learning.

Educational experts generally agree on the importance of character learning on the track of formal education. However, there are some deferent opinions among them related to either taught materials or the approaches. Some experts claim that the leraning material forming the character should be taken of local wisdom that developed in the community, while other experts said that the leraning materials as a character leraning materials must come from curriculum materials prepared by the central government. In Indonesia, the core curriculum is constructed by the central government, but in its application in schools, teachers are expected to develop the core curriculum by integrating local wisdom in their respective regions. Local wisdom is the knowledge of the provincial gained through their experience and initiation as well as those one that has been passed down from generation to generation [4]. While Kartawinata said that "Local wisdom is the embodiment of durability and ability to grow which manifested through the way of life, knowledge, and life strategies in the form of various activities undertaken by local communities to address various problems in the fulfillment of their needs, while preserving its culture."[5] The content of local wisdom "include: knowledge, values, ethics and morals, and norms in the form of suggestions, prohibitions, and penalties, as well as phrases that are used as a guide attitudes and behavior in maintaining, keeping and preserving its continuition.... [6]. Local wisdom intended in this study is values, ethics and morals, and norms in the form of suggestions or advice, prohibitions, and penalties, as well as phrases that are used as a guide attitudes and behavior in maintaining, keeping and preserving their way of life gained through their experience and initiation those have been passed down from generation to generation. Teachers select local wisdom and teach them to

students in accordance with the purpose of learning and of character leraning to be achieved.

Related to the character learning approach, some experts suggest the use of moral learning approaches developed in western countries, such as, an approach of cognitive moral development, value analysis approach, reflective approach, values characteristic and integrated approach. Some others suggested the use of traditional approaches, namely through the planting of certain social values in students. How do the characteristics of each values learning approach that develops today? The next question is, "Which is the most effective approach of value learning to be implemented in Indonesia?

Conceptually character learning is a direct and indirect intervention by various institutions such as the family, religious institutions, and schools which affects a person's character, including developments in behavior, the ability to think about whether the issues right or wrong, the actual opinions of right or wrong that a person holding. [7]. He also argued that the purpose of formal learning should take into account the character (1) the actual actions of a person containing the situational action are right or wrong. (2) The ability of a person to think/critically on moral problems, and (3) actual moral opinions expressed are retained by the individual [8]. To achieve the goals of character, experts have suggested various approaches of moral character education. Superka et al. said there are five typologies of values learning, those are value inculcation (traditional), moral development, value analysis, value clarification, and action learning approaches [9].

Inculcation Approach is an approach that places emphasis on the cultivation of social values in students. Approach to the character learning aims; (1) instill certain values on students; (2) change the social values of unwanted students toward the desired value. Some people support while others criticize to this approach. Huitt said, "Most educators... see values as socially or culturally accepted standards or rules of behavior. [10]" Children actively incorporate these values into her naturally. While critics of this approach say that this approach is seen indoctrination on, not in accordance with the development of democratic life [11], 2004). This approach valued as neglecting the rights of children to choose their own value freely. Human life is different because of differences in time and place. We cannot predict the corresponding value for generations to come. According to the above opinion, every generation has the right to determine their value. Therefore, the younger generation is more necessary to learn the proces rather than the values, so they can find theirs values according to the place and era.

Cognitive moral development approach is an approach that places emphasis on the cognitive aspects and development. This approach encourages students to think actively about moral issues and make moral decisions. Educators who adopt a perspective of moral cognitive development believe that moral thinking develops in stages through a certain sequence in making a moral judgment of a lower level towards a higher level [12].

Historically cognitive developmental approach initially proposed by Dewey. He divides the child's moral development into three stages (levels) as follows: (1) Phase "pre moral" or "pre conventional". In this stage the person's behavior is driven by the insistence of the physical or social nature; (2) Phase "conventional". In this stage, a person begins to accept with little critical value, based on the criteria of the group. (3) Phase "autonomous". In this stage, a person to act or behave in accordance with the reasoning and judgment her/himself, does not fully accepts group criteria. Piaget also made a conclusion that, the development of cognitive abilities in children affects their moral judgments.

Aaccording to this approach, the purposes of learning/education are is firsly to help students develop moral thinking patterns to more complex and based on a series of higher moral values. Secondly, is to encourage students to discuss the reasons why the options and their moral value not only to do share with others but also to gain levels of change reasons of students value.

In the proces of learning, teachers are expected to provide a moral dilemma for students in order to be discussed in small groups to obtain relatively structured argumentative answers and do not necessarily have to come to a right or wrong answer. Through argumentative moral is what allows the child to internalize the values of the information received. However, something to keep in mind that for children of primary school age is still relatively low to think critically and argumenttatticly, and moral will easily formed through habituation. White stated that "... routines shape habits, which in turn establish attitudes [13]."

Value analysis approach is an approach of moral learning emphasising on the development of students' ability to think logically and scientific investigation, by means of analyzing the problems associated with social values. If we compare the value analysis approach to cognitive development approach, one important difference

between the two that the value analysis approach is more emphasis on the discussion of issues that includes social values. While the cognitive development approach is an approach emphasising the moral dilemma that is individual. This means that the cognitive development approach and analysis approach have the same mindset, just two different targets. Therefore, both have advantages and disadvantages similar concept application. Advantages, this approach is able to develop critical thinking, while weaknesses, this approach are relatively difficult to apply at the age of low-grade children.

There are two main goals of moral learning according to this approach, namely (1) to help students to use scientific and logical thinking skills in analyzing social problems, which are associated with certain moral values; (2) helping students to use rational thinking and analytical processes, the connection between concepts and formulate their values.

Value clarification approach is an approach to learning that emphasizes effort to assist students in assessing their own feelings and actions, to increase their awareness of their own values. The are three purpose of education according to the value of this approach, namely to help students to be able to (1) be aware of and identify their own values and the values of others; (2) communicate openly and honestly with others, dealing with its own values; (3) use jointly the ability to think rationally and emotional awareness, to understand the feelings, values, and behaviors of their own [14]. Learning methods used in this approach is clarification, simulation, role playing games, out of class activity, discussion and small game in depth self - analysis's exercises.

In accordance with its objectives, this approach will enable the child to analyze the truth-values he had, be honest with him/her and others, and able to think rationally and increase emotional awareness.

Action learning approach is an approach of character learning placing emphasize on efforts to provide the opportunity either for students to perform moral acts, individually or together in a group. This approach contains two main objectives [15], those are (1) provides an opportunity for students to perform moral acts, either individually or together, based on their own values; (2) encourage students to see themselves as individual beings and social beings in association with others, who do not have complete freedom, but as citizens of a society.

In addition to applying, the learning methods adopted in the approach to value analysis and value clarification, this approach also implement certain projects at school or in the community, and the organizational skills or practices relating among others [16]. This approach will be able to increase awareness, willingness to participate in social life in the community, but not all of the values of social studies that are in the learning material can be applayed directly.

As we know that each of these approaches certainly has its advantages and disadvantages of each and, therefore, need to develop an approach that contains all the goodnessof them. Integrated local wisdom model might be the most appropriate approach in the implementation of the local wisdom value or character learning in Indonesia. As this approach will enable the fulfillment of the authorized capital of the individual in the learning process both cognitive, affective and psychomotor besides planting effort to fulfill the undertakings of the noble values either local values, the nation's culture or philosophy of Pancasila Indonesia.

Observing these problems, this study aims to "develop the learning model of moral character based on local wisdom for elementary school students".

2. Research Methods.

This study was designed to develop learning model of moral character based on local wisdom in social studies elementary school in Bengkulu using cycle stages of Research and Development (R & D) [17]. After doing some preliminary research and found the model tentatively, then the model is tested theoretically by value education experts and empirically conducted through: (a) construct theoretical, (b) validation of expert forums and forum group discussions (FGD), (c) conducting research in the field, (d) trial product. The area of this study was public elementary schools in Bengkulu Province.

In this study sample was taken purposively, in which samples are taken based on the criteria that support the achievement of the purposes of research. For the sake of balance in the discovery of the model, the researchers took two elementary schools in the city and three elementary schools in rural areas. Trial subjects were the teachers and students in grade 5 of elementary schools. All students in the grade 5 (120 students) were to be trial samples. Qualitative data were collected through FGD, observation, and interview. The qualitative data were analyzed by descriptive qualitative and argumentative. For konowing the impect of trial product, researchers apply a trial in the form of

prequestioner-postquestioner control design. The intrument of prequestioner-postquestioner were contructed in the form of students'attitude questioner checklist. The checklists were succesively contructed in the form of indicator 1 to 4 as following. NS: Not seen (if the students have not shown signs of early behavior that is expressed in the indicator). SV: Starting visible (if the students have started showing their early signs of behavior that is expressed in the indicator, but not yet consistent). SD: Start developing (if the students are already showing signs behavior expressed in indicators and began to consistently). E: Entrenched (if learners continuously exhibits behavior expressed in indicators consistently).The Researcher cllected data by asking for students'teacher, friends, and parent to fill the items of the check lists. All collected data were analyzed with t-test.

3. Result and Dicussion

After the draft learning model composed, researchers conducted a validation of the model to two value education experts theoritically and to the 19 teachers of the elementary schools emperically. The next activity researchers conducted FGD with teachers. FGD of moral character learning model values-based local wisdom subjects of Social Studies elementary school Bengkulu province is as follows.

First, researchers conducted a focus group with teachers of the elementary schools against the standards of competence to be achieved by the fifth grade social studies teacher elementary school in the implementation of learning. Furthermore FGD activity is to discuss the basic competencies, material analysis, the search for indicators, analysis of existing moral in social studies learning materials and the values of wisdom/local advantages which may be applied to the learning manners. Based on the results of FGD, interviews and observations obtained some data in the form of values of local wisdom that teachers of elementary school are used to instill students with respect to the standard of competence, basic competence and indicators that would be achieved in the learning of social studies, fifth grade elementary level.

After FGD done, fisrtly, reserahers distrubuted and asked for the students to fill a questioner set to students related local wisdome values that shoul be internalized in to the students (values and local wisdom that would be inculcated in students is "the will to preserve the heritage and imitate the behavior of leaders the history of religion"). Secondly, researhers asked for teachers to apply the learning activities in their respective class, while researcher observed the teachers' leraning activities. The learning activities was done in the cycles. All teachers' learning activities starting its activities with respect to the standards of competence and basic competences to be achieved, the values that would be implanted and searching for material that is deemed to represent the basic competencies to be achieved.

The First Scenario of Learning activity.

On this occasion the basic competencies which would be achieved on the fisrt scenario is "Getting to know the relics patterned Hinduism, Buddhism and Islam in Indonesia." While values and local wisdom that would be inculcated in children is the will to preserve the heritage and imitate the behavior of leaders the history of religion. In connection with these teachers take learning materials "Kingdom of Hinduism, Buddhism, and Islam in Indonesia."

When the class early activities that teachers do was read the greeting, checking student attendance and classroom atmosphere, followed by giving a brief description of temple of Borobudur, Mendut, and Kalasan as relics of Buddhism and Hinduism in Indonesia. Then it is continued with activities by getting students looks at the drawings of children chanting in mosque and explain about the pictures of the relics to the students.

At the core of teachers' learning activities are (1) assigning students to make observations on 3 pictures Borobudur, Mendut, and Kalasan; (2) held a debriefing with the students about the Buddhist tradition practiced in the area where he lives; (3) encourage students to observe the map and pictures of relics and conduct question-answer on the areas of the kingdom; (4) explain briefly about the coming of Islam to Indonesia; (5) require the student to make a resume of the kingdom of Islam in Indonesia; (6) require the student to resume the Hindu-Buddhist kingdom in Indonesia; (7) provide questions to the students about the behavioral activity figures of Islamic kingdoms in various regions of Indonesia; (8) the teacher invites students to think by asking "What do you think about the monuments, temples and the mosques? How is beauty? Based on the legacy of human remains how civilization of our society at that time? "Furthermore, what we need to do with the relics of temples and magnificent mosque?" Why do the religious leaders made quite magnificent place of worship? What behaviors and values we should all follow from these leaders? (9) the teacher divides the students into four groups and asked each group of students to choose one question and discuss. When the students discuss,

teachers around to assist and facilitate the process if students have difficulty. (10) Ordering of each group of students to present the results of their discussions; (11) further teacher with students doing a class discussion about what we should do about these relics; (12) further teacher with students doing a class discussion by asking behaviors from the figures that what we should all follow and we do in our everyday life and behavior which should not have to be our example. (13) based on the behaviors that have been agreed to be emulated, teachers ask a plan of activities to the students what need to do at home and at school.

At the end of the learning activities, the teacher guides students to formulate conclusions about the material that has been discussed, mainly concerned about what needs to be done to the historical relics and examples of the implementation of the values that need to be followed in daily life. At the end of the activities that most teachers notice the message that the implementation of the plan of activities that students have created it will be monitored and determine how the value of the students earn.

After the proces of learning activity done, the researchers and the teachers discussed about what they have done. Fistly, researchers asked "why does the teacher in the learning process always encourage students to think what students thought about what they learned, why, and what is exemplary and why emulated, and finally asks the students based on the values or behavior that logically exemplary, draft activities to be carried out in everyday life both at home and at school ?" Teacher illustrated that we are creatures of God who have sense, we should be grateful for this. With asking "What behaviors and values we should all follow from these leaders?" The students will know what values from the learned content that should be emulated in daily life. By using our intellect we are able to solve all the problems faced. In connection with this the basis of values they have learned and chosen, we expect them becoming a habit and character in students.

Basing on what and why the teachers have done, we (researchers) asked them "Do we think of it possible if the students have learned the content of learning and choosen the values of the learned content, directly becoming a habit and charactter in students?" Mayority of teachers gave it a response that it is looklike imposible to hapen before the students have found out of reasons why the choosen values are rationaly acceptable. With a sense we are able to make sense of why an action that needs to be emulated and choose which ones need to be replicated and which are not, so eventually we be guided in our daily lives. A value of learning outcomes can only be internalized into the characters themselves if done repeatedly in the life and the visible benefits.

After discussion, reserachers and teachers make a conclusion, in order to be character students are not only enough to have knowledge and choose values of the learned content but also they should be aware of the reasons why the values should be be understood, implemented, maintained, and used as a handle in the behavior of individual, group and in social life.

The ilustration of the discussion on the learning proses is in line with the opinion of the Dharma Kesuma, CEPI Triatna and Johar Permana [18] said that the human mind will be able to live a better life. A mind is a gift to be thankful for its existence by using their best to live our lives for the better, good life in this world and in the hereafter. Furthermore, they also say that the mind has a duty to give consideration in the decision-making of any decision to be made through the process of a person in his life. The logic and rationality become an important measure to produce person's decisions. Someone will do and have done steadily if everything was done is acceptable to think. Examples of acceptable behavior will be easy if something that has a sense of acceptance. Something that is unacceptable to think will develop in a person into something that is felt to be liked or not liked by her feelings. Something that endeared value will be the attitude is a tendency that encourages a person to do and will even try to defend and fight for it. This is in line with the opinion of Sarlito which says that contain cognitive attitude, feelings and behavioral tendencies acting on an object [19]. Cognitive influence positive or negative feelings, and feelings affect the tendency to act. Affective-cognitive consistency theory suggests that the affective component of the attitude system may be changed by first changing the cognitive component through providing new information [20].

Individual attitudes toward an object depends on the information obtained from an object is perceived as positive or negative. Changes in individual cognition of an object will tend to produce changes in feelings and tendencies toward the object. Thus the acceptance of information rationally considered as a positive or negative affect the tendency to act on that object. In other words, the acceptance of information from the subject matter which form of the values that have been analyzed rationally why it needs to be done, what are the benefits, how to do so by the individual in question will

strengthen the tendency to act or attitude towards these values.

Decisions of the object to do something or not, maintained or not is determined by the rationality of the acceptability of an object. Decisions on value as a result of studying to do or not, maintained or not is determined by rationality acceptance into a value that has been studied as something rational or not. If the value that has been received as a result of thinking is rasional, perceived as goodness and usefulness in life, done repeatedly then over time will become an ingrained habit. An ingrained habit, its mean has become culture in their lives or has become characters in their life. Thus, development of character through a learning process will be formed, when the learning process is done through an activity of explanation as to what the nature of the study, what the values contained therein, where the values need to be emulated, why is the value that needs to be replicated and maintained, practiced in life in repeatedly.

White stated that ... routines shape habits, which in turn establish attitudes [21]. While Arwani asserted that something is deemed better to do, and do it repeatedly will be custom and entrenched or internalized in him, so he was reluctant and felt there was something missing when abandon, and felt the need to preserve and defend it [22]. That is something the values obtained from the learning outcomes of an individual will be a character in him when practiced in everyday life continuously.

Based on the result of the discussion and theoritical reviews, researchers and teachers have a effort to improve of the fisrt scenario of learning activities as seen in the second scenario.

The Second Scenario of Learning Activity

Based on the conclution, the core of teacher's learning activities that should be implemented as following: (1) assigning students to make observations, vedio etc.; (2) stimulating students to have questions releted to what they have observed (3) asking for the students to collect information, (4) analyzing the collected informaation and to make conclusion; (5) asking for students to share what they have foud out; (6) giving the students an opportunity to think rationally discussing why the values that need to be understood, accepted as usfull things, implemented, maintained, and used as a handle in the behavior in individual, group and in social life. After digging meanings/values contained in the subject matter being studied, the students were told to think rationally where the values are contradictory and where the values of mutual support, where the perceived value dilemmas in the decision to choose, why choose the value this, and not the other value. Which moral values matched with loacal wisdom accustomed to doing daily life. (7) Giving students the opportunity to draft a joint activity that is a manifestation of values is reasonably acceptable. By selecting values rationally acceptable, the students were told to make the design of activities that can be practiced in life either at school, at home and in the community. (8) Encouraging students to apply design activities that have been made continuously. At this stage the teacher encourage students to always apply the values in our daily life by giving gifts to those who behave in accordance with the values that are expected to follow and provide guidance to those who do not yet apply. (9) Monitoring the joint application of the design activity in daily life continuously.

Based on the second scenario, the teachers implemented it in the following week. Competency standards would be achieved in the second learning scenario is to respect role of hero and society in preparing and maintaining the independence of Indonesia. Basic competencies expected was that the students were able to appreciate the services and the role of leaders in the declared independence. The learning material is about the proclamation of independence. While the value of local wisdom that would be implanted is respect, environmental awareness, patriotism.

At the end of the lesson the students are expected to be able to (1) communicate the important events that occurred around the proclamation (Rengasdengklok events and preparation of the Proclamation Text); (2) create time line of events leading up to the proclamation of the stage; (3) make a brief history of important figures in the event of the proclamation; (4) provides an example of how to appreciate the services of luminaries independence; (5) internalized in them the behavior of patriotism in everyday life as a student. In relation to the learning objectives to be achieved, the learning material is the events of surrounding proclamation.

The initial stage when the teachers do in the classroom was read the greeting, checking student attendance and classroom atmosphere, followed by giving a brief description of the events of surrounding proclamation and the purpose of learning.

In the core stage of learning activities as following: (1) the teacher invites all students to oserve the characters of heroes pictures and vedio of the events of surrounding procalamation provided (Rengasdengklok events and preparation of the Proclamation Text). (2) The

teacher encourages the students to have questions related to what they have observed on the picture and vedio. The main ideas of quetions coming from the students were following: (a) any person who included important figures in the event of the proclamation; (b) how the story Rengasdengklok event as preparation for the initial events of the proclamation of independence; (c) how the story of the process of drafting the text of the proclamation; (d) how the story events of the implementation of the proclamation; (e) how the fighting spirit of the proclamation of the figures? (f) behaviors of independence proclamation leaders such as what it should be emulated. (3) Based on the quetions, the teacher divides students into 6 (six) groups. Each group should colect, analize and conclude data/information related to the question posed to them. (4) Teacher asks for the students to communicate what they have done.

(5) The next activities of learning was (a) the teacher invites students to play a role on the preparation and implementation of the independence proclamation; (b) teacher and students together texplore the values of struggle of the proclamation hero that should be emulated in building the nation. (6) Giving the students the opportunity to think rationally to discuss why the values need to be understood, implemented, maintained, and used as a handle in the behavior of individual, group and in social life. After digging meanings/values contained in the subject matter being studied, the students were told to think rationally where the values are contradictory and where the values of mutual support, where the perceived value dilemmas in the decision to choose, why choose the value this, and not the other value, which moral values matched with local wisdom accustomed to doing everyday lain. (7) Giving the students an opportunity to draft a joint activity which is of a manifestation of values reasonably acceptable. Beside selecting values rationally acceptable, the students are told to make the design of activities that can be practiced in life either at school, at home and in the community.(8) Encouraging students to apply design activities that have been made continuously. At this stage the teacher encourage students to always apply the values in our daily lives by giving gifts to those who behave in accordance with the values that are expected to be followed and provide guidance to those who do not yet apply. (9) Monitor the joint application of the design activity in daily life continuously.

In general, the integrated local wisdom learning scenario is as follows. (1) make the students aquintance with the knowledge about the topic of learning that will be delivered. At this stage, the task of a teacher is to stimulate students to become interested in and easily capture the substance of the contents of a topic or subject matter to be studied / discussed at a meeting that will take place. Activities that need to be done by the teacher is to link between the things that have been known or experienced by students in the form of knowledge, experience, skills and abilities in everyday life as well as the knowledge, experience, skills and abilities of students obtained from the previous study. Implementation could be begun by way of question and answer, class discussion, explaining pictures, showing a map, set the film or video, or storytelling style and expression, and expression changes accordingly. (2) Inform the learning goals. Submission of learning goals is very important that make the students come to know what will be achieved after the completion of study and participate actively in the learning process. (3) Convey the benefits of what will be learned. Delivery of the benefits of lessons learned both in terms of the ease in learning the material further or continue their studies and in later life in the community will allow motivated students to study in earnest. By knowing the benefits someone would feel and think that the effort that will be achieved is not worth the rest. (4) Enable students to learn the material contextual learning. Striving for students understand the learning materials are contextually, where students experience on what they learned. Students experience in learning in the sense that students observe, hear, hold, touch, do, feel, think about, discuss, collect data, analyze data/facts, create concepts, generalizations, hypotheses, prove and make own conclusions on what they learn with the guidance of a teacher. Learning activities can be done individually or in groups. What is important in this learning, students can learn by experience or contextual. (5) Enable students explore the values/meaning of learning materials studied. At this stage, teachers' activities is to provide opportunities for students to reflect on what they have learned. Teachers allow students to explore the meanings/values contained in the subject matter that had just learned. On this occasion the students take the examples of exemplary behavior and imitated, like the spirit, ideals, idealism, commitment, honesty, spirit of sacrifice, and concern for both physical and social environment, and honesty to put into practice in life. (6) Give the students the opportunity to think rationally discuss why the values need to be understood, accepted as useful things, implemented, maintained, and used as a

handle in the behavior as an individual person, group and in social life. After digging meanings/values contained in the subject matter being studied, the students were told to think rationally where the values are contradictory and where the values of mutual support, where the perceived value dilemmas in the decision to choose, which values matches with local wisdom value, why choose the value this, and not the other value. (7) Give students the opportunity to draft a joint activity that is a manifestation of values is reasonably acceptable. By selecting values rationally acceptable, the students were told to make the design of activities that can be practiced in life either at school, at home and in the community.(8) Encourage students to apply design activities that have been made continuously. At this stage the teacher encourage students to always apply the values in our daily lives by giving gifts to those who behave in accordance with the values that are expected to follow and be followed and provide guidance to those who do not yet apply. (9) Monitor the joint application of the design activity in daily life continuously. For successful implementation of values as an embodiment of the selected value, the application monitoring needs to be done jointly by teachers, students, educators and parents.

After teachers implemented the integrated local widom learning, researchers asked for the student to fill in quetioner. The Results of the distributed questioner data analysis as following.

Table 1. Mean Score of Observation and T Value

N	Mean Score of Prequestioner	Mean Score of Post-quetioner	The increase of Mean score of character chang-ings after trial.	T value
120	47.7917	80.1250	32.3333 (68 %)	2.89

As showed in the Table 1 we can see that Mean Score of Pre-questioner is 47.7917, and Mean Score of Post-quetioner is 80.1250,. Threre we can see the increase of Mean score of character changings after trial from 47. 7917 to 80.1250 or 32.3333 (68 %). It means that the model is very effective to internalize local wisdom value into children. We can olso say that the implementation of the **integrated local wisdom learning** model in class is able to develop children character 68%. Basing on the table indicates that t valu is 2.9. When counlsult to table of t value, the this result is very significant both either for 5 % of significancy or 1 % of significany. In the table of t show that with N = 120 and 5 % of significancy is 1.960, and with 1 % of significancy is 2.617. It means that T Value of observation is higher than the t value in the table. It indicates that the the formula of integrated local wisdom learning is quite perfect as a model to develop children moral character**.** This result of the research also can be understood that the best way to develope children's moral charachter could be contruccted a syntax as followings. Firstly a teacher makes active children to learn; scondly give a chance to children to explore the values of learning materials studied. Scondly, the teacher provide children opportunities to reflect, explore the meanings/values contained in the subject matter that had just learned. Thirdly, the teacher gives children opportunity to think and discuss rationally why the values need to be understood, accepted as useful things, implemented, maintained, and used as a handle in the behavior as individual, group and in social life. Beside that, the children were told to think rationally where the values are contradictory and where the values of mutual support, where the perceived value dilemmas in the decision to choose, why choose the value this, and not the other value. Fourthly the teacher gives students an opportunity to draft a joint activity that is of a manifestation of values reasonably acceptable and can be practiced in life either at school, at home and in their community. Fifthly, the teacher encourages students to apply the design activities in their daily life continuously. Sixthly, the teacher with all personels in the school monitor the joint application of the design activity in daily life continuously. This syntax is in line with what Badeni and Sri Saparahayuningsih said that moral values will internalized or entrained in self individual as a character if the individul understand the moral values deeply, accept the moral values rationally as a useful thing, the individual aware of why the moral values should be impelemented, maintaned, and used as a handle in the behavior as individual, group and in social life [23 and 24] .

4. Conclusion

Education of character values of local wisdom will be achieved optimally by the students if teachers apply an integrated local wisdom learning with the scenario as follows: (a) Introduce knowledge about learning topics which would be submitted; (b) convey the learning objectives; (c) to convey the benefits of the learned; (d) enable students study the learning

materials contextually (by observing, hearing, holding, touching, doing, feeling, thinking about, discussing, detremining problems, hypothising, collecting data, analizing data/facts, generalizing, creating concepts, making own conclusions on what they learn with the guidance of a teacher.); (e) enable students explore the values of learning materials were studied; (e) provide students opportunities to think rationally discuss why the values that need to be understood, implemented, maintained, and used as a guidance to behave as individual, group and public life; (g) provide students with an opportunity to draft a joint activity is a manifestation of values is reasonably acceptable; (h) give encouragement to students to apply design activities that have been made continuously; (I) monitor the joint application of the activity plan in daily life continuously.

Suggestion

Local knowledge, whether based on religion or phrases that live in the community, the values of social and cultural life that has been taken hold and understood by the majority either understood as knowledge or its meaning for life. Therefore, the teachers are expected to carry out the value/character education based on local wisdom in a society where the education done. The learning process model of local wisdom values that the teachers should do is an integrated local wisdom learning.

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CHARACTER EDUCATION IN SINGAPORE INDONESIAN SCHOOL

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Abstract

This research aimed to (1) analyse the School Culture, (2) describe the process of learning by implementing character education to the students, and (3) analyse the obstacles in implementing the values of the characters to the students. The method of this research wasa case study with the qualitative descriptive approach. The data were collected by direct observation, interview, and document which were validated by Triangulation theory. The data analysis was the model of interactive analysis, in which data collection, data reduction, and data conclusion were done. The results of this research were (1) Indonesia School in Singapore (or SIS) already had a great culture in the schools. The school culture there was divided into three groups: the religious culture, leadership culture, culture of social and art; (2) the process of implementation in character education was comprised: a) Planning, b) Implementation, and c) Assessment. a. The planning in the learning character education include in making a syllabus and lesson plan based on Character Education. b. The process of the implementation of character education will be reflected in the learning process. c. Moreover, forms of assessment done by teachers whom consider cognitive, effective, and psychomotor of student; and (3) the obstacles are found by the process of character building both come from internal and external. The internal obstacles were because the students had various characteristics in comprehending learning materials, and also the admissions system was not organized well yet, whereas, the external obstacle was the passive participation of parentsin the character building process.

Keywords: Character Education, School Culture, Singapore Indonesian School

1. Introduction

In recent years, character education has been a serious topic in education which is expected to solve national problems such as students' fights, illegal drugs, free sex, premarital pregnancy, and even suicidal actions. Those phenomena reflect the failure of education in shaping a better generation. Thus, character education emerges as a new option to regain the basic values to create the expected generation.

Education character can be defined as all kinds of effort to influence students' character (AjatSudrajat, 2011:49). Students' behaviour was expected to be able toknow, feel, and act based on the values related to moral and ethics in their daily lives. Character education will be able to build students' good characters.

The implementation of character education in the school is powerful to solve problems related to students' behaviour like dishonesty, students fight, etc. The school culture will shape all stakeholders in the school through the implementation of rules or compulsory behaviours. It, for sure, affects students unexceptionally.

The character building can be influenced by learning process in the class. The learning process will be designed systematically by using interesting learning method and media which can affect students in behaving and socializing. In this case, Social Science and History are lessons which emphasize the students' character building. Those lessons are not only oriented in students' intellectual development but also in students' behavioural aspects in their social life. In accordance to Said Hamid Hasan and friends (2010: 18), the integration of character education in lessons can be done by developing the character values in syllabus and lesson plan, or by developing the active learning process so that the students have the chance to absorb the values and to implement them in a proper behaviour.

In short, the school institutions have a considerable role in building the characters after family. One of the schools which implement the character education is Singapore Indonesian School (SIS). SIS is a school abroad running under the Indonesian government. This research aimed to identify the school means in building the students' character through the school culture and learning process and to identify the

experienced obstacle in implementing character education.

2. Method

This research was a case study with a descriptive qualitative approach. Lexy J Moleong (2005:6) stated that qualitative research is a research aiming to understand the phenomena which were experienced by the subject of research, such as behaviour, perception, motivation, and action. It is explained through description in the form of words and language in a certain context naturally and applying various scientific methods. Data collection of this research was obtained through interviewing, observing, and documenting. Data analysis used was *Interactive Model of Miles and Hiberman* which covered data reduction, data display, and data verification (Miles andHubermanin Sugiyono: 2013:246).

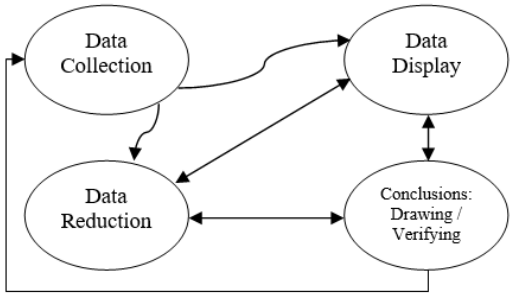

Table 1. Components of Data Analysis: Interactive Model

3. Result

3.1 The Profile of Singapore Indonesian School

Sekolah Indonesia LuarNegeri (SILN) was Indonesian schools in abroad. There are, at least, 15 Indonesian schools in abroad Singapore, Bangkok (Thailand), Davao (Filipina), Kuala Lumpur (Malaysia), Yangon (Myanmar), Kinabalu (Malaysia), Johor (Malaysia), Tokyo (Japan), Moscow (Russia), Holland, Cairo (Egypt), Riyadh (Arab), Jennah (Arab), Mecca (Arab), and Beograd (Serbia).

Singapore Indonesian School (SIS) was one of Indonesian governmental school in Singapore. It has been officially operating since 1969 and initially approved Kindergarten students only. In 1970, elementary grades were then available, followed by junior high school grades in 1971 and senior high school grades in 1974.Formerly, it was only for the family and relatives of who works in Indonesian Embassy (KBRI) in Singapore. The building was also in a simple house on Holland Street, Singapore.

As the time being, SIS developed greatly. The number of students increased but the facilities and building remained. Thus by the end of 1987, SIS moved to Siglap Road No. 20A, East Cost, Singapore. The school now is 8,054 m^2widths. It had 148 students, 19 teachers, and 2 administration officers in December 2015. The following is the number of students based on the grades:

No	Grade	Male	Female	Number
1	SD	27	31	58
2	SMP	26	15	41
3	SMA	29	18	47
JUMLAH		84	64	148

Table2.Number of students at SIS

Based on the table above, we can infer that the number of elementary students were more than high schools students. Yet, it can change anytime because the uncertainty of students' domicile based on their parents working place in Singapore.

3.2 Vision and Mission of Singapore Indonesian School

Vision which this school sets out in facing the global challenge was in a formulation as follows:

"Being superior in achievement, being pioneer in cultural technological development, and *being role-model in behaving and acting attitude* for creating the globally and environmentally sounded Singapore Indonesian School"

From the lines we can clearly infer that SIS has strongly committed to build modellingthe positive behaviour and attitude to the students. Through the vision, SIS is aware that building the personality could not be unjust. It does not emphasize a single aspect, cognitive aspect in this case, which results a smart people with weak personality.

As operational steps to create the vision, SIS formed it into 10 items of mission. Those are:

1. Being brought intelligent and competitive alumnus.
2. Realizing the development of adaptive and proactive curriculum.
3. Realizing the learning process actively and efficiently.
4. Being brought school cultural centre in the promotion of national culture.
5. Realizing the educational resources that have the ability and the readiness of high employment.

6. Achieving adequate school management according the National Education Standards Plus.
7. Achieving fundraising adequate education costs.
8. Realizing the development of an adequate assessment model.
9. Realizing the vision of global schools that can compete with national and local schools.
10. Achieving environmentally sustainable schools to Green School.

3.3 Curriculum at Singapore Indonesian School

The curriculum used in SIS is following the domestic Indonesian schools, that is *Kurikulum Tingkat SatuanPendidikan*(KTSP). KTSP was arranged based on the condition, territory, and vision mission of the school based on the valid law.

KTSP in SIS is not absorbed straight off, but it is also developed based on the local condition in Singapore, such as developing Singaporean, Mandarin, and English languages as the addition lessons. Thus lessons of Mandarin Language, English Conversation, and Math Cambridge were added. Math Cambridge is Mathematics which delivered by using English. Mrs Yang Jing is the teacher for Mandarin class and Mr Eugene Yong is the teacher for English Conversation and Math Cambridge.

3.4 Service

As one of the school located in Singapore, SIS serves easy and complete service. Facilities in this school are listed as follows.

- Easy to reach by any public transport from any direction.
- Supportive rooms and buildings.
- Hall of SIS
- Complete and cosy library
- School Canteen managed by Muhammad Abu Bakar and his family.
- Scouting Lab
- Computer Lab
- Music Lab
- History Lab
- Economy Lab
- Sociology Lab
- Sewing Lab (used only on Sunday for Sewing Course conducted for TKI /Indonesian workers in Singapore)
- Beauty Lab (used only on Sunday for Sewing Course conducted for TKI /Indonesian workers in Singapore)
- Chemistry Lab
- Physics Lab
- English Lab
- Basketball Fields

The teachers are bachelors or above who are provided with educational knowledge as the requirement of passing the teachers selection of SILN held by Education and Culture Ministry/*Kemendikbud*(http://www.kemdikbud.go.id/main/blog/2016/04/seleksi-penerimaan-guru-sekolah-indonesia-di-luar-negeri-tahun-2016).

3.5 Indonesian Culture House (RBI)

Indonesian Culture House is the centre of Indonesian culture located in Singapore. It is used for introducing arts and cultures from Indonesia to the world in gaining image, appreciation, and cultural bond in international society. There are 3programs:

1) *Indonesian Culture Expression* as a media to introduce the Indonesian cultural heritage through batik exhibition, traditional music performance, traditional shadow puppet, Indonesian culinary bazaar, Indonesian traditional weapon (*keris*) exhibition, dance performance, martial arts exhibition, and Indonesian literature show.

2) Indonesian Culture Learning as a media to conserve Indonesian arts and cultures through workshops of *batik*, Indonesian culinary, traditional music and dance, and through Indonesian language course. This program was done every Saturday at 8.30 am – 4.00 pm.

*3) Indonesian Culture Advocacy and Promotion*as a programto discuss and develop the image of Indonesian culture broadly, especially to strengthen the international acknowledgement and appreciation to Indonesian cultural icons.

3.6 Education and Training Centre (P3K)

Indonesian Training Centre KBRI Singapore is a non-formal education institution which aims to develop the human resource of Indonesia in Singapore, especially the Indonesian Workers (TKI). This institution started running in 2009 by opening an education program of *KejarPaket* B (equal to SMP), *KejarPaket* C (equal to SMA), and courses.

Special program was held, such as English, Mandarin, Computer, Skin Beauty, Hair Beauty, and Fashion courses. This program was held every Sunday at 8.30 am – 4.00 pm.

4. Implementation Of Character Education In Sis

4.1 School Culture

School Culture is a specific character and image of the school in the eye of the society (Danu Eko A, 2012: 73).It is used as school identity which has the distinctive feature which differ a certain school from other schools. The distinctive feature can be in the form of curriculum, rules, logo, uniform, activities, and so on. The school culture cannot be created immediately. It needs a continuous and simultaneous process. A good school culture will create good students with good personality.

SIS has at least 3 unique and special cultures. The first is **religious culture**. It was formed through the following Islamic activities: [1] Dhuha praying done everyday around 10 am (Singaporean Time Zone), [2] Dhuhur praying together done by all shool Muslim stakeholders in the second breaktime everyday around 1 pm (Singaporean Time Zone). [3] Friday Praying for male school stakeholders held at the Hall of SIS or Siglap Mosque by turns. [4] Womanhood done by female Muslim students every Friday by praying Dhuhur but having a preaching or *tausiah/kultum* before. [5] Extra Class for Reciting Qur'an held every Friday after praying Jum'at.

The second is **leadership culture**. The opinion about leadership culture was delivered by the headmaster of SIS, AgusTriyanto, as written below:

> *"The culture of this school can be seen when a teacher and students meet on the street. The students will kiss the teacher's back hand. This kind of culture becomes the overplus for this school. Respecting and loving one another are kept in school environment. It can be proven by no senior seems to bully the junior. Instead, the junior put a high respect to the senior."*

The leadership culture is also reflected through the schools activity and Student Association that cover all grades, including elementary and kindergarten students. Flag ceremony, morning ceremony, scouting, morning gym, and Thursday reading are the examples of the activities which were held under good leadership by both teachers and students.

Teachers and Students disciplinary can be seen in the morning ceremony. It is held everyday before the first lesson. All students and teacher gather for an hour in the Hall of SIS at 7 am exactly. This activity aims to check students who attend or who come late, to check the completeness of uniform (tie, socks, belt, etc). If a student comes late or wearing incomplete uniform, there is one who records the violation and warns them not to do again. The teachers are expected to do the same as long as they are obliged to be the role-model for students.

The third is the **Culture of Social and Art.** It can be seen in certain activities held in or out of the school, such as International Jambore, Asian Museum Arts performance, etc. The students are trained in the extra-class on Fridays. There are at least 7 extra-classes developed by this school: Badminton, Music/Vocal, Gamelan art, Dance, Qur'an Reciting, and Scouting. Scouting is compulsory for all students and held in 1st and 3rd week every month.Besides Scouting, students are allowed to join only one extra-class s/he really interested in. Their optional extra-class is held held in 2nd and 4th week every month.

The activities supporting the implementation of character education are explained in a table below.

No	Day	Time	Routine Activities
1	Monday	07.50-08.40	Flag Ceremony
2	Tuesday	07.50-08.00	Morning Ceremony
3	Wednesday	07.50-08.00	Morning Ceremony
4	Thursday	07.50-08.00	Morning Ceremony
		08.00-08.40	Thursday Reading/Health
5	Friday	07.50-08.00	Morning Ceremony
		14.40-16.00	Extra-Class / Scouting

Table 3.Activities in SIS Supporting Implementation of Character Education

The table reflects that the school culture in SIS is pretty good. The ceremony reflects the character of honesty and disciplinary in this school while the extra-classes reflect the characters of creativity, fairness, encouragement, teamwork, caring, and faith.

4.2 Teaching-Learning Activities In Sis

Teaching-Learning Social Science and History

The process of learning in SIS applies moving class system. It means teachers have their own room based on lessons they teach. As an example, History lesson is taught in the

History Lab while Science lesson is taught in the Science Lab.

Social science in elementary and high-school is basically an integrated subject, in which it is simplified, adjusted, selected, and modified from the concepts and skills from history, geography, sociology, anthropology, and economy to aims certain learning purposes (Danu Eko A, 2012: 62). It is related to all life aspects.

As the History lesson at Senior High School, History lesson is not oriented to students' intellectual development but also to students' aspect of attitude in social life (TaatSetyabudi, 2015: 3). Thus Social Science and History both develop the educational character in the learning process.

During the implementation of character education, teachers have prepared the three stages. Those are planning, implementation, and assessment.

1) Planning

Lesson planning is an initial activitywhich was done by teachers before the teaching-learning process in the class. The planning is arranged in the beginning of the year education. The planning process includes arranging syllabus, arranging lesson plan (RPP), and determining teaching material/media.

The following was the interview with Mr Devi Rahman as the Social Science teacher for 8th and 9th grades and History teacher for 10th, 11th, and 12th grades. Besides, Mr Devi also teaches Sociology and Civics.

> *"At first, I made a syllabus, lesson plan, and teaching materials before teaching, for sure. It was my reference to teach. Studying the Standard of Competence (SK) and Basic Competence (KD), I then develop the characters value in them. After that, I determine the method appropriate to the theme of material during the learning process."*

Similar things occur to Mrs. Muthmainnah Hasaan, as the Social Science teacher for 3th and 5th grade of Elementary School. The following was what she said during interview.

> *As an educator, I prepare the materials for learning activity with values of character education as well as I can. Especially Lesson Plan because it is the most important one to me. In formulating the lesson plan, I also develop the characters values and think about the proper method to implement it in a learning material.*

Syllabus and lesson plan made by teachers in Singapore Indonesian School has covered the aspects of character education. Activities of formulating syllabus and lesson plan done by teachers were studying SK and KD. And then determining the character education was expected to emerge in the real learning activities, after that identifying what appropriate method done. And the next stage was implementation.

2) Implementation

Implementation of character education in Social Science and History in Elementary, Junior high and Senior high grades in Singapore Indonesian School has engrafted common values of character education, such as honesty, responsibility, good belief, good faith, religiosity, discipline, respect, patriotism, loyalty to nation, care, team-working, hard-working, independence, and creativity.

Teaching-learning methods which commonly used to teach the 2 subjects/lesson are lecturing and group discussion. Teachers give the example of a certain event and take some values from it. In the group discussion, students will be given some problems and they have to exchange the idea and opinion to make a decision together. Some problems should be related to the discussed materials and explained by the teacher then it is discussed together through catechizing. The values implied in this process are team-working, respecting other people's opinion, confidence, creativity, critical thinking, and leadership.

In addition, teachers also use project method and discussion method. Role-playing method is a method engaging two students or more to interact with one another about the certain topic or situation. Each student does their role as the figure he gets to act. They will interact and have an open act(Hamdani, 2011: 163). Here is the interview with Mr Devi as the Social Science and History teacher of SIS.

> *"I often combine the project method with discussion method. At first, I explain the materials and certain topic guidance. And then I ask students to observe, read, and examine individually and make a report in the form of clipping pictures. This method is functioned to measure their analysis and creativity of students. It is effective to avoid students' boredom. After that we finally discuss together. In addition, I often use role-playing method. Students play a certain role they have to act. It is very relevant to the learning process."*

In the learning process, teacher has applied tools and media like projector, power point, video and pictures.

3) Assessment

Based on the observation and direct interview. Not all of SIS teachers apply 3 aspects in assessing students (cognitive, affective, and psychomotor aspects). Teachers assess the assignments, daily test, midterm test, and final semester (cognitive). And then, teachers also have the personality assessment sheets (affective) and assess the active students during learning process (psychomotor). The following is quotation from the Mr Devi as the Social Science and History teacher of SIS.

> *"I always concern to some aspects; cognitive, affective, and psychomotor. I assess objectively based on students assignments, daily test, midterm test, and final semester for the cognitive aspect. For assessing psychomotor, I assess their activeness during learning process. And for the affective one, I have assessment sheets of attitude based on some indicators that I try to develop."*

Mrs Muthmainnah Hassan as the Social Science teacher for 3rd and 5th Elementary said that she often uses cognitive aspect more often than affective and psychomotor ones. Here is the quotation:

> *"Actually I prefer assessing students from what they have done. Thus I tend to use cognitive more than affective and psychomotor which are difficult to do because they are more subjective.*

Based on the observation and direct interview, it can be concluded that mostly assessment done by the teachers by considering the cognitive, affective, and psychomotor. The cognitive is related to the logical, scientific and analytic aspects. Affective assessment was related to morality, ethics, and attitude. While psychomotor is related to the practical or implementation for what the students have got.

4.3 Obstacle In Character Education Process

The obstacle found in the Indonesian school can be divided into two kinds: internal and external obstacle. Below is the result of interview and observation related to the obstacle faced by the teachers when implementing the character education to students in learning process.

From interviewing Mrs Muthmainnah Hasan, teacher of social science, internalobstacle faced in implementing character education to students are:

> *"In teaching, I find students are so active but some are still passive. This gap becomes the obstacle in teaching. I must have brainstorming to make them respond to what I teach so they can easily understand it."*

Mrs Vieny Juliawati also face the same problem as Mathematic teacher as well as homeroom teacher for 7th

> *"The students here are more various than students in Indonesia. They are so unique. There is one who is so much clever but the other one is difficult to receive learning materials. So that is an imbalance situation that I have to solve.*

Fromthe explanation, we can infer that the characteristics of students vary. The have different typical of how fast they absorb teachers' explanation and learning materials. It can be the obstacle for teachers in engrafting character education.

Moreover, new studentregistration which is so easy and loosely organised can be another obstacle. Everyone can be students of SIS as long as s/he is Indonesian official citizen who lives in Singapore. The following is the result of interviewing Mr Andri Fanthosa as the Religion teacher.

> *"We don't have any test for admission. Everyone can be our student as long as living in Singapore and being an Indonesian official citizen. In addition, students here are commonly unsettled. Every year most moves in and out. It becomes an obstacle. We have guided them for long but they move out of this school and are changed by the new ones. Thus we have to start all over again. And as long as new students have test of admission test, it would be our next problem and obstacle.*

In short, SIS teachers' obstacles are caused by students characteristic and no test or further requirements for registering to be the students of this school.

One more obstacle is that parents are not participative enough in the process of character education. They loosely watch their children so it can be external obstacle like Mr AndiSantosaexplain:

> *"Students often disobey the rule, sometimes that's because they are lack of caring from their parents. Naughty students sometimes are from the broken*

home family. It is the factor that we have to do maximal effort to care for them and educate them. Once they go home, they are free again.

Thus, the external factor that becomes the obstacle for character education isstudents' parents, even though not all parents are careless to their own children. Yet the parents' role is important for implementing character education.

5. Conclusion

From all explanation above, we can conclude that Singapore Indonesian School has strong and considerable school cultures which are classified into three groups: religious culture, leadership culture, and art and social culture. Those cultures are implemented by all stakeholders during the learning process or beyond.

The process of learning activities based on character education includes planning (making syllabus and lesson plan also teaching method), realization (integrated with character education during the lesson), and assessment (students' cognitive, affective, and psychomotor).

The obstacles in implementing character education are from internal (various students characteristic and no requirements for students'registration) and external (parents with less active participation in engrafting character education to their own children).

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[14] Danny 7th grader good at sports. Interviewed on 9 December 2015, at 12.10-12.30 Singapore time zone.

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THE EFFECT OF PROBLEM- BASED LEARNING ON CRITICAL THINKING AND STUDENT ACHIEVEMENT IN THE 1 BANTUL SENIOR HIGH SCHOOL

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Abstract

The purposes of this study are (1) to know the effect of Problem-Based Learning on critical thinking, (2) to know the effect of Problem-Based Learning on student achievement, (3) to know the relationship between critical thinking and student achievement in Environmental Pollution of 10th Grade in The 1 Bantul Senior High School. The research was quasi experimental research using a control group pretest-posttest design. Sample was X IPA 5 as an experimental group while X IPA 6 as a control group. Data analysis techniques were normality and homogeneity test, t test, analysis of covariance (ANACOVA), and Pearson correlation. The results show that (1) Problem-Based Learning affects critical thinking, (2) Problem-Based Learning affects student achievement, and (3) there was a significant relationship between critical thinking and student achievement. The higher critical thinking is, the higher student achievement of the students.

Keywords: problem-based learning (PBL), critical thinking, student achievement

1. Introduction

The development of 21st century era pushes students to develop 21st century skills. Partnership for 21st Century Skills [1] has developed 21st century skills that consist of life and career skills, learning and innovation skills, and information media and technology skills. Teaching and learning process does not only increase student's knowledge but also develop student's creativity, critical thinking skill, characters which are included the character to has responsibility, social skills, tolerance, productivity, and adaptive skills. 21st century skills also emphasize on the ability to think critically, solve problem, communicate, and collaborate each others [2] that are included in Higher Order Thinking Skills.

Problem- Based Learning (PBL) is teaching and learning model that provide contextual problems to the classroom, so that teacher can stimulate students to learn [3]. PBL is a teaching and learning model that present many anuthentic problems and meaningfull to the students [4]. Teaching and learning process using PBL challenges students to learn, work in group to look for the solution in contextual problem. Teaching and learning process is directed to student in order to develop student's ability in making solutions systematically.

PBL has five characteristic that need to be considered by teachers before designing the lesson plan using PBL model. The first characteristic is presenting essential question that is included problems. The others characteristic are PBL focuses on the relationship between interdisiplinary study, authentic investigation, publication of the artifact, and colaboration [4]. There are five operational steps from PBL, (1) giving orientation about the problem that will be discussed by student, (2) organizing students to do research, (3) helping students to investigate the problem, (4) developing and exhibiting the artefact, and (5) analysing and evaluating problem solving process [4].

Critical thinking is the process of complex thinking to analyse question or argument and generalize meaning and specific interpretation through logical thinking and understanding assumptions. The student's critical thinking ability can be identified by implementing proper teaching and learning model such as PBL model. **S**tudents who involved in PBL have critical thinking ability higher than students who involved in traditional teaching and learning model [5]. Teaching and learning process using PBL encourages student to think critically by presenting the extraordinary problems which the solution cannot be solved using common ways of thinking [6].

Student's achievment is student's skills that achived by students after teaching and learning process. One of student's achiement that can be measured is cognitive aspect. According to

revised Bloom Taxonomy there are six aspects, (1) remember, (2) understand, (3) apply, (4) analysis, (5) evaluate, aand (6) create [7].

There are several advantages using PBL as one of teaching and learning models. By using PBL increases student's undertanding and increasing student;s activites during teaching and learning process [8]. PBL helps students in transfering their factual knowledge to understand the contextual problem. PBL also develop student's responsibility and the most importanly is that PBL can increase the student's thinking ability. PBL brings the happines in the classroom through teaching and learning process. By using PBL in classroom, it can increase student's critical thinking and also give student possibility to apply their knowledge in order to solve the problems.

One of senior high schools that has implemented 2013 curriculum is The 1 Bantul Senior High School. Biology teaching and learning process that is used using 2013 curriculum ideally should develop student's critical thinking skill. One of teaching and learning models that develop critical thinking skills is PBL. However, not all of the teaching and learning process has developed student's critical thinking skill. Teaching and learning process still conducted by teacher give whole information to students using conventional model such as question- answer method. Whereas, critical thinking skills do not merely appear instantly. It needs efforts to develop student's critical thinking skill. This skill, critical thinking, is ability that student should have in achieving learning mastery.

Learning material that is used in this study is environmental pollution. Environmental pollution choosed to be study material because it presents contextual problem that should be solved by student in daily life. This material bring problems that usually faced by student in their daily life. The implementation of PBL is on the Standard Competition 3.10 that it emphasizes on analysing data in environmental changing and the implication in environmental changing. In this material, students are confronted with environmental problem and are demanded to solve problems using critical thinking and also gathering information to solve problem systematically. This material provides dynamic environmental problem. Environmental problems tend to be complex and need to be solved using higher order thinking skills.

Based on the background above, there are three research question for this study (1) what is the effect of PBL to critical thinking?, (2) what is the effect of BL to student achievement?, and (3) is there any relationship between critical thinking and students achievement in Environmental Pollution in The 1 Bantul Senior High School.

2. Method

This study, which was carried out to know the effecet of PBL to critical thinking and student achievment, was designed according to quasi experiment design using control group pertest-postest design. This research is conducted in The 1 Bantul Senior High School, Bantul Regency, Special Region of Yogyakarta.

Population of this study was students of 10^{th} grade of Science Program in The 1 Bantul Senior High School, which was consisted of two classes, 10^{th} Science Program 5 as experimental group and $10t^{h}$ Science Program 6 as control group.

The dependent variable of this study was PBL that consists of five steps, (1) problem orientation, (2) study organization, (3) individual and group investigation, (4) presentation, and (5) analysis and evaluation. The independent variables in this study were critical thinking and student's achievement focuses on cognitive aspect.

The study conducted by determining experiment group and control group by giving treatment which was PBL for experiment group and conventional model for control group. Extraneous variables were also controlled. Data was collected using test (pre test- post test), the implementation of PBL, and student evaluation about the implementation of PBL in class. After data had been taken, data was analysed.

Colected data in this study were observation sheets, videos, photos, student's critical thinking skills data, and student's achiement data in cognitive aspect. Instruments that were used in this study were instrument to collect the implementation of PBL, intrument to collect the student's critical thinking skills and also student's achievement in cognitive aspect.

The data obtained in the study were analysed using SPSS package program. Data analysis that were used were normality test and homogenty test. To know the difference between two groups, T test was used in order to know the difference between experiment group and control group. To know the difference between two groups before and after the implementation of PBL, Pair sampe T test was also used. Covariance analysis is also used to know the influence of covariance to the dependent variables. The relationship between variables were analysed using Pearson Corelation Test.

3. Result

Descriptive analysis was conducted to describe the student's critical thinking skills and student's achievemnt. According to descriptive analysis, experiment group had higher result in critical thinking skills and student achievment than control group.

Table 1. Descriptive Analysis of Student's Critical Thinking Skills and Student's Achievement

	Control Group		Experiment Group	
	CT	SA	CT	SA
Mean	66,11	69,33	77,50	79,57
Median	70	72	80	80
Mode	65	76	75	68
Max	85	88	100	100
Min	35	56	35	68
STDV	18,47	16,34	15,37	8,73

CT= Critical Thinking
SA= Student Achiement
*= significant different

As seen on the table above, it was understood that experiment group has higer average on critial thinking (77,50) and student's achievement (79,57) than control group which has 66,11 for critical thinking and 69,33 for student's achievement.

According to Independent Sample T test, there was a significant difference between the median of critical thinking ability (sig. 0,016) and student achievement (sig 0,005) which wass showed by the sig 0,05. According to the result of Paired Sample T Test, there was a difference between berfore and after the implementation of PBL in experiment group, whereas there is no difference in control group before and after the learning process.

Table 2. Pair Sample T- test Result

Group	Aspect	Sig	Result
Control	Critical thinking	0,805	Not difference
	Student achievement	0,0006	Difference
Experiment	Critical thinking	0,014	Difference
	Student achievement	0,000	Difference

According to Covariance Analysis, there was an effect of PBL to student's critical thinking ability and student's achievement which was shown by the sig 0,016 for critical thinking and 0,006 for student achivement.

Table 3. Covariance Analysis

Dependent variable	Sig
Critical thinking	0,016
Student achievement	0,006

The result of Pearson Correlation Test to independent variables, critical thinking and student achievement, shows that there was a relationship between student critical thinking ability and student achievement. Corelation coeficent in critical thinking and student achiement was 0,406. It means that two independent variables, critical thinking and student achievement, had significant correalation (sig= 0,032). The correlation between critical thinking and student achievement is positive correlation. It means that the higher critical thinking was, the higher student achievement of the students after involving PBL class.

4. Discussion

The difference results between control group and experiment are caused by students in experiment group involve in PBL classroom which is student- centerd learning. PBL gives students opportunities to actively participate during learning process. Students actively discuss for solving the problems provided by teacher about the environmental polution. Students are encouraged to solve the problem using analitical thinking and also encourage them to apply their knowledge in order to solve the given problems. These activities are developing student critical thinking because student are also encouraged to seek and gather the information relating to the problem they will solve. Students are also analaysing and associating the relationship between information relating to the problems. Through all these activities, students have opportunities to think deeply about the environmental concepts that they get through thinking activities during problem solving activities. All those activities are also increasing student's understanding about environmental polution which has influence to student achievement especially cognitive aspect.

Critical thinking is the activity to think about facts or information in order to make conclusion which involves the lower- order thinking activities and higher order thinking activities. High- order thinking skills consist of the abilitybto analysis, evaluate, and create that are represented as critical thinking skills [9].

Critical thinking skills that is measured are the ability to make interpretation, inferece, explanation, analysis, and evaluation. There skills are increasing during PBL teaching and learning process because PBL highly motivate and encourage student to use their thinking ability. According to the result study shows that critical thinking skill has correlation with student achiement especially in cognitive aspect which has been stated by revised Bloom Taxonomy. Analysis, evaluate, and create are three level of revised Bloom Taxonomy that represent the critical thinking skills. It can be concluded that the higher critical thinking is, the higher student achievement especially in cognitive aspect.

The results show that (1) Problem- Based Learning affects critical thinking, (2) Problem-Based Learning affects student achievement, and (3) there was a significant relationship between critical thinking and student achievement. The higher critical thinking is, the higher student achievement of the students.

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DEVELOPMENT OF LEARNING MATERIAL ON THE SUBJECT OF SOUND WITH ARTICULATION LEARNING MODEL

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Abstract

This development research of subject material using articulation learning model is held with its general purpose is to explain the feasibility of science subject material in junior high school on the subject of sound which is developed with articulation learning model in SMP Negeri 10 Banjarmasin, and its particular purposes are to explain: (1) validity of subject material seen from the validation test, (2) the practicality of subject material seen from the lesson plan implementation during the learning process, and (3) the effectiveness of subject material seen from the students' achievement on the cognitive learning result test. The type of this research is development research referred to Dick and Carey development model. The try-out subject of this research is 30 students of class VIII E SMP Negeri 10 Banjarmasin. Data collecting technics are subject material validation sheet, lesson plan implementation observation sheet, and learning result test sheet. Data analysis technic consists of validity, reliability, and N-gain test. The research result shows that: (1) the validity of subject material, which is developed according to the validators, is categorized as valid with small revision, (2) the practicality of subject material seen from the lesson plan implementation during the learning process is categorized as well implemented, and (3) the effectiveness of subject material seen from the students' achievement on the cognitive learning result test is categorized as medium and stated as effective. It is concluded that the developed learning material on the subject of sound with articulation learning model is feasible to be used in the learning process.

Keywords: Learning material, articulation learning, sound.

1. Introduction

Education is very important as the main capital to promote aprestigious nation. According Roestiyah (2012: 1)[1] in the teaching-learning process, teachers must have a strategy, in order to students can learn effectively and efficiently, and hit the expected purpose. In the process of learning in the classroom is still common tendency of the lack of involvement of students during the learning takes place. Teachers are more dominant in the learning process causes the students end to be more passive in learning, making students are waiting forservingteachersthanseek and find their own knowledge, skills, and attitudes that students need. Based on observations in SMP Negeri10 Banjarmasin suggests that in the learning process teachers only focused onthe delivery of material while students busy recorded material submitted by teachers that makes students' difficulties in developing ideas and dig they own knowledge. This resulted in learning to be impressed unattractive andless effectivef or students, and students tend to feeltired. To overcome the learning difficulties of students a teacher is required to have the ability to develop subject materials through effective learning models, especially in science subjects. Subject materials as learning media have an important rolein learning activities. However, subject materials weredeemed worthy very difficult to find. Science lesson, especially physics also considered students as lessons is difficult and complicated, as well as presenting some of the concepts, theories, formulas and calculation, so that physics lessons has the impression of interest to students, it would require an alternative like a subject materials using learning models that fit to apply to teachers in order to obtain a satisfactory student learning outcomes in accordance with the purpose of education. One of the way is by applying the learning model Articulation. According Shoimin (2014: 27) [2] Articulation learning model is learning that requires students to be able to act asreceiver of the message whose

role as a messenger, a teacher of learning that has been given, shall be forwarded by the students and explain to other students in the partner group. Articulation learning model suitable for use in junior high school science learning materials such as the sound, which in practice learning model articulation performed in groups with a total membership oft to three people, can be said this learningrequires every student to take an active role for the progress and success of the group members. Based on this, the researchers interested in doing researchen titled "development of science subject material in junior high school on the subject of sound with articulation learning model in SMP Negeri 10 Banjarmasin".

The research problems are: (1) How is the validity of subject material seen from the validation test?; (2) How is the practicality of subject material seen from the lesson plan implementation during the learning process?; and (3) How is the effectiveness of subject material seen from the students' achievement on the cognitive learning result test?

The objectives of this research are: (1) to explain validity of subject material seen from the validation test, (2) to explain the practicality of subject material seen from the lesson plan implementation during the learning process, and (3) to explain the effectiveness of subject material seen from the students' achievement on the cognitive learning result test.

This research development is considered important because it has benefits:(1) For schools, as inputs that help insupplied subject materials in accordance with the material characteristics and the characteristics of the students, which can be the availability of subject materials on the subject of sound with articulation learning model which isready for use and have been tested; (2) For teachers, to help over come learning problems by supplying subject materials that can be used to improve the quality of learning and can be taken into consideration in choosing alearning model that corresponds to the characteristics of learning materials and student characteristics, and can provide a variety of teaching for teachers; (3) For students, to help acquire science learning an attractive, fun, innovative, and facilitate students in understanding the material about sound; (4) For researchers, it can determine the feasibility of subject materials which was developed and can be a media of learning in an effort to train them selves to develop competence as a candidate for educators and adding donation works in the form of subject materials which was developed by Articulation learning model; and (5) For readers, the results ofthis research can add to the knowledge and can be used asa guide and reference for conducting research on subject materials by Articulation learning model.

2. Method

This research type is research and development. Subjects tested in this research is students of class VIIIE SMP Negeri 10 Banjarmasin school year 2014/2015, address at Jl. AIS Nasution Number 22 Banjarmasin. Total number of students 30 people consisting of 12 male students and 18 female students. The object of research is the feasibility of subject materials which was developed by the articulation learning model on the subject of sound. This research was conducted in February-August 2015.

Subject materials with articulation learning modelin this research was developed by Dick and Carey Design. The steps of development model from Dick and Carey among others: requirements analysis and identification of common objectives, analysis of learning, learners and context analysis, formulate particular purposes, determining the assessment instruments, determining the learning strategies, developing and selecting learning materials, design and perform formative evaluation, design and perform summative evaluation (Setyosari, 2013: 234)[3].

Type of data used in this research development is qualitative and quantitative data. Qualitative seen from the results of data validation and the lesson plan implementation while quantitative seen from the students' achievement on the cognitive learning.

Results of the assessment data subject materials were analyzed by descriptive qualitative, with the validity criteria:

Table1.Criteria for the validity of subject materials

Validity Criteria	Category	Validity
4	Very good	Valid without revision
3	Good	Valid with aminor revisions
2	Enough	Valid with amajor revision
1	Less	Is not valid

(Adaptation Akbar, 2013: 41)[4]

Reliability of assesment instrument subject materials can be calculated using the Spearman Rank Correlation (Wibisono, 2013: 240) [5],which is expressed by the following formula:

$$r' = 1 - \frac{6[\sum_{i=1}^{n} d_i{}^2]}{n(n^2-1)}$$

Description: r' = rank correlation value

d= the difference of each pair rank

n= number of pairs a data

Results of the correlation value calculation then interpreted in accordance with the criteria of reliability of the instrument as below:

Table 2. Reliability criteria validation of subject materials

Coefficient Interval	Level of Reliability
0,80 – 1,000	Very High
0,60 – 0,799	High
0,40 – 0,599	High Enough
0,20 – 0,399	Low
0,00 – 0,199	Very Low

(Adaptation Riduwan, 2013: 136) [6]

The practicality of subject materials seen from the lesson plan implementation through observations by two observers who have been trained to give a proper assessment on the implementation column thatis available according to the instructions. The values givenby the two observers at the lesson plan implementation criteriathen beaveragedin order to obtainan final average score which is then categorized according to categorization the lesson plan implementation criteria. Lesson plan implementation categorization criteria can be seen below:

Table 3. Categorization criteria of the lesson plan implementation

Interval	Category
X > 3,4	Very Good
2,8 <X ≤ 3,4	Good
2,2 <X ≤ 2,8	Enough
1,6 <X ≤ 2,2	Less
X ≤ 1,6	Very Less

(Adaptation Widoyoko, 2012) [7]

Interval data(gain) frompretest and posttest values are used to determine the effectiveness of the subject materials which was developed.An increase in the average score of pretest and posttest calculated using the equation N-gain (Bao, 2006) [8] can be seen below:

$$g = \frac{Posttest\ Score - Pretest\ Score}{Maximum\ Score - Pretest\ Score}$$

Description:*g= N-gain*

N-gain calculation results then interpreted in accordance withthe criteria of effectiveness of learning. Criteria for the effectiveness of cognitive learning out comes of studentscan be seen below:

Table 4.Criteria effectiveness of learning

Interval	Category
g > 0,7	High
0,3 < g < 0,7	Medium
g < 0,3	Low

(Hake, 1999)[8]

3. Results and Discussion

Results of this research development is subject materials which was developed with articulation learning model. Subject materials which was developed have been adapted to the characteristics on the subject of sound and characteristics of the eighth grade junior high school students on the second semester. The subject materials which was developed include lesson implementation plan, student activity sheet, the result test of learning and teaching materials.

Feasibility Test Results

Validity of subject materials

The lesson implementation plan which was developed consisted of two meetings on the subject of sound with the Articulation model. Based on the results of the analysis can be seen that the validation of lesson implementation plan are in a category valid with minor revisions. Lesson implementation plan reliability level obtained for the first meeting and the second meeting valued 0,67 which indicates that the reliability of lesson implementation plan are included in the category of high reliability.

Student activity sheets developed in this research are consisted of two meetings adapted to the Learning Implementation Plan. Student activity sheet validation assessment results include review format aspects of student activity sheet, language, and student activity sheet content is expressed in the category valid with minor revisions. The level of reliability that obtained for student activity sheet 1 and student activity sheet 2 respectively of 0,67 and 0,70 are included in the category of high reliability.

Learning result test that was developed in this research consist of pretest and posttest which refers to the learning objectives in

the lesson implementation plan are arranged into a lattice that contains learning objectives, question numbers, cognitive domain, question, answer key, and scores. Assessment result of the learning result test validation covering eight aspects of general construction and thirteen aspects of question validity in the category of good validity and valid with minor revisions. Overall reliability value on learning result test validation that is equal to 0,67 are included in the high reliability criteria.

Learning materials which was developed can used as a source of learning and guide for students during the learning process in the classroom or independently at home. The validation results of learning materials overall obtained validity is declared good and the validity of the learning materials is declared valid with minor revisions and obtained a reliability that is equal to 0,68 that included in the category of high reliability.

Practicality of subject materials

Practicality of subject materials were developed seen from lesson plan implementation that is assessed by the observer based on observations of the suitability of measures learning activities listed in the lesson plan. Data results of calculations for implementation the lesson plan at the first meeting on the subject of sound and propagation obtained implementation the lesson plan with an overall average of 3,3 which is included into the category of good implemented, at the second meeting on the subject of resonance and sound reflection obtained implementation the lesson plan with an overall average of 3,5 which shows the implementation the lesson plan in the category very good implemented. Reliability for the first meeting amounted to 0,65 are included in the category of high reliability and reliability for the second meeting amounted to 0,42 are included in the category of high enough reliability.Based on results test of lesson plan implementation for the first meeting and the second meeting can be said included in the category implemented is very good, so that the subject materials which was developed with articulation learning model in this research can be expressed practically.

Effectiveness of subject material

The effectiveness of learning is the cumulative impact of the developing a subject materials implementation as seen from the acquisition of N-gain scores were expressed in categories: high, medium, and low. Based on analysis data of learning result, are shown cognitive learning result of students. From pretest, cognitive learning result of students before being given the learning using the subject materials with the articulation models obtained an average value of 23 students in the amount of 13,57. From the posttest, cognitive learning result of students after being given the learning using the subject materials with the articulation models obtained an overall average score of students in the amount of 61,78. Comparative value of pretest and posttest is 1:5, which means cognitive learning result of students after the learning process with subject materials which was developed with the articulation models experienced an increase fivefold. From the results that obtained of subject materials which was developed with the articulation learning model overall can be said good to used by obtaining the learning result that in medium criteria and declared effective.

4. Conclusions

Based on the results of development and testing, it can be concluded that subject materials on the subject of sounds which was developed with articulation learning model is feasible for use. Based on the data findings following: (1) Validation of subject materials were developed seen from the validity test is valid with minor revisions and feasible to use based on the results of the validation by academics and practitioners through the validation instrument; (2) The practicality of subject materials have category very good implemented on the level of conformity of the implementation stages of learning through articulation learning model seen from the lesson plan implementation during the learning process that is observed with the observation sheet lesson implementation plan; (3) The effectiveness of subject materials categorized as medium and stated as effective seen from the mastery level of the students' achievement on the cognitive learning result test toward the learning objectives that have been established with the N-gain and measured using tests such as pretest and posttest.

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EFFECTIVENESS PHYSICS MODULE CLASS X USING COOPERATIVE LEARNING MODEL WITH A PEER ASSESSMENT

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Abstract

The aims of this study is that to describe the effectiveness of physics module developed using cooperative learning model with peer assesement. The teaching materials physics examined in chapter circular motion. This type of study is quantitative description with pre experimental design. The subject of this study is class XB SMA Muhammadiyah 1 Banjarmasin. Data were collected achievement test. The data analysis technique is descriptive quantitative analysis. The results showed that the physics module class X using cooperative learning with peer assessment is effective in term of student learning outcomes.

Keywords: Effectiveness, physics module, cooperative, peer assement.

1. Introduction

The task of educators in based on UU RI No.14 Tahun 2005 on teachers and lecturer define the teachers are professional educators with the primary task of educating, teaching, guiding, directing, train, assess and evaluate students on formal education, basic education and middle education. In accordance with the demands of the legislation on UU No. 20 Pasal 40 Ayat 2 tahun 2003 mentions Teachers and educational staff are obliged to create an atmosphere of meaningful education, fun, creative, dynamic and dialogical. Of the two laws can be concluded a teacher duty in of educating, teaching with fun, creative, dynamic and dialogical as well as assessing and evaluating students in a professional manner to improve the quality of education. In fact, there are a lot of learning that takes place in school does not correspond to the expectations of both the law.

Based on observations in SMA Muhammadiyah 1 Banjarmasin obtained lack of student interest in physics visible from the Participation and activity of students in the learning that takes attention distracted by things that are not related to instructional. This happens because the instructional is centered on the teacher rather than the student. Learning is still centered on the teacher to make students use the lecture method passive because during the learning of students just listen and record science teacher who transferred to him. The lecture method is selected because the target material contained in the curriculum is reached.

Another problem particular to the tenth grade students in the school have a high sense of individualism and the difference in speed of study of each student. During the absence of teaching materials that support learning physics in groups conducted in schools and the use of feedback (assessment) apart from the teacher. In addition, the student does not have its own handbook to be able to learn independently with or without the help of a teacher other than a notebook containing teaching materials acquired during the learning of the teacher's explanation. Student handbook is necessary so that students better understand the material, hone and develop the student's ability itself.

The module is a means of organizing the subject matter is concerned about the function of education. Organizing strategies of learning materials containing squencing which refers to the making of the order of presentation of the subject matter, and synthesizing that refers to an effort to show learner the link between facts, concepts, procedures and principles contained in learning materials. The components of the module include (1) the introduction, (2) Learning Activities section, and (3) references. Introductory section contains (1) a general explanation of the module, (2) indicator of learning. Learning Activities section contains (1) a description of the content of learning, (2) summary, (3) test, (4) the answer key, and (5)

feedback (Indriyanti, 2010)[1]. Learning materials that will be discussed on the module developed contains the subject of the circular motion is one of the subjects of the lessons in high school physics class X in odd semester.

Learning using module effectively will be change conception students to the scientific concepts, so that in turn their learning outcomes can be improved as optimal as possible in terms of both quality and quantity. On the use of this module must be supported by a learning model that is appropriate to the purpose and characteristics of teaching materials. Cooperative learning model is a series of learning activities conducted by students in certain groups to achieve learning objectives have been formulated. Slavin (2010)[2] describes cooperative learning is a learning model in which students learn and work in small collaborative groups whose members 5 with a heterogeneous group structure. In a cooperative class, students are expected to help each other, each other to discuss, and argue to hone the knowledge they control the time and closed the gap in the understanding of each. Moreover, a thing done together will be easier than done alone. As the saying goes "bear the same weight and the same lightweight portable united we stand divided we fall".

Cooperative learning model is a model of learning by way of a group to work together to help each other construct concepts and solve problems (Shoimin, 2014)[3]. In addition, teachers realize that students need to learn to think, solve problems, and integrating and applying the capabilities and knowledge through group learning (Slavin, 2010)[3] The model of cooperative learning is based on the cognitive-constructivist theory and social psychological theories (Utomo, 2002)[4].

Good quality of learning should be followed by a strategy assessments good , for information from the assessments beneficial for the efforts in improving the quality of learning , similarly on the other hand. Wolf (Badmus, 2007)[5] and Djemari Mardapi (2008)[6] argued that the assessment of students is an important part of teaching and that good teaching can not succeed without a good student assessment. The opinion indicated that any effort to improve the quality of education should include efforts to further improve the assessment system used. According to Popham (2005)[7] reasons for conducting the assessment, is to: (1) diagnose the strengths and weaknesses of students, (2) monitor the progress of learning, (3) to give the attribute grading, and (4) determine the effectiveness of teaching. Stecher et.al (1997)[8] states that there are three objectives which all three relevant educational assessment by technology and vocational education, namely (a) to develop learning and teaching, (b) certify the ability of individuals, and (c) evaluating the success of the program. So far, the only assessment done by teachers. Forms of assessment such as this, do not give space for students to reflect on their own performance results. The form of assessment gives students the chance to get feedback, not only from the teachers but also of themselves as well as the group's friends.

Keaten, Richardson, & Elizabeth (1993)[9] defines peer assessment as a process in which students assess other students; students assess and comment on the job or other students; Students assess how much they contribute to the group, and students can reflect on the strengths and weaknesses of the group. Rate peers is a strategy development and improvement of assessment used in the workplace to improve the quality of performance. In applying this kind of assessment of students are trained to be fair and accurate in providing value peer member. Johnson & amp; johnson (2002)[10] said that reasons involving students in the assessments , among other: (1) will increase the quality of the decision about assessments due to use resources students , (2) may be to step up their commitment students to apply way assessments the best , (3) can reduce attitude resistant students to umpanbalik and the need for change , (4) may this amount of increase , (5) to encourage the motivation great learning and build a studied attitude a positive and assessments , and (6) can increase assessments yourself (self assessment) students. A peer assessment is necessary because it can change the paradigm in which students when the students do something as a group then only partially working, while others escape from its responsibilities. In addition, the assessment can improve the quality of the cooperation between the students themselves.

Based on the above conditions, it would require an alternate module using learning models to be applied in increasing interest in learning, and social skills in particular cooperate and may reflect the ability of students to learn the results obtained in accordance with the purpose of education. Then the common problems in this research is how the effectiveness of the physics module class X using cooperative learning with peer assessment in the subject matter circular motion.

2. Method

Research conducted at SMA Muhammadiyah 1 Banjarmasin class XB academic year 2015/2016. This type of this study is quantitative description with pre experimental design forms One group pretest posttest, the experiments conducted without a comparison group. In this test done twice, ie before the experiment and after the experiment. Tests conducted before the experiment (O_1) called pretest and post test experiment (O_2) is called the post-test. Research design:

$O_1 X O_2$ (Arikunto, 2009)[11]

Information:

O_1 = *Pre-test,* to record the results of students' prior learning module using cooperative learning model with peer assessment applied.

X = apply learning module using cooperative learning model with peer assessment.

O_2 = *Post-test,* to record the learning outcomes of students after learning module using cooperative learning model with peer assessment applied.

Learning effectiveness is measured on the test results of learning by doing pretest and posttest, to determine the increase achievement test for students' understanding of the concept then determined using the equation normalized gain (N-gain) by Hake (1998)[12]

Furthermore, from the results of *n-gain* calculation is then converted to the following criteria:

Table 1 Criteria *normalized gain*

Scores *N-Gain*	Criteria *Normalized Gain*
0.70 ≤ *N-Gain*	High
0:30 ≤ *N-Gain* <0.70	Average
N-Gain <0:30	Low

(Hake, 1998)[12]

3. Results

The effectiveness of the modules developed can be determined through student learning outcomes in this study, measured from the *pretest* and *posttest* essay tests shaped as 6 matter and is calculated by using the *N-gain* with the number of students 25 people, can be seen in Table 2 as follows:

Table 2 Through the *pretest* and *posttest outooner student*

interval Values	Category	The number of students	Percentage
0.70 ≤ N-Gain	High	7	28%
0:30 ≤ N-Gain <0.70	Average	17	68%
N-Gain <0:30	Low	1	4%

Table 2 shows that student learning outcomes were calculated using gain the test through a *pretest* and *posttest* is of 25 students total, there are 28.00% or 7 students high category, 68,00% or 17 students were categorized medium, and there is 4.00% or one student that low category.

Knowing the effectiveness of the learning process using the module can be seen from the results of student learning through the *pretest* and *posttest* were calculated by *the gain test.* The student learning outcomes as indicators of the expected goals of learning objectives. In the *gain test* were classified into three categories: less effective, effective, and very *effective.* Based on the calculation results by using test of cognitive learning *gain* can be seen in Table 2, it appears that students are included in the category of very effective there are 28.00% or 7 peoples, wherein the percentage level by using the *gain score,* the results obtained exceed 0.70. Students are included in the effective category No 68.00% or 17 peoples with a percentage rate of less than 0.70 and more than 0.30. Students are included in the low category there are 4.00% or 1 people with percentage rate of less than 0.30. Based on analysis of the effectiveness of the use of the modules obtained can be graphed which can be seen in Figure 1 beside below as follows.

The results of the analysis are presented through graphs, it is known that the category is less effective coined the lowest percentage is 4.00% or there is one student, because the student is not mastering the material, the difficulty in understanding the material circular motion and incomplete in answering the question *post-test* , The student learning outcomes to achieve effective and highly effective can not be separated from the students master and understand the material circular motion with the good, the implementation of lesson plan very well, students who are active and positive response in the learning process by using the

module, as well as full students' answers according *posttest* assessment criteria for the matter.

Based on the above presentation, modules used in the learning experience can be effective. This is in accordance with the opinion of Daryanto (2013)[13] that the effective use of the module if it reaches the intended learning objectives. It was also supported by the theory put forward Shoimin (2014)[3] that students are learning with cooperative learning increases academic achievement and show a more positive attitude towards learning (Shoimin, 2014)[3]. The achievement is in line with the use of valuation techniques peer assessment, because students can find out answers to questions like what is desired from the assessor. In accordance with the opinion of Daryanto (2013)[13] about the advantages peer assessment which give an overview to the students about the assessment criteria used to assess learning outcomes (Daryanto, 2013)[13].

4. Conclusion

The physics module class X using cooperative learning with peer assessment is effective in term of student learning outcomes.

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THE VALIDITY OF PHYSICS MODULE CLASS X ACCOMPANIED PEER ASSESSMENT PEER IN TOPIC CIRCULAR MOTION

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Abstract

The lack of teaching materials that support learning in a group of physics that a valuation technique other than teachers and facilitating the learning pace of each student is different underlying physics module development class X with peer assessment on the subject matter of the circular motion in SMA Muhammadiyah 1 Banjarmasin. This research aimed to describe the validity of physics module developed with peer assesement. Data obtained through the validation module sheet. The data analysis technique is comprised descriptive analysis of the validity of the module. The results showed that the validity of the module developed valid.

Keywords: validity, module, cooperative, peer assessment.

1. Introduction

Development of teaching materials is a set of processes or activities that are designed according to the applicable curriculum to produce a set of tools or learning tool containing learning materials, methods, limitations, and how to evaluate designed systematically and attractive in order to achieve the expected goals according to its competence or sub competence (Lestari, 2013)[1]. One of the teaching materials that can be used as a means of self-learning is a module.

Module development, has steps that must be taken: (1) planning; (2) writing; (3) *review* and revision, and (4) finalization. In step planning unbiased determine the subjects that will use the module, general purpose and special purpose, content and sequence learning materials, pick and choose media and assessment strategies. The second step writing stage module prepares *outline* / draft writing, start writing and writing learning outcomes assessment. The next step, the modules have been completed, requiring repairs concerning the content and effectiveness. Repair activities in question is through *reviews* and testing. *The review* process and trials intended to elicit a response in the form of input from several people in an effort to repair the modules developed. The final step after revisions were made to enhance the module then the module can be used in the field (Daryanto, 2013)[2].

The module is teaching materials that can be used by students learn independently with the help of least possible harm from others (Munadi, 2010)[3]. Therefore, the module should contain instructions on using the learning modules, competencies to be achieved, the learning objectives, the content of the subject matter, supporting information, practice questions, evaluation and feedback on the results of the evaluation.

Giving the module as a student handbook, intended for students to learn independently. Students who have low learning speed can be repeatedly studied every learning activity without limited by time, while students high learning speed will be faster to learn a basic competence. In essence, the module to accommodate the student's pace is very different (Lestari, 2013)[1]. Therefore, the module should describe the basic competencies to be achieved by students, and served with good language, attractive and include illustrations. The function module than as a standalone teaching materials and substitute educators function is as an evaluation tool and reference material for students (Prastowo, 2011)[4].

Modules were developed in this study are in accordance with the characteristics of the module which has been described previously. The developed module structure consists of three parts, namely the introduction, learning activities and cover. Introduction consists of decryption (general overview) module, the user learn to use the module, the ultimate goal of learning and standards of competence and basic competence. In each section of learning activities

consist of teaching materials, exercises or student worksheets, assessment sheets peers, summaries and test competence. The last part of the module contains a list of important words (glossary), a bibliography and a discussion of the problems of the competency test.

Assessment is a general term that is defined as a process in which to have information used in order to make decisions about students, curriculum, programs and education policy. According to Linn and Gronlund cited Uno (2012)[5] in his book that the assessment is a procedure used to obtain for student learning and learning progress assessment format.In addition, Uno (2012)[5] quotes from Popham who argued that the assessment is a process or a normal effort of collecting information relating to the important variables of learning as an ingredient in decision making by teachers to improve processes and student learning outcomes. In general, the assessment can be defined as activities construe or interpret data from a measurement based on the criteria or standards as well as to certain rules (Uno, 2012)[5].

Assessment (assessment) can also be interpreted to interpret or make sense of the data results of a measurement based on the criteria or standards or by certain rules. In other words, the assessment is also interpreted as giving meaning or quality assessment is the result of a pegukuran by comparing the measured data with certain criteria or standards (Widoyoko, 2014)[6].

Various techniques can be done by teacher assessment to determine the extent of student success. However, none of the most appropriate valuation techniques for all competency at any time. Valuation techniques rely heavily on the competence to be assessed. In general, the assessment of learning outcomes can be done with the self-assessment*(self-assessment)*, assessment of peers *(peer assessment)*, performance assessment, project assessment, performance assessment of learners, attitude assessment and portfolio assessment (Widoyoko, 2014)[6].

Assessment carried out in an atmosphere of fun as far as possible, to enable learners to show what they understand and be able to do. The study of students in a given period will be compared to learning outcomes owned other learners. Thus, learners do not feel judged by teachers but are helped to achieve the expected learning goals (Jauhar, 2011)[7].

The principles of assessment must possess is (1) a whole; (2) continuous; (3) objective and (4) educate (Jauhar, 2011)[7]. In other words, the class-based assessment should include all domains (domains) contained in each basic competence to do on an ongoing basis and to be fair in order to be used as a basis to motivate and improve the quality of learning. This class-based assessment aims to (1) determine how much students can mecapai expected learning goals; (2) provide feedback to learners; (3) The students' progress monitoring tools; (4) feedback to improve the quality of learning, and (5) provide information on the effectiveness of education (Uno, 2012)[5].

Assessment peers *(peer assessment)* is an assessment technique by asking students to assess the results of his work. In other words, peer assessment can be interpreted as an assessment technique by asking students to assess each associated with achieving expected learning objectives (Widoyoko, 2014)[6].

According quoted Aoun (2008)[8], assement colleagues can improve work skills, especially those related to non-technical (generic) aspects including oral and written communication, reading skills and strategies, problem solving, decision making learning , dependence and responsibility (Aoun, 2008)[8]. Student involvement in the assessment process is to make students become more active in learning, identify the weaknesses and advantages of his colleagues as well as indirectly to compare the results of its performance and reflect himself and be responsible for the task at hand.

Application of peer assessment can be done effectively is by supported learning environment. Students must feel comfortable and trust one another in order to provide honest feedback and constructive. Then the student should understand and be familiar with this assessment teknnik (Widoyoko, 2014)[6]. Students in judging based on guidelines set by the teacher. These guidelines are made clear to be easily implemented for example by giving a picture with the criteria on each image that has ditetukan.

Thus, peer assessment can increase student participation in the learning process, especially the assessment. The excess valuation techniques peer assessment according Widoyoko (2014)[[6], among others: (1) develop students' ability to cooperate and ability to be critical of the work of other students; (2) develop students' ability to accept criticism and feedback from other students on the results of his own; (3) provides an overview to the students about what criteria are used to judge the results of his own; (4) build a *personality* (personality) and the social nature of the student. In other words, the assessment of peer assessment is perfect paired with a particular model of cooperative learning in physics.

2. Method

Module physics class X which developed validated by two experts. This validation stages using validation sheet. Sheets module validation prepared with a view to obtaining the validity of said modules. The technique adopted to obtain data on the validity of the module is to provide assessment module sheet to a team of experts. In the assessment form also provided a general assessment items and space suggestions and comments to the assessors. The steps performed in the process of the validity of the data analysis module are as follows:

- Recapitulated the expert assessment results into a table that includes aspects assessed and the results of the assessment validator,
- Determine the average expert assessment results for every aspect
- Determining the validity criteria every aspect with an average match facet with the validity criteria specified
- Criterion validity of every aspect determined by the assessment criteria

Table 1 Criteria for the validity of teaching materials

No.	criterion validity	validity level
1	85.01% -100.00%	Very Valid or can be used without revision
2	70.01% -85.00%	Enough Valid or can be used but with minor revisions
3	50.00% -70.00%	Valid less, it is advisable not to be used because it needs major revision
4	0.00% -50.00%	Invalid or may not be used

(Adaptation Akbar, 2013)[9]

3. Results

The results of the validation modules developed conducted to determine the feasibility of modules developed tersebut.Validator modules are academics and practitioners that Mustika Wati, M.Sc as academics, and Cuk Soebiyanto as a practitioner and teacher of physics lesson.

Table 2 Summary of Contents Module Validation

No.	Aspect	Average	Information
1	quality of content	3.38	Very good
2	Organization	3.50	Very good
3	linguistic	3.25	Very good
4	Evaluation	3.00	Good
	Average	3.28	Good
	validity	81.00%	Enough valid with minor revisions
	reliability	94.00%	Good

Table 2 above is known assessment module validation for the content, generate a valid category with minor revisions. The value of reliability in validation module for the contents of 0.94 with good reliability category.

Table 3 Results Display Module Validation

No.	Aspect	Average	Information
1	Consistency	4.00	Very good
2	Format	3.00	Good
3	Attractiveness	3.25	Very good
4	The shape and size of letters	3.67	Very good
5	linguistic	3.50	Very good
Average		3.50	Very good
validity		87.00%	very valid
reliability		97.00%	Good

Table 3 above is known assessment module validation for a view, result in the category of very valid. The validation module reliability value at 0.97 with good reliability category. So the validation of the results obtained are valid module.

4. Discussion

According Prastowo (2011)[4], the module is a module that is arranged systematically with language that is easily understood by learners in accordance with their knowledge and their age, so that they can learn on their own (independent) with minimal help or guidance from educators. It contains modules developed teaching materials, student worksheets and peer assessment sheet. The material quoted from the subject matter contained in the syllabus. The subject matter was later developed into a description of material and practice questions on a worksheet students who raced on learning indicators.

Student module contains material that students use a circular motion as a learning resource. Teaching material students developed consisting of a cover of a book, preface, introduction (description and instructions for use of the module, the ultimate goal, the standard of competence and basic competence), content, concept maps, chapter titles and their material circular motion (contains additional knowledge about circular motion , example problems along the discussion, student worksheets), summaries, competency testing and the discussion and a glossary and a bibliography.

Table 2 shows that the contents of the assessment results validation include aspects of quality of content, organization, language, and evaluation with the overall mean value of 3.28 with a valid category with minor revisions. This shows that the module contains material that has been developed in accordance with the basic competencies and learning objectives, and presented systematically. In addition, the evaluation questions contained in the module has a difficulty level that is evenly distributed and can measure the achievement of the expected learning goals.

Table 3 shows that the assessment results of validation to see include aspects of consistency, format, appeal, the shape and size of letters, and the language with a mean value of 3.50 with the overall very valid category. This shows the modules developed has an attractive appearance, communicative language and the format and content of the module consistency of good writing.

Thus, the modules developed otherwise valid for use. Based on the opinion of Daryanto (2013)[2], the modules are categorized as valid if the contents of the module are compliant, which means effective to learn competencies into learning targets (Daryanto, 2013)[2]. This is consistent with the opinion of Akbar (2013)[9] that is a good teaching materials have compatibility between the competencies that must be mastered by the content and scope of competence readers. Relevance (appropriate) should also describe the relevance of the material, assignments, explanations examples, exercises and problems, as well as illustrations with competencies that must be mastered by the readers of the appropriate level of development of the readers (Akbar, 2013) [9]. Thus, the module has been developed can be used to support the achievement of the expected learning goals.

5. Conclusion

The validity of the modules developed by validator is valid and fit for use. Based on the validation results of academics and practitioners using the validation sheet.

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SELF- DEVELOPMENT PROGRAM BASED ON HYBRID LEARNING TO INCREASE CHEMISTRY TEACHER ABILITY OF RESEARCH AND SCIENTIFIC PAPERS WRITING

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Abstract

This research aims to design a self-development program based on hybrid learning to increase the ability in research and write scientific papers for high school chemistry teacher. The designed include the structure of the program, media for supporting program in the form of training modules and web-based media. The method used is the exploratory mixed methods design with instrument development models. Research procedure includes four stages, namely the qualitative development of instruments, quantitative and interpretation. Qualitative phase is done with need assessment and literature. Instrument development is done by designing the program structure in the form of training activities and preparation of modules and web-based media for program implementation. The research use three instruments, i.e. a sheet of expert validation, assessment sheets of module and web based media. Assessment sheets module contains of 58 items covering three aspects of assessment, namely instructional design, content and design of technical feasibility. Web-based assessment sheets consists of 31 items statements include continuities aspects, modalities, redundancies, coherence, interactivity, personalization, simplicity and specificity. The data were analyzed descriptively. The first results is the self-development program structure based on learning hybrid with characteristics; follow the pattern In-On-In; with two training strategy -face to face and online- that conducted for 18 weeks; training materials include basic research, action research, and scientific writings. Media for supporting program include Tinular module and Tinular website. Tinular training modules consist of six chapters and further reading material. Tinular website for training can be accessed at http://dikkitinular.wix.com/titinular. Quality of Tinular modul and Tinular website are in good categories based on peer reviewers assessment.

Keyword: hybrid learning, self-development, research ability, scientific writing, chemistry teacher

1. Introduction

Continuing Professional Development (CPD) is necessary for chemistry teacher. It is a major component of teacher's activities that can be assessed for promotion. CPD activities are expected can create a professional teacher, not only has extensive knowledge, but also have a mature personality. The elements of CPD activities include self-development, scientific publications and innovative work [1]. Innovation in the learning process is one of the activities of self-development material. The innovation can be developed through action research. The result of action research can be a scientific publication that is another form of CPD for chemistry teachers. So, action research and scientific publication can be the materials that emphasized in CPD for chemistry teachers.

CPD can be structured and organized in a number of different ways, and for a number of different reasons. While most CPD experiences might be considered as means of introducing or enhancing knowledge, skills and attitudes. The models of CPD have been categorized into several form as training, award-bearing, standards-based and coaching or mentoring [2]. The training model of CPD is universally recognizable and in recent years arguably been the dominant form of CPD for chemistry teachers. It is generally delivered to the teacher by an expert in a conference or workshop. Its agenda determined by the deliverer, and the participant placed in a passive role.

Training activities is necessary because the community to be one of the important aspects in the professional development of teachers good [3]. But, there is a constraint in training for

chemistry teachers that is the difficulty in taking time in a long time to assemble. The results of previous research [4] conclude that continuing professional development that is mostly with the traditional mode of workshops and seminars by face to face to be inadequate for the teacher's self-development effectively. In this case the self-development program based on hybrid learning to be an alternative solution to overcome the constraints of time and place.

Hybrid Learning combines mode of face to face and online. A substantial proportion of course material is presented online but still has a face to face meeting [5]. Merging least two setting learning into a flexible learning environment, namely the physical classroom and web enable infinite relationships between tutors and participants [6]. Hybrid learning is expected can be overcome the constraints of time and place. However, the emphasize of matter and pedagogical aspects still fulfilled by mode of face to face.

Chemistry teacher's self-development program based on hybrid learning has not been encountered in the field. Therefore, innovative self-development program with training model based hybrid learning is the first step that is appropriate to support the program CPD for chemistry teacher. Program developed can be disseminated nationally. Part hybrid learning namely online learning will provide benefits that can be accessed by all chemistry teachers in Indonesia, whenever and wherever. This model also will improve the chemistry teacher's skills in using the information technology.

A good training program requires an optimal design before the program starts. It is required the media that will be used to support the implementation of the program. The program that based hybrid learning requires two major media, namely in the form of print media as training material to-face and web-based media as training material online. This research aims to design a self-development program based on hybrid learning to increase the ability in research and write scientific papers for high school chemistry teacher. The designed include the structure of the program, media for supporting program in the form of training modules and web-based media.

2. Method

The method used is the exploratory mixed methods design with instrument development models. Research procedure includes four stages, namely the qualitative, development of instruments, quantitative and interpretation. Qualitative phase is done with need assessment and literature. Questionnaire of needs assessment (NA) is used to explore problems related to the experience and ability of chemistry teachers to conduct research and write scientific papers.

Development of instruments in the form of modules and web media carried out by the analysis of material, drafting, expert validation, revision and peer assessment. The research instrument used is a sheet of expert validation, assessment sheets of module and media based on web. Assessment sheets of module contains of 58 items covering three aspects of assessment, namely instructional design, content and design of technical feasibility. Web-based assessment sheets consists of 31 items statements include continuities aspects, modalities, redundancies, coherence, interactivity, personalization, simplicity and specificity.

The data were analyzed descriptively. The analysis procedure included; scoring, calculating the mean score, and determine which the quality categories. Basis for determining the categorization adopted from [7].

3. Result

Description of self-development program based on hybrid learning

Self-development program was developed based on the model of training. The pattern applied is In-On-In with online supporting that conducted for 18 weeks. The first phase is In-(service 1) done by face to face meetings. The materials presented are the type of educational research, action research, instrument development, preparation of proposals and reports action research.

The second phase is On - (service) conducted by independent activity and collaboration among the chemistry teacher to develop proposals, conduct research and prepare a report of action research. The third phase is In - (service 2) that conducted through face to face meetings for reflecting the activities in the On phase. It also follow by workshops to prepare of scientific articles. In addition to face to face meetings, chemistry teachers can access a variety of training materials as well as communicate with tutors via a web-based media. Training participants can access a variety of training materials more operational, ask him, investigators linked the difficulties that it faces as well as interact with fellow participants.

Profiles of chemistry teachers as respondents

Need assessment conducted to collect preliminary data related teacher experience in

doing research and writing scientific papers as well as training which need to be done. It can generally be identified profile of respondents, namely all respondents (16 teachers) are bachelor in chemistry education, have teaching experience from 3.1 to 20 years and nine teachers are have been certified.

Based on analysis of the NA data there are several important issues regarding the need for training in developing teacher's ability for conducting research and writing scientific papers. There are: a) The chemistry teachers have been accustomed in using of the Internet for a variety of purposes; b). All chemistry teachers have accounts in social networks; c) Only 25% of respondents who had conducted research; d) A total of 31.25% of respondents who have never written a scientific paper; e) teachers lack an understanding of research design and its application in learning process; f) teachers' understanding of classroom action research and its implementation is still lacking; g) A total of 37.5% of respondents had attended training related to research and h) 12.5% of respondents had attended training related to writing scientific papers.

The clarity of knowledge sources on Research and Scientific Writing

Need assessment activities intended to obtain field data that will be used as the basis to develop of training including the media to be used. Tables 1 and 2 respectively presents a summary of the data related to the clarity of the source of knowledge for teachers today. The result indicates there are 15 parts that are not clearly from the source of knowledge about the research that have been read or owned by the teacher. The biggest percentage is the examples of research reports and research proposal, making instruments and research proposal. The result is used as the basis for developing modules and web. The analysis result of the clarity of the source of knowledge related to writing scientific papers indicate that there are 10 sections that has not clearly. The largest percentage of parts that have not clearly is on the examples of scientific work, turning the report into a scientific article and abstract.

Tinular module as media to support the self-development program

The first products of research is a training module for upgrading the ability of research and write scientific papers for chemistry teacher. The module was developed based on the analysis of the theory and the results of need assessment. A module consists of six chapters. In each chapter contains objectives, material descriptions, summaries and reviews as well as a bill. Here the systematics of modules:

1. Chapter 1: Introduction. This chapter consists of eight pages and contains a description of what and why the self-development program conducted with training models (hereinafter abbreviated training Tinular) required for teachers. Description about Tinular training purposes and how it is will be implemented.
2. Chapter 2: Research in education. This chapter contains 19 pages. Matters discussed in this chapter include; basic understanding of research, research skills, research variables, hypothesis, literature review and sources, sampling and instrument.
3. Chapter 3: Types of educational research. The chapter consists of 12 pages. Chapter 3 discusses design of qualitative research, quantitative and mixed methods
4. Chapter 4: classroom action research. The chapter contains of 12 pages. Description delivered include; definitions, types and steps action research.
5. Chapter 5: Do action research. The chapter consists of 17 pages. The topics discuss how to write proposals and reports action research. Output of this chapter is the proposal and report of action research.
6. Chapter 6: Writing scientific articles. This chapter consists of seven pages. The contents are "what, why and how to" write a scientific article.
7. Further Reading. This section contains about another references that can be accessed.
8. References of Tinular module.

The Tinular module is validated by three experts. Feedback given by experts is used for revising the product. After that, the module is assessed. The results of the assessment of five peer reviewers for each aspect served successively in Fig. 1, 2 and 3.

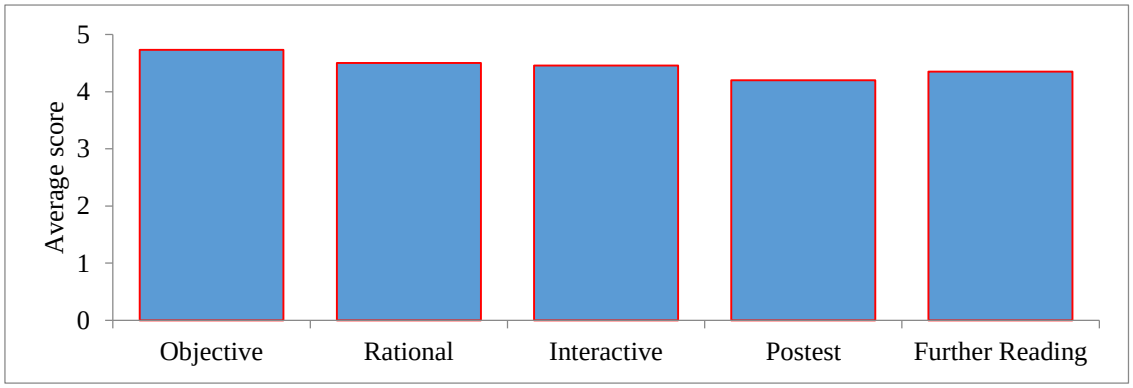

Figure1. Assessment of instructional design aspects

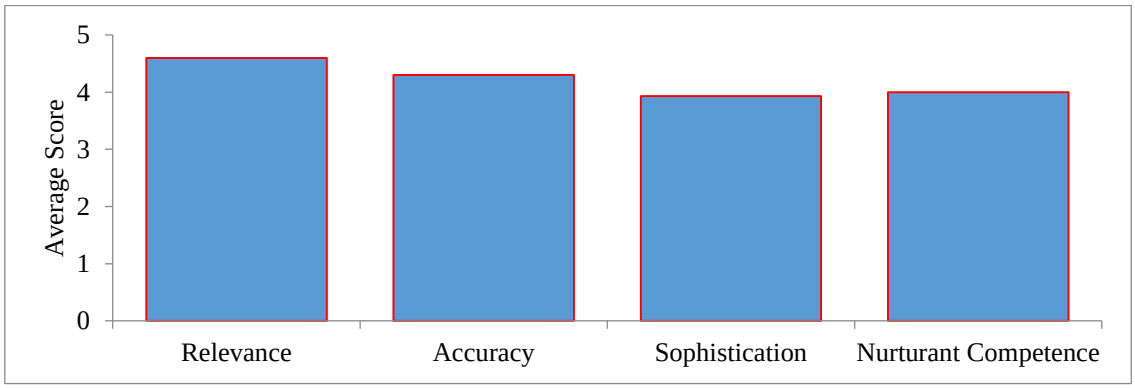

Figure 2. Assessment of feasibility contents aspects

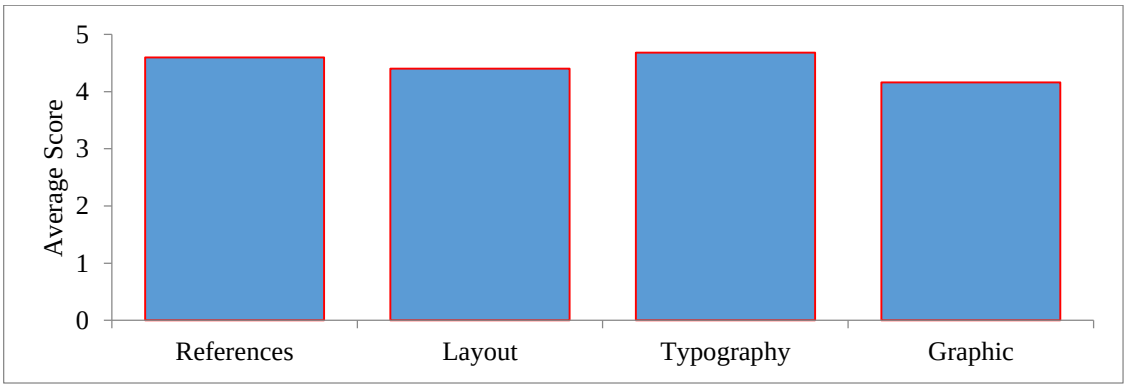

Figure 3. Assessment of Technical design aspects

The evaluation criterion for the module in the feasibility content aspects consists of relevance, accuracy, currency and nurturant competence. In Figure 3, it appears that all the assessment criteria are in good category (the average score> median). This shows that in terms of content, the modules fit for use in training activities to be conducted. As for the other aspect of the assessment is a technical design (Figure 3). The criteria in these aspects include; references, layout, typography and graphics that are all in good category.

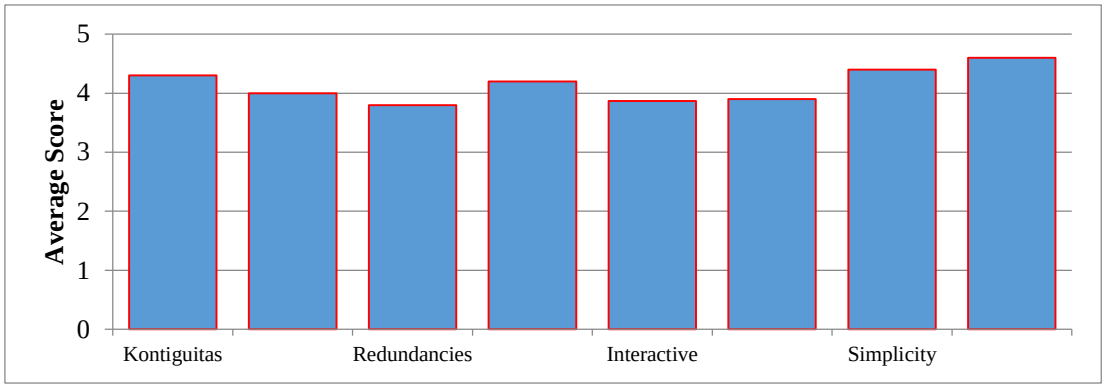

Figure 3. Results of assessment for the training web Tinular

Results of assessment for the training web Tinular

The second product developed is training media web. The media is characteristic of hybrid learning, where training is conducted through face-to-face and online sessions. Web can be opened in http://dikkitinular.wix.com/titinular address. Menu of media contains home, schedule, materials, resources, news, about us and contact. In this website also provided space communication between trainees with a tutor. The material presented in part is the same material as the module, but others are additional materials. Additional material is examples of proposals and scientific articles. Moreover, this website also has shown a video about the explanation of some of the material.

Media website developed also validated by experts. The results of the expert input are used as a basis for revision and subsequent media assessed by peers (peer). The assessment results are presented in Figure 4. There are eight assessment criteria, namely kontiguitas, modalities, redundancies, coherence, interactivity, personalization, simplicity and specificity. Based on the pictures, it appears that the average score for all of the criteria of assessment results over a median score. This means that the developed web media fit for use in training activities Tinular.

In general, media training modules and web Tinular be developed in compliance with the eligibility for use in the training program to be conducted

4. Discusion

The survey showed that of the 16 teachers, six of them getting training. The form of training includes training of action research proposal preparation and training that is integrated in the activities PLPG. Next, the teacher stated that the training had attended still not meet the adequacy supplies teachers in implementing research in the classroom. Things have not been fulfilled, according to the teacher, was the absence of a competent core resource persons, no follow-up training, and there are no concrete examples of action research proposals. As related to teacher training experience of writing scientific papers, only two teachers who said that they had followed him. However, according to them, he followed training is still not satisfactory, especially related to training that is only theoretical as well as the exposure is less clear. These two facts indicate need for training activities that can provide a good understanding of research and writing scientific papers as well as provide an opportunity for teachers to implement the understanding in real terms in the field, accompanied by a real follow-up.

In addition, teachers also provide advice regarding good training. There are eight main things to be considered in teacher training. Related to the execution time, most teachers require training schedule that does not interfere with teaching schedule, and supported by a strategic place with the support of adequate facilities. Things can be done is to combine face-to-face training and on line. Training materials associated with emphasis on materials applicable not just theoretical with complete training and media interest. Expected training methods are interactive delivery is accompanied by direct practice with competent mentor (both content and pedagogical) and communicative. One thing that is important is the need for teachers according to feedback and follow-up of training activities that follow. In addition, the associated ease of bureaucracy, teachers want notifications and official invitation to the schools so that teachers can attend training well. All these teachers suggestions into consideration in developing training on research and writing scientific papers either.

Tinular training modules developed based on theoretical analysis and user requirements. Offline and online training needs require modules. Learning module is a freelance unit that contains a self-learning that is designed to be used for the learners themselves or a small group without the presence of a teacher means fundamentally that required students to learn in the module.

Tinular developed training modules consist of six chapters, further reading and bibliography. Cover module is presented in Figure 5. The Tinular module accordance with the rules that must be met in learning, such as the clarity of learning objectives and their final test. Participants have clear guidelines in studying the content of the module can simultaneously assess her abilities independently. In addition, the material presented interactively with the various methods of delivery. Starting from the concept of exposure, excavation problems, questions or begins with examples. Some manner of presentation makes the modules more easily understood by the reader and at the same time can accommodate different learning styles and abilities of different readers in understanding the reading material.

Figure 5. Modul Cover

The Tinular module has a good feasibility in terms of content. The materials presented are relevant to the needs of self-development chemistry teacher because the teacher associated with the obligation to investigate. The material presented is sourced from the latest research results and resources so that up to date. The use of modules is expected to add insight about the chemistry teacher action research and write scientific papers. Meanwhile, web-based media that was developed was also instrumental in developing the ability of chemistry teachers. The media of interactive website by giving concrete examples of action research that applicable to teachers. In general, media training modules and web Tinular be developed in compliance with the eligibility for use in training programs to be conducted.

5. Conclusion

Has designed self-development program to increase the ability of research and writing scientific papers for chemistry teachers. The self-development program structure based on learning hybrid with characteristics; follow the pattern in service 1-on service-in service 2; with two training strategy -face to face and online-that conducted for 18 weeks; training materials include basic research, action research, and scientific writings based hybrid learning, which combines face-to-face and online presentation. Similarly, the media will be used, in the form of modules and to support the implementation of the program. Tinular media in the form of training modules consist of six chapters and further reading material. The quality modules and web developed by peer reviewers (5 chemistry lecturer) categorized in good quality so worth it to be used as a medium in the implementation of self-development program at the next research.

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CHILD DEVELOPMENT AND MEDIA

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Abstract

Every kind of change in body, mind and and emotion from the time in mother womb to death is called development. Physical, mental, social and moral development processes cannot be thought independently from each other. A development, positive or negative, in any of these phases influences the whole development of the individual deeply. Some elements affecting development process are passed down through genes and some others are affected by the social environment the individual lives in. But most are affected by both. There are various environmental factors affecting child's development process. One of those affecting individual seriously is media tools. Particularly children are influenced by these tools excesively since they spend much time with them. Studies in our country and abroad have shown that children are affected in a positive or negative way by media tools they have an easy access. In this study we tried to show the effects of media on children's cognitive, emotional, moral and social development process giving examples from scientific studies. We applied document review method as data collecting method and tried to reach various local and foreign sources. Having considered the research results in general, it was concluded that media tools affect individuals' every phase of development seriously; children, from pre-school period to maturity, spend most of their spare time with media tools; there are not enough studies about media's effect on individual's moral development and that families' being informed about media's effects contributes to understanding children problems in future.

Keywords: Cognitive Development, Emotional Development, Moral Development, Social Development

1. Introduction

Today, people have an access to the media tools very easily. The fact that it is readily accessible to the mass media has led to an increase in time spent with these tools. These tools all around affect children seriously. Educators used to believe that the most important factors which affect children were family, school environment and teacher but it did not take long for media to be added to this list.

1.1 Cognitive Development Stage and Media

The cognitive development is one of the important senses which focuses on what a child knows or thinks and how the mental or cognitive processes develop in time. Jean Piaget is one of the most important thinkers to examine this process. According to information obtained from Piaget's work a child's memory enters a maturation process from birth up to 12 years [1]. The stages of the maturation process are applied to all children through the Piaget's Cognitive Development Theory. Piaget stated that each stage is the harbinger of the next stage and the stages reflect the qualitative differences in cognitive structure.

We examine the possible effects of the media on cognitive development stages:

1.1.1. Sensory Motor Period and Media (0-2 Age)

During this period babies reveal their thoughts with physical activity. From the moment individuals are born to understand and adapt to their environment significant patterns are created in mind that we call schema. Schema can be considered as structures to understand the problems around to solve and to cope with the world. The individuals adapt to and organize their environment through the cognitive structures and schemes [2]. The media may adversely affect the children schema structure when they are faced in the infancy period. During this period, the baby needs calmer mental functions [3].

The research indicates that babies show interest in television since the first six months [4]. A survey made by the Kaiser Family Foundation shows that in a normal day 61 % of children under two years of age use television,

video and screen media such as DVD and 43 % of the infants and young children watch television [5]. Huston and Wright (2011a) proposed a different theory related to attracting attention to the television. In this theory, the television elements attracting children attention differ according to ages. They especially point out that the television elements taking attention are sound effects and movement [6].

The enthral period of children are short. For example, the fragments and quickly switch seen in the ads cause to be taken unstructured and wrong materials by the children. During this period, children should learn calmness and three dimensional world perceptions. These steps are important for baby in terms of getting information about media content. Over time children gain skills to distinguish a picture, object, image and sound from each other [7].

1.1.2. Pre-Operation Period and Media (2-7 Age)

During this period, children are very sensitive to sounds and images of objects. This feature has been described as the *sense of limitedness* by psychologist Bruner. As age progresses, children focus on conceptual properties which objects have, like functionality. Researchers point out that small children pay more attention to the noteworthy items such as live music, sound effects and animation when they encounter on screen. When the children move towards the middle childhood, they become more selective in their attention [8].

It has been demonstrated by research that after age of 3, the children have watching television habits 1-2 hour per day. In fact, watching TV is very superficial in this age. Only the colours, music, movement and strange sounds draw their attention. In general, they don't understand the subjects and the dialogue between the characters completely. Age 4 and after, children begin to understand what they watch and perceive successfully. In this age, children learn to distinguish the types of the program. While only 10 % of the 5-7 age group children can understand the aim of ads which are profit-oriented, others think that ads are a form of entertainment [9].

After the age 7, as a result of the cognitive maturity, actively using experiences and skills slowly, they begin to understand the true meaning of the ads. And children begin to understand the subjects of the television program and dialogue between the characters. The children in this age are sensitive to the ads. If this ads are related to the products they know and use, the level of sensitivity increases. When they watch ads of toys which were used by them previously, they may notice that these are exaggerated too much, yet they make less comment about ads of the toys they did not use before.

The other cognitive ability developed in this period is separating fact from fiction. Especially, the small children treat inanimate objects as if they are alive and this objects could be their imaginary friends. Such situations reflect the children's lack of experience with reality. As an example, pre-school children talk to television screen and may shake hands to the characters on the screen. In a research conducted by Flavell and his colleagues, many children at the age of 3 think that the pop-corn bowl on TV would spread around if the television set is overturned. Until 4 or 5 years, the children begin to understand that those on the screen are representations of fact but they tend to think that if something seems to be true, it is simply true [10].

1.1.3. Concrete Operations Period and Media (7-12 Age)

Concrete Operational Period is a transition stage for abstract thinking. In this period, the individuals begin to move from the concrete thinking to the deductional thinking which is one of the latest cognitive trends.

The younger children tend to focus on the obvious and sensible information. Thus, they focus on the distinct and concrete behaviour of the characters rather than motives of the characters. But understanding many media communication completely involves the ability to understand implicit information. For example, the television serials urge audience to watch multiple stories taking place in a section. Web pages don't reveal their commercial purposes clearly and even the video games contain secret information about time and places. Until 7 or 8 years old, they begin to use multiple criteria to judge the fact in the media. They can even consider the type of program, production techniques and the power of the message. When the older children have surmised the described characters and events in the real world, even a program, a film or a video game can be expressed as real. Until 8 or 9 years old, children make impressive progress in terms of the ability to connect between the events and sub-themes and

make a causal sense out of media [11]. A study that confirms this idea was made by Wilson and his colleagues. This study revealed that since young people do not think that they can face kidnapping, they are less afraid of it compared to the primary school students [12].

1.1.4. Abstract Operational Period and Media (12 + Age)

Abstract operational period is averagely considered aged 12 and above. According to Piaget, this period begins at the age 12 and continues throughout adolescence. The cognitive development of the individual becomes more effective. The most important feature of this period is to obtain the abstract thinking [13]. During this period, the abstract ideas can be analyzed and abstract concepts can be become clear. Individuals can synthesize those she/he has analysed and solve the problems in a logical order [14].

The ability emerged in abstract operation period is metacognitive. Metacognition is recognizing, monitoring, supervision and making regulation in the individual's own cognitive processes. Because the individuals spend extreme mental energy watching around, young children and even older kids have difficulty in assessing their thinking processes [15].

Teens and adults can consider their reactions associated with a situation and also processing the things that are in their environment. Thus the possibility that a teenager has more difficulty in reading a complex novel in a noisy environment of music compared to a child. Teenagers, when reading an emotional story or in the face of a sad movie, can control their feelings better and reduce anxieties by talking themselves. Because the adolescents use different media tools, they can understand complex tools easily. In this period, the children follow the main idea and even the sub-idea of the story. Due to the unusual power of the heroes in the program, they can understand whether the program is real or not. On the other hand, the adolescents do not find such programs interesting. If it is possible, they can criticise in a more abstract level and examine how the gender and race is portrayed and how brute force is used as a problem solving method [11].

1.2 Emotional Development Period and Media

The children need emotional skills to communicate with other people. In fact, recognition of other emotions and interpretation capacity is the cornerstone of social competence [16]. Developmental psychologists and media experts stated that in children's emotional development the screened media plays an important role [17].

The most important step of emotional competence is the ability to define different mood. The researches have demonstrated that preschool children know and distinguish fear, emotions and happiness which are experienced by the television characters [18]. However, many children spend much effort to recognize the complex emotions. They understand the emotional experiences experienced by people better than experienced by puppets and cartoon characters and when a narrative is repeated in a television program, so they don't need to focus on the emotions of the characters [19].

When children, especially girls, reach the age of eight, they are likely to focus on the dramatic situation of movie characters which is repeated in television. Older children try to understand the more complex emotions of the characters watched on TV. The more children perceive the programs as realistic, the more they remember the feelings. A study revealed that watching educational programs (like Sesame Street Program) regularly helps the preschool children to recognize the feelings [6]. Recent studies have showed that the educational programs help children to deal with feelings in terms of educational aspect. Researchers have indicated that children have knowledge about the emotions in these programs. A series of studies made by Calvert and Kotler addressed that How secondary school students obtained a number of different types of information from programs. A group of students taken as samples from schools was asked to visit special websites crafted to record what they have learned from television program recently. Researchers have determined that children remember their lesson and expression clearly. They were asked to classify the programs as educational and informative. It was observed that as a result of the classification, children have learned the course described as emotional content better than information content [20].

In other words, educational programs have taught the children interpersonal skills such as overcoming fears, knowing different feelings, sharing, respecting and loyalty rather than science, history and culture subjects. The girls

have learned much more things than boys. The gender differences have revealed that girls liked these programs more and involved their feeling. As a result, children learn much more from the emotional programs rather than the program including entertainment [21].

1.2.1. Self-Esteem and Body Image

Self-esteem and body image are affected from media very much. Experts state that the development of body perception may be affected by the media message related to body image. The remarkable items (beautiful models, standards difficult to access) used by media have successfully changed people in the community. Because people adopted the criteria that were imposed from media very seriously, this situation has caused to decrease self-esteem they have for themselves. Kates (2008) has determined that the media have negative effects on the self-esteem of both men and women and cause significant change in self-esteem and self-consciousness. Other studies have revealed that the difference in the level of self-esteem is significant only for women and men's life are not affected by media images [22].

Another study has revealed that the attractiveness concept defined by the society differs from gender to gender. While women see attractiveness as weight of body, men see attractiveness as muscle mass. The previous research results had revealed that media had significant effect on level of self-esteem. It was determined that exposure to an ideal image was causing a decline in the level of self-esteem. Although this decline shows difference between men and women, research has revealed a general decline in the level of self-esteem among both sexes [23].

1.2.2. Violent and Aggressive Behaviour

Hosting much more violent factors in it and the effect of these factors are perhaps the most researched topics of the media. In particular, exposure to violence and entertainment program in early age has a positive relevance with attention deficit which appears later. But an educational program that is watched on television does not cause attention deficit in the future [24].

The research related to violence asserts that this violence topic is especially found on television [25]. Today, television is the most easily accessible and most widely used tool in all media. So it draws attention as the most effective learning tool. Children and adolescents begin to spend more and more time in front of computer and television. In particular, television programs, films, cartoons, TV series and computer games, violence, brutality and aggression in all mass media has become remarkable and thought-provoking in recent years. The violence events such as killing, injury, fighting, harassment, rape and threats are getting widespread among the children and youngsters and there is an important contribution of the violence in mass media. Scientific research reveal that the violence watched on television and in media, both in long and short term, have a triggering, acceleration and encouraging effect on the children's feelings, thoughts, values, attitudes and behaviours [26].

1.2.3. Media and Health

Nowadays, media tools such television, cinema, video, music, video games and computer software affect both working and social life directly. The studies related to the effects of the media on child development conducted by child development experts revealed that children at very young age use a variety of media [5]. The number of television programs market towards early childhood, software programs for toddler and video films for infant are growing.

Paediatrics, educators, researches and policy experts care about the issue of electronic media exposure in small age. The research conducted revealed that the negative effects of media such as obesity, aggression, fear, sleep disorder are more effective in vulnerable period like early childhood and school age children [27].

Neural development research reveals that unlike the other organ systems of human, the brain doesn’t develop adequately after birth and it completes most of development in 18 and 24 months. The stimulants related to creative problem solving activities mobilize the development of the structure of brain by mobilizing environmental issues and by providing interaction with other people and families.

None of these functions can be made by media tools. The American Academy of Paediatrics (AAP) suggested that exposure to the media tools is very harmful rather than having benefits for young children and children at the age of 0-2 ranges should be kept away from media. Researches revealed that there is a relationship between the exposure to media and various violent behaviours, obesity and health problems [28]. Besides, AAP stated that it is enough for children at the age of two and over to spend 1 or 2 hours a day with the electronic devices [29].

Watching horror programs cause acceleration of heartbeat in children and Post Traumatic Stress Disorder (PTSD). In a research conducted with 116 families that have children aged five to three, forty percent of the families reported that Post Traumatic Stress Disorder emerged after watching horror films. Sleep disorder is the most common symptom of this condition [30-31]

1.3 Moral Development Period and Media

It is assumed that in the development or regression of morality, virtues and values, media have significant effects. Even today, the studies related to moral values and media issues are very limited and as Wilson expressed "the researchers often focus on how the media influences the behaviours of children" [21].

Children's moral development follows a predictable path. The children under the age of eight consider that an action should be judged when it is wrong or when you kick against the pricks, this situation should be judged as a wrong or improper action [32]. When the children grow up, they evaluate the situation with multi perspectives. They consider intents and reasons and they try to recognize the conflicting rules which are the core of moral dilemmas. In other words, while small children's (under the age of eight) moral ideas are much more flexible, the adult's are oriented [21].

Krcmar and colleagues (1999) made a number studies about whether violence watched on screen influences moral thinking or not. In a survey, they provided relevant examples about "legitimate violence" as expressed attract to protect oneself or "unjustified violence" as expressed attract due to random reasons between children at the age of 6 and 12 [33]. Most children stated that unfair violence is wrong. But the children watching imaginary violent programs on screen thought that it was morally right due to the justified violence in the story. And indeed, the researchers observed that the violence is very common in cartoons characters that depict it right [12]. In Krcmar's study, the children exposed to both imaginary violent elements and realistic violent elements many times made a little progress in moral thinking strategies and in thinking about the moral dilemmas, and they especially focused on the rules and presence and absence of punishment.

2. Method

We applied document review method as data collecting method. This method is one of the qualitative research methods containing information about facts and events. Document review and research involves the analysis of written materials including information about targeted case and cases. Document review is a collecting data technique inevitable for almost every research [34].

3. Results

Studies in our country and abroad have shown that media tools affect children both positively and negatively easily. The research about the "Use of Information Technology and Media at the 06-15 Age Group Children" conducted by Turkish statistical Institute (2013) revealed that the average computer user age starts from 8 years old; 24.4 % of children have their own computers; 60,5 % of children use computer; 50,8 % use internet; 24,3 % use mobile phone; 45,6 % of children use internet almost every day; the average age of the using mobile phone is 10, nine out of ten children watch TV almost every day and except for internet, reading newspaper rate in printed media is 16,6 % [35].This and similar studies revealed that uncontrolled media consumption in early age could affect individuals adversely. In particular, exposure to violence and non-educational entertainment programs may cause attention deficit which is likely to occur at early age but watching educational programs does not cause attention deficit in future [24]. In this respect, parents' awareness of the effects of media on children's cognitive, emotional, social and moral development period will contribute to understanding the problems originating from media in later life of children.

4. Discussion

In this study, the media's effects on children's development process have been revealed by scientific studies. Over the past thirty years, the media concept towards the children has changed surprisingly. Not only did the number of TV channels for children increase, but also the computer games and internet have become the most important leisure time activities for children. In the first half of the 21st century film, radio and newspaper, although limited, were the accessible media forms for children. Starting in the first half of 1940 and towards the end of the century, the children's media experience expanded from television, recorded music, videotapes, electronic games, interactive computer programs to the internet.

Although the printed publications such as comics and children's magazines may not have a similar speed ratio like visual electronic media, they had improved in this period. What should be considered in understanding media for children, which is relatively a new phenomenon, is that children use media too much.

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RESEARCH AND DEVELOPMENT CHEMISTRY COMPENDIA OF QUR'AN FOR ISLAMIC HIGH SCHOOL

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Abstract

Islamic high schools have special characteristics in managing learning chemistry because it uses the base of Qur'an and Hadith to enrich the material. Therefore, this study has examined the needs of teachers in using Qur'an as a source to develop chemistry material, developing the material into the form of enrichment book, its quality, and the response of the students towards the learning materials developed.

A successful material developed through this research is compedia of Qur'an for chemistry subject. This compedia was developed using Borg and Gall's model. An outline of the development includes the identification of potential and problems, the selection of products, a literature review, planning and production, field trials and product revision. The subject matter expert (chemistry and Qur'an), linguists, chemistry teachers and students of 3 Islamic high schools were involved as the subject appraisers. The data captured using several instruments: interview form, validation sheet, product assessment sheet, and student response sheet. The interview and validation of products were analyzed using descriptive techniques, product assessment was analyzed using quantitative descriptive categorical, while the student responses were analyzed using percentage.

The results showed teachers of chemistry at the Islamic high school yet have a teaching material linking the chemistry materials with the Qur'an. Teachers find difficulty to develop it because of several factors, including: the lack of training on the preparation of teaching materials which relates the material with verses from the Qur'an as well as the lack of knowledge possessed by teachers of the verses of the Qur'an dealing with chemical materials. Therefore, this study has successfully developed compedia enrichment book of the Qur'an for chemistry subjects, which has the features such as advance organizer, teaching tips, reflection, the history of Muslim chemist and information related to chemistry. This book has a very good quality according to teacher assessment with a percentage of 84.55%. In general, students respond positively (filled questionnaire results indicate ideals percentage of 90%) toward this book because it can enhance students' knowledge about the connection between chemistry and the verses of the Qur'an.

Keywords: compedia, the Qur'an, chemistry, Islamic high school

1. Introduction

Curriculum is one instrument that can determine the success of an education. Various efforts have been made by the government related to the curriculum, for example, the replacement of Curriculum Curriculum 2006 to 2013. However, because a lot of sharp criticism and public protest, the government gave the right to choose enact curriculum 2006 or 2013. In Indonesia, there is dichotomous practical learning process, which is organized by public schools and Islamic school (madrasah). The term madrasa or school in the conceptual realm can be used interchangeably. In the decision of the Law No.20 of 2003 on National Education System in particular Chapter VI, Article 18, paragraph 3, a secondary school is public high school (SMA), Islamic high school (MA), and/or equal (SMK/MAK). Therefore, the graduates of the MA is also entitled and allowed to proceed to public colleges.

Instead of position as a public school, MA curriculum exactly the same as the public school curriculum at the same level. Furthermore, to realize the hallmark of the Islamic religion, then in the MA curriculum adds a number of subjects covering Islam e.i. Qur'an, Hadith, Aqeedah,

Fiqh, Islamic History, and Arabic.

Madrasah and others public schools organized in order to prepare generations to realize the ideals of the Indonesian nation. Therefore, quality graduates, qualified and noble personality must be produced through a process of education. To focus more on learning outcomes, the basic principle of education is also directed to a process of learning that a planned, systematic and oriented towards the development of human resources of learners. The basic principle of education is contained in the Content Standards, issued by National Education Standards Agency (BSNP) and should be applied to all schools, both public and Islamic. However, Islamic school must add the content of Islam in the curriculum uses.

On the one hand, Islamic school serves as a religious educational institution, which means learners should be able to understand and master the sciences of Islam. On the other hand, the school also serves as the executor of basic education and general secondary education, which means that learners must understand the study material is the same as public schools. It is a challenge for students at the Islamic school to achieve the desired learning outcomes by the curriculum set itself.

Although all MA already bases its education management in accordance with the PP. No. 19, 2005: 60 on the Management Standards, but in general the quality of the output of Islamic still relatively lower than public schools. The UN (national examination) in 2014 showed the highest value obtained high school (SMA) students instead of MA. Therefore, most people still consider the MA as a second class in education.

Preliminary study through interviews to the headmaster and teachers MA in Yogyakarta (March, 2015) reveals several factors that led to the gap between public and Islamic schools, including:

a. Learning resources, instructional media, and laboratory equiptment are very limited, so that students cannot explore knowledge with scientifically proven theory.
b. Lack of guidance, training teachers and unequal assistance to the MA education facilities by the government, and it has always lagged one step below the SMA.
c. Many miss match teachers in teaching, such as teacher of mathematics teaching physics, chemistry teacher taught biology.
d. The numbers of subject at the Islamic school decrease the time allocation for others subject.

For chemistry (which is one of the compulsory subjects in the MA), mastery of concepts and scientific attitudes is needed, especially cognitive domains. Teachers are not enough to simply deliver material knowledge to learners in the classroom, they need the ability to obtain and manage information in accordance with the needs of the profession. Teaching is no longer an attempt to impart knowledge, but also an effort to create an environment that educates students for learning goals can be achieved optimally. Therefore, teaching requires an appropriate learning strategy.

Teachers can use a variety of sources of knowledge to enrich the instructional materials; one of them is the Qur'an. The Qur'an is the source of intellect and spirituality all of science, including chemistry. The chemists can gain knowledge from various sources and through a variety of ways, but all knowledge ultimately stem from one, that is Allah SWT. Therefore, the content assessing knowledge in the Qur'an as the main reference is the necessity for the Islamic society, including chemistry-learning process at the school.

Pudjiastuti, et al. (2013) stated that the learning method compendium of projects incorporating the Qur'an could improve student achievement motivation in the subject matter of chemical bonds. In the first cycle increased to 84.62% and 92.31% in the second cycle. Learning methods compendium of projects incorporating the Qur'an also can improve student achievement in the subject matter of chemical bonds. In the first cycle of 50% and 80.77% in the second cycle.

Explanation of the Qur'an never conflicts with the findings of chemistry. On the contrary, certain facts newly discovered with the technology of the 20^{th} century were actually revealed in the Qur'an 14 centuries ago. Therefore, it is often said when the Qur'an is valid for all eras of time. The word 'chemistry' was actually derived from the Arabic, *Kimiya*, which means changes in objects or substances. Muslim chemists also successfully perform experiments, such as distillation, sublimation, oxidation, and precipitation. Not only that, a wide variety of compounds have also been found by Muslim chemists including ferrous sulfate, mercury sulfide, mercury oxide, copper sulfate, copper sulfide, sodium bicarbonate, and potassium sulfide.

Based on the preliminary study (March, 2015), obtained by the fact that no one teachers of chemistry at the school in Yogyakarta has used the Qur'an as a source to develop teaching materials. It is caused by several factors, that most of the teachers are graduates form public

university (LPTK), which is not equipped with the Islamic courses; some who are graduates from Islamic university (PTKI) also no provisions on how to develop teaching materials based on the study of the Qur'an.

Kosin (2012) through research with a qualitative approach and analysis of documents on science teaching materials in MA concluded that the content of the Islamic religion in science teaching materials at the school are very limited and insignificant.

To implement the idea of integration of science and Islam at the school, it takes a number of supporting components, especially teaching materials. Instructional materials for chemistry subjects in MA must be integrated with Islamic values that teachers and students have established guidelines. Similarly, MA teachers must be prepared in order to have more capabilities, which is skilled of integrating the material with the Islamic values.

Therefore, this study is one alternative solution to resolve issues related to chemistry teaching, focusing on teaching materials are based on the concept of the integration of chemistry and Islam. Compedia of the Qu'ran for chemistry subjects can be categorized as knowledge enrichment book, so it can serve as a supplement to the main teaching materials.

Great (2011) said that the textbook is one of the strategic learning resources to improve the quality of education. Research has been conducted on the study of a wide range of literature relating to chemistry and material values relegius in the verses of the Qur'an and supported by the experience and prepare for teaching chemistry textbooks. On the other hand, Rosyada (2015) said that the integration of science and religion would be more effective to try to articulate science with religion in any subject matters, either through exploration of meaning explicit verse with scientific theory, or bringing back the theory of science in paragraph through understanding the cues texts, so that all actions of Muslim weighs spirituality and becomes an act of worship as a Muslim.

2. Method

This study used the type of research and development (R & D) that aim to develop the Compedia of Qur'an for chemistry subjects, through preliminary research (needs assessment), product development, and final research (test the effectiveness of the product). The development model used in this study was Borg & Gall (1989: 775-788), and then was operationalized into research and development activities in accordance with the study.

The instruments used in this study were:

a. Guidelines for the interview to identify the potential and problems of conducting preliminary research on chemistry learning in MA and its influencing factors, including the curriculum, teachers, teaching materials and student characteristics.
b. Observation sheet for chemistry learning tools, to examine what learning tool prepared by the teacher.
c. Form the material selection and review of the literature for selecting the material to be made.
d. The expert validation sheet.
e. Product assessment sheet.
f. Questionnaire for student responses on using the compendia.

In accordance with the research objectives of this development, then the data were obtained and the instruments used in this study include:

a. Qualitative data about the development process of stage 1-5, obtained through descriptive notes and sheet product assessment by subject matter experts, media specialists, and linguists.
b. The quantitative data from field trials in the main stage acquired through product assessment sheet.

The qualitative data obtained were analyzed descriptively, while quantitative data (product testing) were analyzed using descriptive quantitative methods.

3. Result and Discussion

a. Development Process

Research and development compedia of the Qur'an for the chemistry subject was successfully developed using a development model of Borg and Gall. Compedia of the Qur'an is one kind of knowledge enrichment book, which contain materials of chemistry subjects written by studying the verses of the Qur'an. This compedia is also equipped with "teaching tips" for teachers and "reflection" for the readers. Compendia development was done through several stages of review by two experts' materials (chemistry and Qur'anic studies), one media expert, and given feedback by three teachers and 30 students of MA.

The process of drafting and developing compendia Al Qur'an procedures implemented through several stages of development, namely:

1) Identify the potential and problems of conducting preliminary research on

chemistry learning in MA and its influencing factors, including the curriculum, teachers, teaching materials and student characteristics.

The initial research was conducted through interviews and observations to teachers and students. Interviews showed that learning chemistry in MA refers to the curriculum 2006 because the school was not ready yet to implement the curriculum of 2013. MA (in this case the teachers) do not provide specialized teaching materials that integrate Islamic values as well as review the verses of the Qur'an to be delivered to students. Teachers find difficulty how to integrate chemistry with Islamic values. Teachers also admitted the difficulty to find the right verse and seek its interpretation to be integrated with the subject matter. Until today there has been no training about the development of teaching materials based on the integration of Islam and science.

Therefore, when the proposed development of this Compedia, teachers welcomed and hope can be realized to assist teachers in presenting the chemistry material. Teachers also said they did not understand the meaning of a "compedia" itself. Therefore, it is explained that the compendia is a summary/overview written to complement the main teaching materials (textbooks). So, the material in the compedia is not as widely and deeply in the textbooks, but there is up-to-dated info (linked with the verse in Qur'an) and it is important to increase the knowledge of the reader.

Results of interviews conducted to students in some madrassas (2 November 2015) revealed that teachers had not conveyed Islamic values and the content of the Qur'an, which is integrated with chemistry subjects. Teachers usually give additional tasks to search for articles on the internet for students who have completed at one subject matter, while unresolved asked to get the remedial testing.

2) Selection of products (Compedia of Qur'an for Chemistry) to be made, a tentative outline of what will be included in the product and how the product will be used, the specific statements about the purpose of the product is made.

   In this step, discussions with the research team were held to choose the features that will be included in the compedia. Based on the discussions, it was agreed there are some features that are incorporated into the compedia, namely:

   a) *Advance organizer*, an image (match with the chapter) and followed by verse and translation. The purpose of giving advance organizer is to draw literacy and a general description of the material.
   b) *The main material*, the main discussion of chemistry materials, which are described after paragraph presented along with its interpretation.
   c) *Teaching tips*, a guide for teachers how to introduce chemistry terms are actually cited in the Qur'an. For example the term "*dzarah*" as the meaning of sub-atomic particles, not atoms; the word "*amad*" (pole) as an analogy of the buffer, and so on. In addition to the introduction of the term, teachers were also given tips on how to deliver the verses dealing with chemistry materials.
   d) *Reflection*, the study of how to be a better Muslim, which is actually analogous to chemstry materials.
   e) *The history of Muslim chemists* contains information of Muslim figures that contributed in the development of science in general and chemistry in particular.
   f) *Info chemistry*, an explanation of the development of chemistry more applicable in daily life.

3) Review of the literature, which was to determine the areas that are the focus of research, in this case study/review focused on literature relating to the problem of student competence; study the verses of the Qur'an that match with the content in chemistry (eg, atoms, molecules, chemical bonding, acid-base, and so on); and research development. In this step, discussions were held with the research team, to select the material that will be developed into a compedia. Selection results presented in Table 1.

Table 1. The results of material selection and review of the literature

No.	Material	Review	Selection		Chapter Title
			Yes	No	
	Atomic Structure	In a verse of the Qur'an about the *dzarrah*, which is interpreted as a subatomic particle.	✓		*Menguak Dzarrah, Bagian dari Atom* (translation: Revealing Dzarrah, part of the Atom)
	Periodic System of Elements			✓	
	The Chemical Bond	According to the Qur'an, the material world is always in pairs, as well as atoms are linked together by chemical bonds.	✓		*Penciptaan Materi secara Berpasangan* (translation: Matter Creation in Couples)
	Stoichiometry	Everything God created in a certain size. Similarly, chemical reactions that occur also because of their size / amount specified by the Fundamental Law of Chemistry.	✓		*Hukum-Hukum Allah dalam Ilmu Kimia* (translation: Laws of God in Chemistry)
	Thermochemistry			✓	
	Reaction Rate			✓	
	Chemical Equilibrium	Everything has been created equal, even the processes that occur in nature that do not seem too are created equal though. Environmental balance is dynamic, which means constantly changing but remain in balance for the amount of accretion balanced by the amount of reduction.	✓		*Kesetimbangan Kimia* (translation: Chemical equilibrium)
	Acid Base	There are verses of the Qur'an, which describes the type of seawater and river water. The verse implicitly explained about acids and bases, *adzabun furat* and *milhun ujaj*. Tasteless, salty and bitter are characteristic of acids and bases. So the verse tells us one of them about the solution of acid and base.	✓		*Karunia Asam Basa* (translation: The Mercy of Acid and Base)
	Buffer	The word *'amad* on Q.S. Ar - Ra'd: 2 means the pole, the point supporting the objects that lie on it. All objects are spread on the ground certainly require a pole as a prop. In terms of chemistry, also known buffer solution is one of the forms in the blood. We can maintain the pH of the blood although we eat foods that are too acidic because we have a blood buffer systems which maintain the pH.	✓		*Larutan Penyangga* (translation: Buffer)
	Hydrolysis	There is a verse that describes the sea contains salt, where the salt can run into hydrolysis.	✓		*Hidrolisis Garam* (translation: hydrolysis)
	Solubility and Solibility Product Constants (K_{sp})			✓	
	Colloidal System	Many verses pertaining colloidal system, one of the clouds and fog.	✓		*Sistem Koloid* (translation: Colloidal System)
	Colligative Properties of Solution			✓	
	Redox Reactions and Electrochemistry	Word *maraja* on Q.S. Ar - Rahman: 19-20 originally means a release. This word is used among others to describe the animals are released to find their own meaning. Removing the sea in the sense of letting it flow freely. The most appropriate meaning for the verses that speak of this ocean is flowing and it can be analogous to the flow of electricity.	✓		*Misteri Aliran Listrik dalam Reaksi Redoks dan Elektrokimia* (translation: Mystery Electrical Flow in Redox Reactions and Electrochemistry)
	Chemical Elements	With a variety of different contexts found in the Qur'an about gold and silver as a precious metal (Surah Al ' Imran [3]: 14 and Al - Tawbah [9]: 34), as a luxury jewelery (Surat al - Zukhruf [43]: 33-53), and as a sign of God's gift that will be given to the dwellers of paradise (Surah Al -Hajj [22]: 23 and Al - Kahf [18]: 31).	✓		*Kekuatan Unsur-Unsur Kimia* (translation: The power of Chemical Elements)

No.	Material	Review	Selection		Chapter Title
			Yes	No	
	Organic Compounds	Allah mentions fruits that can be consumed at once can produce a beverage. It's just that these drinks can be something bad because of intoxicating. Q.S An- Nahl: 67 confirms that both the fruit can produce two different things, namely the strong drink and good provision. If so, a good strong drink that comes from grapes and dates is not a good provision.	✓		*Rezeki dari Senyawa Organik* (translation: Sustenance of Organic Compounds)
	Macromolecules	An-Nahl word is the plural form of an-nahlah which means bee. In Surah An-Nahl verses 68-69, God explains that the bee was awarded an ability to produce things that are awesome, that something out of the stomach in the form of drinks variety of colors, which in this case is usually called honey (as a cure for humans). Honey is one example of carbohydrates (macromolecules).	✓		*Makromolekul yang Halal* (translation: Halal Macromolecules)

4) Planning, which determines the specific objectives to be achieved by the products to be made, the intended use of the product, who the users of the product, a description of the components of the product and its use.

In this step has determined specific objectives of compedia, namely:

a. The intended use of the product

Compedia of the Qur'an was developed to supplement textbooks that are usually used by students in learning chemistry. So we can say that this product is an enrichment book, which contains additional knowledge about the chemistry and connection with the verses of the Qur'an relating to such materials. Aside from being a source of additional learning, this book can also be used by teachers as a manual/guideline how to integrate chemistry materials with Islamic values and the verses of the Qur'an.

b. Description of the components of the product and its use

In general, the compendia printed in B5 size (in accordance with ISO standards) and has advanced features such as an organizer, teaching tips, reflection, the history of Muslim chemists, and chemistry information.

5) Development of the draft initial product, developed in collaboration with professionals or people who have the skills required for its development, including the cross study programs (to assess aspects of the review of the Qur'an).

After the determination of any material that will be developed along with its features, the next step is to develop a draft of the initial product. At this stage, after determining the subject matter, eg Atomic Structure and Elements Periodic System, followed by assessment of the verses of the Qur'an, which have been interpreted. One of the main references used in this study is Tafsir Al Misbah, because the explanation is more general and able to explain aspects of the scientist. For example the word "*dzarah*" in other commentators referred to as the ant eggs and/or dust, but the interpretation of Al Misbah explained as part/atomic particles, since referred to as the smallest particles.

Having found a paragraph along with the interpretation that best suits the chemistry material, the next step is to assemble the verse and the interpretation and integrate the chemistry material. Each of the chapters (the subject matter) is finished, then attempted to write "Tips Teaching" for teachers as a guide to how to teach it to students and "Reflection", in terms of everyday life, for example: "No matter how tiny human actions will not escape the scrutiny of God, everything will be recorded in the book of deeds (page 11 of the book compedia)".

After the initial draft is finished, the next step is to implement FGD with lecturers (chemistry education and physics education background) who are concerned with the development of integration Islam and science to give feedback on the initial draft.

6) The field trials early stage and revision of the product, in this case do preliminary testing through initial product assessment by two subject matter experts, one expert media/languages that includes assessment material aspects (chemistry and Qur'an),

layout, and language.

After the initial draft and improvement through FGD, the next step is field test of early stages. This stage involves some experts, the subject matter expert (chemistry and Qur'anic studies) and a linguist. Some aspects were reviewed by an expert chemical materials are:

a. Compliance with the educational objectives
b. Compliance with the development of science
c. Reasoning ability development
d. Truth chemical concepts
e. The suitability of the material to the level of students' progress
f. Systematically logic
g. Understanable presentation
h. Creativity development
i. The absence of elements of SARA, Gender Bias, and Violations of Human Rights and Copyrights

As for subject matter experts review the Qur'anic studies includes the following aspects:

a. Truth lettering/verse of the Qur'an
b. Truth interpretation of the Qur'an
c. Suitability verses of the Qu'ran and chemistry materials
d. Integration of Islam and chemistry/science

All those suggestions are presented in Table 2.

Table 2. Chemical materials expert advice and review the Qur'an to the draft initial product

Chapters	Page	Suggestions
Atomic Structure	9	Should be given the size of the mass of atoms (protons, neutrons, and electrons) so that the reader can imagine how small the atom. If it is associated with the verses of the Quran can be taken wisdom that Allah SWT give attention to the very small thing that human alone can no longer imagine the size as small as atoms. That is the greatness of God as the creator.
	10	Should be given the fusion reaction of atoms, so readers know the nuclear reaction. As afterthought wisdom, it turns out that humans should not underestimate the small things. Something small can make a big thing and can be destroyed.
The Chemical Bond	19	Should be given an example of the formation of ionic compounds or Lewis structure covalent compounds (compounds NaCl or CO_2 are often found in daily life) so as to strengthen the paragraph about pairs.
Fundamental Law of Chemistry	22	Should be given examples of the application of Dalton Law or Proust Law, which explains that the compound is formed by the composition of the specific substance. To strengthen the verses that everything is measured.
	24	Should be given an example titration to determine the level of vitamin C to strengthen the verses that explain the levels and chemical information about the vitamin C.
Chemical Equilibrium	35	Examples of the manufacture of ammonia given Kc value that can be associated with a verse about the concept *tawazun*.
Acid and Base	41	Should be given an example of the neutralization reaction to give a real picture of the verses describing the concept of fresh, salty, and bitter.
Buffer	47	Should be given to contemplate that God has compiled an incredible buffer systems in the human body so that human has the blood in a stable pH even though they consume foods that tend to be acidic or base.
Hydrolysis	54	Giving the example of the four types of salt re-associated with the letter al-Fatir verse 12 about the "*And the two seas (kinds of water) are not alike, this fresh sweet, and pleasant to drink, and that saltish and bitter*."
Colloidal System	57	*Ad-dukhan* word actually means mist or dust? Although many translations call it a fog, but according to the explanation of the clergy, word *dukhan* described as scattered dust of the land by drought (al-misbah). Chemically clearly different between the fog of dust if it is associated with the concept of chemistry. *Dukhan* words should be explained in more detail such words *dzarah* (sub-atom) because the meaning of words *dukhan* (dust/mist) is an example of the real material and studied in colloidal systems.
Redox Reactions and Electrochemistry	65	Should be given a picture of the circuit arrangement electrochemistry tool, so that the reader gets a clear picture of the two substances that cannot be mixed.
Organic Compounds	82	Should be given examples of fermentation reactions of grapes and dates as explaination of an-Nahl verse 67 which explains the origin of all things good, but it can also be intoxicating if we mismanage and consume. It can also be coupled discussion on *tapai*. Is the *tapai* containing alcohol (haram or halal), because *tapai* is Indonesian indigenous food.
Macromolecul		The composition of the editorial reorganized to read more systematic

The result of suggestions from subject matter experts and review the Qur'an used to improve the initial draft of the compendia. Media and language experts only focus on two aspects, namely the layout – illustration and typography. In general, there is no meaningful suggestion; only the size of the Arabic letters needs to be enlarged to be proportional to other text.

7) The main stages of field trials (small-scale) and the revision of the product, which is conducted on three chemistry teacher and three study groups of MA.

The initial products, which have been revised by experts (and the product is assumed to be valid), then tested on a limited respondent to 3 MA, ie MAN Maguwoharjo Sleman, MAN Wonokromo Bantul, and MA Wahid Hasyim Yogyakarta and involved 3 study groups on each MA.

b. Data Quality Products of Compendia and Its Analysis

Product quality of compedia revealed through the main stage field trials. A total of 3 chemistry teachers from MAN Maguwoharjo Sleman, MAN Wonokromo Bantul, and MA Wahid Hasyim Yogyakarta involved giving an assessment of the compedia. In general, based on the four aspects of the assessment can be summarized the results of teacher assessment of these products are presented in Fig. 1.

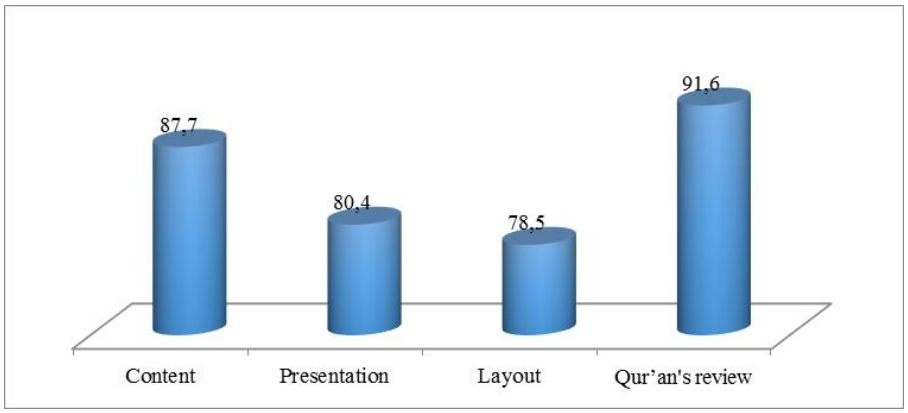

Figure 1. Percentage of ideals every aspect of the compedia

Fig. 1 shows that the aspect of reviews of Qur'an gets the highest score (91.60). In accordance with the description of the teacher, the presence of these compendia product is something new, which can add to the knowledge and skills of teachers on provision of teaching materials. Books compedia can be used to complement or supplement the textbook used in MA. In addition, teachers are glad, because the compendia gives teachers an inspiration to develop teaching materials that integrate Islamic values as well the verses of the Qur'an that is appropriate to the subject matter of chemistry. Teachers also stated that the book is rich of new information, such as information about "The Important Role of Blood" described by associating them with verses of the Qur'an coupled with attractive illustrations and supporting narrative. Nevertheless, the teacher suggested that revisiting some of the verses used is appropriate or not with their chemistry content.

The lowest score was obtained on graphic aspects (78.50) because it still encountered a few typos, blur images (because the image size is small), the less attractive cover, writing chemical formula is less precise, and the Arabic font size is too small. Sugestion on the graphic aspects have been followed up.

In addition to teachers, as many as 30 students of MAN Maguwoharjo Sleman, MAN Wonokromo Bantul, and MA Wahid Hasyim Yogyakarta also involved to provide a response associated with the use of compendia. It was revealed that all respondents agreed that the book is a compedia required by MA students to support learning process chemicals (statement number 1 in the questionnaire). The compedia is something new that has not been read by the students. The worst response to a given student is on the 6th statement: "I still find the Arabic script is wrong." This response is similarly given by the teacher/reviewer. Therefore, it was double check the Arabic script.

4. Conclusion

Based on the results of data analysis and discussion, it can be concluded:

a. MA chemistry teachers need instructional

materials chemistry based on the study of the Qur'an because it still has not found similar teaching materials. Teachers can also use this compedia as a source of inspiration to further develop other teaching materials.

b. It has successfully developed a chemical enrichment in the form of a compedia of books verses of the Qur'an that have the characteristics of reviews verses of the Qur'an as a base in discussing chemistry materials. The compendia are equipped with advance organizer, teaching tips, reflection, the history of Muslim chemist and chemistry information.
c. Based on the assessment of MA chemistry teacher, the compendia have a very good (VG) quality with a percentage of 84.55% ideals.
d. Students gave a positive response in the presence and use of the compedia as supporting teaching materials. This is demonstrated by the average percentage of ideals to 10 statements that were answered by the students through questionnaires by 90%.

ACKNOWLEDGEMENT

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PROBLEM SOLVING-BASED LEARNING TOOLS TO IMPROVE THE SCIENCE PROBLEM SOLVING SKILLS OF JUNIOR HIGH SCHOOL STUDENTS

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Abstract

Validity and practicality of a prototype of the problem solving-based learning tools (syllabus, lesson plan, worksheet, student's book, test of problem solving skill) were investigated. The development of learning tools was conducted by using Dick and Carey's R & D Model. This study showed that the prototype of learning tools is valid and practical. All of the learning tools component have an exelence category. Both of teacher and students' learning activity in very good category. Teacher did not met diffuculties in applying instruction significanly, but the students met a bit of difficulties. It mean that the problem solving-based learning tools can be applied to improve the students' problem solving skill in junior high school science class.

Keywords: science education, learning tool, problem solving skill, Dick and Carey's R & D model

1. Introduction

The era of globalization demands of modern society the world has 21st century skills. Problem-solving skills, is among the major component of 21st century skills were very influential to the individual competitiveness [24]. Indonesian students' problem-solving skills based on the results of the PISA study in 2012 was classified as less satisfactory [25].

Schools as a developing human resources should apply ability to solve problems early on. Junior high school students began to be taught problem-solving skills because it is in a transitional phase towards concrete operational cognition. Students begin to construct knowledge in a systematic procedure [33].

Based on the analysis of the curriculum, the topic change of things around our life is one of the topics in science subjects that require junior high school students' ability to solve problems. Referring to the basic competence of it requires that students do a lot of problem-solving activities. Learning activities include observation of physical and chemical changes to objects in daily life and industrial activity, conducted an experiment to share methods of separation of mixtures, discuss, and report the results of experiments. The learning activities make students learning to deal with many problems. The problem included routine problem and non-routine problems so it requires students to have good problem-solving skills to solve learning problems [18].

The success of the curriculum can be achieved if the implementation process is well underway. The success of the implementation process of the curriculum is very influenced by the readiness of all aspects of the curriculum [42]. Teachers have an important role in preparing the curriculum aspects of the field. Every teacher in the educational unit has the responsibility to do the lesson plan, the implementation of the learning process and the learning process in the form of learning tool.

One of the most concrete solutions to support the successful implementation of the curriculum from the viewpoint of the teacher is the ability to design a learning tools. According to Plomp [27] some of the criteria that determine the quality of the learning tools is validity and practicality. The learning tools being developed not only able to support the cognitive learning, but also students' problem-solving skills.

Problem-solving skills is the main aim of education process [9]. Students should be encouraged to work to solve problems in order to truly understand and can apply the knowledge [18]. When students have good problem-solving skills certainly the government's aim to produce intelligent beings and competitively can be achieved. Another effect is the competitiveness of students in PISA event can be better.

The development of learning tool based appropriate learning models can develop problem-solving skills of students. Both of Intellectual and problem-solving skills can be developed by problem based learning. Learning environment familiarize students involved in the troubleshooting process causes the student gets the experience how to solve the problem. The impact of application, students who are accustomed to solve the problem is a problem-solving skills will develop [12].

Problem solving is among the problem-based instruction strategy in which teachers help students to learn to solve problems through hands-on learning experiences [14]. Problem solving is learning that encourages students to solve the problems in order to develop their own knowledge and develop higher level thinking skills [5]. Syntax of problem solving model include identifying problems, affirming problem, choosing a strategy, implement the strategy, evaluate the results.

Problem solving model are proven to support problem-solving skills and cognitive learning outcomes. Several international research shows the problem solving is an appropriate learning to optimize students' problem-solving skills. Cognitive potential students can develop problem-based learning [30]. Reference [21] argued successfully solving helps students develop important skills in learning activities, one of which is a problem-solving skills. Students become more effective in solving problems in the learning process [41].

Other research shows problem solving can support cognitive learning outcomes of students. Cognitive ability (knowledge, memory and thinking skills) have been influenced for the better through problem solving [19]. Similarly, the results of research [29], [13], [22], [26], [3], [7], and [8] showed cognitive achievement of students has increased by learning problem solving.

Brain work better and smarter through the practice of solving the problem [15]. It because the students are taught to not only solve the routine problem but also non-routine problem. Familiarize students completing non-routine issues become very important because real life problems may be very different from that understood the students in class [37]. Students who choose a lot of experience in solving the problem has the advantage of having a lot of problem-solving pattern. A true problem solver is that person have a lot of alternative way of resolving problems. Students who have good skills to solve automatically have high individual competitiveness [20]. Impact of its, the hope of the nation has a young generation with global competitiveness can be realized.

Based on the background, the researchers conducted the research and development of science learning tools to produce learning tools are valid and practical. Through the development of learning tools that meet the standards as well as valid and practical is expected to optimize students' problem-solving skills. Components of learning tools developed include syllabus, lesson plans, worksheets, student's book, and paper test of problem solving skills.

2. Method

Products are expected of this study is a prototype of learning tools. It refers to a valid and practical category. Prototyping stage includes nine of the ten stages Dick and Carey's model [27]. The tenth stage of the models of Dick and Carey was not held because the focus of development only to produce prototype [10].

Generally, try out of the learning tools conducted through the stages (1) Validation by experts (2) One-to-one a try out involve three students who have different category of achievement (low, medium, and high). This try out to determine the legibility and understandable of the learning tools. (3) Small group tryouts involve; 12 students of class VII K of SMPN 1 Banjarbaru who have different category of achievement. This try out to identify the weaknesses of learning tools (4) Field tryouts held in a class VII B SMPN 1 Banjarmasin involve; 32 students. This try out to identify the practicality of the learning tools.

Data gathering instruments of this research include validation sheets and observation sheets. In validation learning tools, validation sheets given to three experts and two teachers (practitioners). Purpose of this process to determine the validity of the developed learning tools. Based [3] Interpretation of the score validation can be seen in Table 1.

Table 1. Categories of validity

No	Score	Category
1	85,01 – 100,00 %	Valid
2	70,01 – 85,00 %	Quite valid
3	50,01 – 70,00 %	Less valid
4	01,00 – 50,00 %	Invalid

Information:

(1) Valid, can be used without revision
(2) Quite valid, can be used but need to be revised a little
(3) Less valid, it is advisable not to be used because it needs major revision
(4) It is not valid, may not be used

The observation sheets, to observe the teacher and student activities. The learning tools is practical if medium category at least. Category practicality according [40] is presented in Table 2.

Table 2. Category Practicality

Score	Category
84,01 – 100,00	Very Practical
68,01 – 84,00	Practical
52,01 –68,00	Medium
36,01 –52,00	Not Practical
20,01 – 36,00	Very Bad

3. Results

3.1 Validation

The validation results of the learning tools showed that all the components are valid. It means that the leaning tools are valid. The assessment of validator are presented in Table 3.

Table 3. Validity of Learning Tools

Tools	Result	V1	V2	V3	V4	V5
Syllabus	(%)	95,00	95,00	85,00	95,00	95,00
	Category	Valid	Valid	Quite Valid	Valid	Valid
Lesson	(%)	87,50	95,31	71,00	96,86	98,43
Plan	Category	Valid	Valid	Quite Valid	Valid	Valid
Student	(%)	82.81	90,62	71,00	96,86	95,83
Book	Category	Quite Valid	Valid	Quite Valid	Valid	Valid
Work	(%)	81,82	86,36	85,00	95,00	93,18
Sheet	Category	Quite Valid	Valid	Quite Valid	Valid	Valid
Problem Solving	(%)	100	100	100	100	100
Test	Category	Valid	Valid	Valid	Valid	Valid

Note:
V1= Validator 1, V2= Validator 2, V3= Validator 3
V4= Validator 4, V5= Validator 5

Based on the results of the validation, problem solving based learning tools can be used in individual tests, tests on small group learning and field tests.

3.2 One to one try out

Try out with three students (low, medium and high category of achievement). Briefly assessment results are presented in Table 4.

Tabel 4. Result of one to one try out

Subject	Component	Score	Category
Subject 1	Student Book	100 %	Very Good
	Worksheet	100 %	Very Good
Subject 2	Student Book	100 %	Very Good
	Worksheet	100 %	Very Good
Subject 3	Student Book	100 %	Very Good
	Worksheet	100 %	Very Good
Rata-rata		100 %	Very Good

Based on Table 4.3 legibility of teaching materials and worksheets are very good. Student book and worksheets have excellent legibility so that it can be directly used on a small group of test and field test.

Figure 1. Student Book and Worksheet

3.3 Small Group Try Out

The trial was conducted at SMP Negeri 1 Banjarbaru. Small group test is performed to determine the practicality of the draft study learning tools.

Practicality learning tools to be based on the achievement of the learning activities of students and teachers. The results of observation are used to determine the enforceability of the plan of teaching and learning by using the initial draft of the science learning problem solving based on the topic of changes the things around our life.

The results of the activities of teacher and student assessment conducted by two teachers. The observation of the activities of teachers and students' activity during the learning process generates the percentage of achievement of activities for each step of the learning activities of students and teachers. As for the observation of activities of teachers and students in small groups are as follows.

The results of teacher observation is used to determine the enforceability of teaching and learning plan to use the learning tools by the teacher. The results of observations conducted by 2 observers on small group test. Results of the assessment of teacher activity observation sheet is displayed in graphical form in Figure 1.

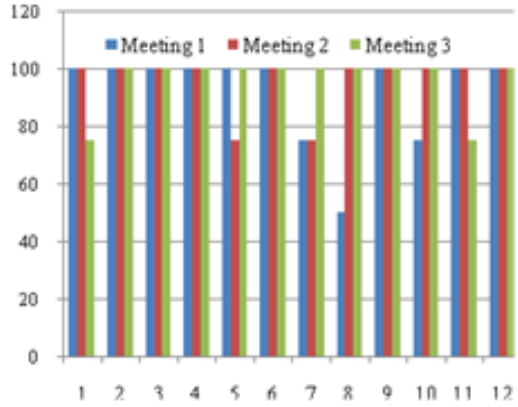

Figure 2. Activities of teacher

Note. Detail activity* for Figure 2 and Figure 4:
1. Communicate the learning objectives.
2. Motivating students.
3. Linking lessons with the students' knowledge.
4. give problems.
5. Describe the activities to be carried out in accordancestudent who stamped on teaching materials.
6. Guiding students discussed.
7. Listen to the explanation iswaketikasiswaberdiskusi.
8. Encourage students to melakukankegiatanpercobaan.
9. Membantumengevaluasihasildiskusi.
10. Directing students to draw conclusions.
11. Guiding students to make a summary of the material lesson.
12. Provide a homework assignment.

The results are used to determine students' observation activity learning by using learning tools by students. Results of the assessment of student activity observation sheet shown in Figure 2.

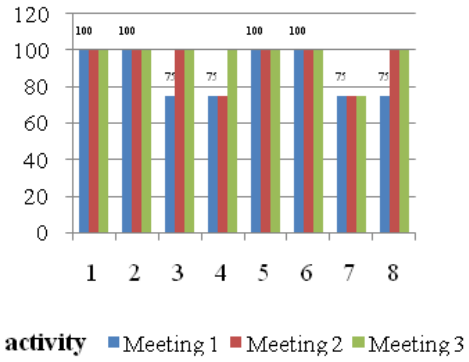

Figure 3. Activities of student

Note. Detail activity* for Figure 3 and Figure 5:
1. Listen /pay attention to the teacher's explanation.
2. Reading/understand the problems on teaching materials.
3. Work to do problem solving strategies through activities based worksheet.
4. Using the teaching materials provided teachers to solve Problems.
5. Involve themselves actively in the discussion process, such as: express opinions, ask questions, put forward ideas to solve problems
6. Presenting the results of the work.
7. Listen to the results of discussions.
8. Drawing conclusions about the subject matter.

Based on Figure 2 and 3, average percentage of student activities for students and teachers for each indicator is above 85%. Activities of students and teachers classified as very good category. The weakness of the learning tools from the viewpoint of the teacher is to guide students when discussing activities and conduct experiments.

The weakness of the learning tools from the viewpoint of the student is learning activities using the tools provided teachers to solve problems and drawing conclusions about subject matter.

Revisions were made to the learning tools based on the weaknesses found during the test of small group is to increase the allocation of time for students to discuss and provide information on the composition of the content contained in student book.

3.4 Field Try out

The stage was conducted at SMPN 1 Banjarmasin. This stage aims to determine the practicality of the draft learning tools.

Practicality learning tools are rated based learning activities of students and teachers. Results of observation is used to determine the success of the learning process by using the draft of the science learning tools on the topic of the change of things around our life.

The results of teacher and student activity assessment conducted by two teachers. The observation of the activities of teachers and students' activity during the learning process takes place to produce a percentage of activities for each step of the learning activities of students and teachers.

Results of the assessment of teacher activity observation sheet is displayed in graphical form in Figure 4.

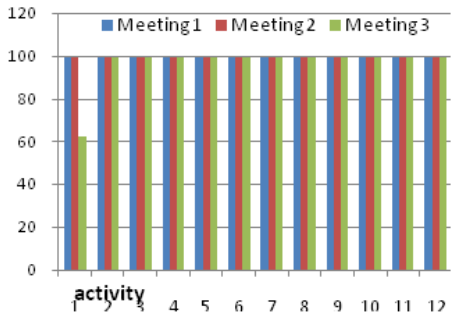

Figure 4. Activities of teacher

Results of the assessment of student activity observation sheet shown in Figure 5.

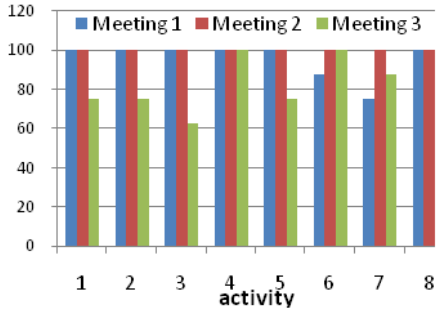

Figure 5. Activities of student

Based on figure 4 and 5, the average percentage of student activities for students and teachers for each indicator is above 85%. Activities of students and teachers, including the excellent category. Teacher did not met difficulties in applying significantly instruction, but the students met a bit of difficulties on third meeting. The weakness of the learning tools from the viewpoint of the students are activities work

to do problem solving strategies on the worksheet.

The revision is based on the weaknesses found in the field try out is to give a clue to the students that problem solving has been running properly or do not work well when core activities. Based on the notification, the student can judge whether he/she is already on the right track in the troubleshooting process. When students know are in the right process, he became more confident in acting. The impact students can work smoothly and more independent. This makes the learning process becomes practical.

4. Discussion

4.1 Validity Learning Tools

Validity learning learning tools includes syllabus, lesson plans, student book, worksheets and problem solving test. Results of the assessment by the validator that the overall learning tools is declared valid.

Based on the average score of the assessment results validator in Table 3 states that all components of learning tools as very valid. This is because most of the validity of the assessment indicators have got the optimal score of the validator. The scores are classified as valid for each indicator obtained because the process of developing learning tools researchers have compiled according to the rules of instructional design. Learning development learning tools referring to the principles of instructional development under the terms of national education standards agency (Badan Standar Nasional Pendidikan /BSNP) so that the resulting learning tools based on problem solving appropriate with K13 curriculum. The impact of the learning tools is a valid learning can be implemented in a very good and can improve the cognitive learning skills and solving problem.

In general, based on the learning that has been carried out activities of students and teachers as very good and tends to increase over time. Cognitive learning outcomes and skills of the students also tend to increase.

The results of cognitive assessment product, cognitive processes, the activity of students and teachers as very well as the learning tools used have been prepared in accordance with the characteristics of the K13 curriculum and problem solving model. Problem solving model is a practical active learning [28]. The overall performance of students in solving the problem of learning is influenced by the approach used according [6]. Scientific approach to motivate students to participate actively [18]. Active participation of students making learning activities can be implemented as written in the lesson plan.

Through problem solving model based learning tools with a scientific approach to learning atmosphere in class is becoming more centered learning that encourages students to become active. This is because the learning process based lesson plan motivates students to work actively perform problem resolution. When students actively in learning activities, the knowledge will be more absorbed. Referring to the problem solving in scientific approach, students learning activities carried out in groups so as to make students active even for students who previously classified as passive. The group activity in problem solving supports students' learning environment.

Give teens the opportunity to conduct group activities so as to improve the operation of formal, can eventually help the development of cognition. The cognitive development may include the knowledge and problem-solving skills [33].

These findings support previous research. According to the research findings [39] students become active because the learning problem solving are trained to build team spirit in order to have a responsibility to each other and interact in discussions to solve the problem. Good learning process of problem solving is seeking to resolve problems through active discussion of students in groups [9].

Active learning strategies a positive effect on student motivation. According to the research findings [34] from the standpoint of psychological motivation may appear on the learning environment of problem solving caused students are given discretion choose their own learning process in problem solving. Flexibility in the learning process that makes students get a lot of direct experience. Direct experience in learning science resulted in better student motivation [33].

The impact of these motivations make student learning outcomes to be optimal. Motivation is directly proportional to the results of both cognitive learning and cognitive processes products. Students who have high motivation tend to achieve good learning [33]. Has a lot of studies have shown a positive correlation between motivation and learning outcomes. Some of the are the result of research [31], [23], [4] and [32] states that motivation significantly correlated to student learning outcomes.

The findings of this study support the findings and the results of previous research.

Reference [17] found that the learning problem solving has the advantage to optimize an active role so as to give students more opportunities to work in groups to develop problem-solving skills. Supported research by [13] which states that junior high school student's academic achievement include cognitive and problem-solving skills to get better through learning problem solving. Reference [19] reported that cognitive ability (knowledge, memory and thinking skills) have been influenced for the better through learning problem solving. Problem solving strategies in the science activities affect the cognitive learning outcomes and student motivation [6].

4.2 Practicality Learning Tool

Based on data from the assessment of learning activity is seen that the activity of teachers and students tend to increase at each meeting. This proves that the interest of teachers and students towards learning. Similarly, the interaction between teachers and students, the teacher can interact with both the students who lead students can do what is asked by the teacher in the learning process. Finally the activities undertaken by students continues to rise.

Based on the learning activities of scientific approach with problem solving model, students work in groups. Each group member is given the responsibility to contribute ideas solution of problem. Given the responsibility to make students actively in learning. These results are consistent with research [36] which states that the learning process using science teaching material-based problem solving makes student-centered. The impact of students are encouraged to be actively involved in constructing the knowledge, attitudes and behavior.

The group activity in problem solving supports students' learning environment. Students who previously passive become more active to share his/her opinion. It happens because the passive students are usually a little embarrassed to ask the teacher if not understand about the learning activities. Asked a question in a group helps students become very passive, because passive students are more ‘open mind’ to the group of their friends. Ask with friends, helping passive students become more communicative.

The advantage of student group activities, a student can be a totur peer for his/her friends who do not understand about the learning activities or any subject matter. It gives a great advantage to students who are classified as passive.

They can begin to learn to communicate, share opinions, ask about concept are poorly understood. This finding is consistent with the findings [38], students who are less passive feel greatly helped by his friends. Because when student not able to resolve the problem, students will be able to listen to the insight that his friends. Students are passive be more faster to work task. Peer support can reduce the chance that students do not contribute anything to the group's activities [16]. The learning process that occurs in accordance with the theory of learning by Dewey that good problem solving is seeking to resolve problems through active discussion of students in groups [9].

The help of teammates to make the performance of teachers in managing classroom can become easier. Teachers can more focus on directing students to the process of problem solving based worksheets. According [38] this can happen because the learning problem solving in groups has many advantages. Among the advantages students get help in understanding a problem in the beginning, looking for help when stuck to the completion of the wrong process, checking their work with others, comparing the solution at the end; and to look at alternative solutions after solving the problem.

The advantages make the learning problem solving be performing well both from the viewpoint of teachers and students. In accordance with the constructivist theory by Vygotsky who emphasized the importance of sociocultural in the learning process [35]. The success of the learning activity is strongly influenced by a person's participation in social and cultural practices that there are good teachers, friends, or community. Through communications with people who understand, those who do not understand will be motivated to understand and be able to develop their own understanding.

Figure 6. A student tutoring her friends in classroom discussion

The learning activities that occur repeatedly in every meeting so that students and teachers are increasingly know what to do when learning process. The longer students become more independent in terms of the execution steps without a lot of learning to ask the teacher about what to do. Teachers become more informed about the students' obstacle in problem solving. It makes the teacher can give 'access' or support to appropriate according to the needs of students.

Access is meant is everything needed for students in solving problems [12]. The most important access associated with the notification process of learning from teachers to students concerning problem solving activities have been on track or off the right path.

It often happens students are not convinced by solving operations performed. When students realized already on track right solution can reduce doubts in performing troubleshooting operations. Conversely, when the student knows he is on right process of problem solving, making it aware of the path should immediately seek solutions more appropriate. Two of these circumstances can make the time more effectively and prevent the futile effort of students in problem solving [14]. Finally the activities of teachers and students can be accomplished in accordance events listed on the lesson plan.

These findings supported by previous research. In line with the findings of [2], problem solving changing students from passive learners into active learners in finding information. Reference [11] stated learning model of problem solving can optimize the activity of students in problem solving.

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DEVELOPMENT WATSON-GLASER CRITICAL THINKING SKILLS ASSESSMENT IN SCIENCE LAB COURSE

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Abstract

Aims of this study are to determine the content validity and construct validity of the Watson-Glaser Critical Thinking Skills Assessment (WGCTSA) that will be used to assess student's critical thinking skills in In Science Lab Course. This assessment was developed by using 3D (Define, Design, Develop) model of research and development. WGCTSA combining between Watson-Glaser Critical Thinking indicators covering Recognize assumptions, Evaluate arguments, Draw conclusion (RED) and the Science Lab Course learning objectives. Before the assessment have been tested, is first tested the construct validity. Construct validity carried out by experts evaluation, then Analyzed qualitatively. Then, the assessment was given to 33 Open University students on September 2015. Data were Analyzed by Pearson Product-Moment Correlation using Microsoft Excel 2010 and SPSS 18 to Determine contents validity include validity, reliability, discrimination, and difficulty index. The results showed that the assessment of critical thinking skills meets the criteria of content validity. Also the assessment meets the criteria of construct validity with expert notes. So, this assessment can be used as appropriate.

Key words: Watson-Glaser Critical Thinking Skills, Science Lab Course, content validity, constructs validity, assessment.

1. Introduction

The development of science and technology in the 21st century gives challenges in the field of education. Silva (2009) states that Proponents point to a new workforce reality that demands a next generation of college students and workers who are independent thinkers, problem solvers, and decision makers [1]. Based on the statement above, it can be seen that the importance of independent thinking skills, problem solver and decision maker have to be mastered by students in the 21st century.

Another thinking skills needed by the students in the 21st century is the critical thinking skills. Wagner, T (2014) states that the critical thinking skills and problems solving are two of seven major skills that must be mastered by the students in order to survive and adapt to change [2]. According to Rotherham, AJ, & Willingham, DT (2010) critical thinking skills and problem solving have already become the components of the development of human progress throughout history, from the time the development of simple equipment for farming to advanced farming equipment today [3]. The challenge now is how those skills are applied to the curriculum in such appropriate way. Therefore it is necessary assessments to measure students' critical thinking skills.

The effort to include critical thinking skills in the learning has been done by experts. Duron, R *et al* (2006) state that there are five steps for skilled students to think critically consisting of: 1) determine learning objectives; 2) teach through questioning; 3) Practice before you asses; 4) review, refine, and improve; 5) provide feedback and assessment of learning [4]. While Ennis (1993) states that in the development of assessment tools themselves, it needs to focus on the nature of matter containing open-ended problems, creation of multiple choice questions which either requires a series of revisions, and the observation of students' needs first [5].

There are various types of assessment for the critical thinking skills that have been developed by experts. The types of assessments to measure critical thinking skills by Ennis (1993) are presented in Table 1 [5].

The research on critical thinking that refers to critical thinking skills Ennis and Facione has been carried out by researchers in Indonesia. Fakhriyah, F (2014) develops on Ennis's critical thinking skills assessment on students through problem-based learning [6]. Susantini *et al* (2012) also develop on Ennis's critical thinking skills assessment that are integrated in the manual lab [7]. Similarly Hartati (2010) develops on Ennis's critical thinking skills assessment through learning using

props frictional force. Setiyaningsih, Y (2008) chooses to develop Facione's critical thinking skills assessment through learning model based on logic Toulmin [9]. While Watson-Glaser's critical thinking skills has not so much been developed by researchers in Indonesia, whereas Watson-Glaser's critical thinking skills is simpler, standardized and recognized.

Table 1. Types of Critical Thinking Skills Assessment

No.	assessment	developers	Information
1	*The California Critical Thinking Skills Test*	Facione P. (1990)	Aimed at college students. Incorporates interpretation, argument analysis and appraisal, deduction, mind bender puzzles, and induction.
2	Cornell Critical Thinking Test, Level X	RH Enniss and J. Millman (1985)	Aimed at Grades 4-14. Sections on induction, credibility, observation, deduction, and assumption identification
3.	Cornell Critical Thinking Test, Level Z	RH Enniss and J. Millman (1985)	Aimed at high school students, college students, and other adult. Sections on induction, credibility, prediction and experimental planning, fallacies, deductions, definitions, and assumption identification
4.	The Ennis-Weir Critical Thinking Essay Test	RH Ennis and E. Weir.(1985)	Aimed at grades 7 through college. Incorporate getting the point, seeing the reasons and assumptions, Stating one's point, offering good reasons, seeing other possibilities, and responding
5.	Watson-Glaser Critical Thinking Appraisal	G. Watson and EM Glaser (1980)	Aimed at adulthood Sections on assumption Recognize, Evaluate arguments, and draw Conclusions

Source: Ennis (1993) [5]

Watson-Glaser's Critical thinking skills is developed by Goodwin Watson and Edwin Glasser in 1980 [6]. They are both a professor and a student at Columbia Teachers College. There are three indicators according to the Watson-Glaser assumption recognize, Evaluate arguments, and draw Conclusions (RED) [11]. This indicator is developed to make an assessment of Watson Glaser critical thinking skills. This assessment is published by Pearson Assessment based in London.

Learning to improve critical thinking skills is needed at all levels of education including the Distance Learning Program Unit Open University Surakarta. Based on the regulation of the Minister of National Education of the Republic of Indonesia Number 23 Year 2007 regarding the statute of the Open University said that The Open University is the education unit that organizes high-level academic education, vocational education, and education profession with the system remotely and opened. Opened education means that in its implementation no age limit, the year of graduation, and the length of the study, where and how to learn; time registration, frequency of exams, and the selection of the program. Therefore, the Open University students must have more varied character than the average student. Prajoko, S (2014) states that the characteristics of the Open University students majoring in PGSD Program Various disciplines of Science (BI) is dominated by women non-science graduate who works as a non-civil servant teachers working from 1-10 years. While regular students graduated from upper secondary education or equivalency. The age ranges of UT Students are varied from 19 - 60 years old [12].

Basically critical thinking skills can be integrated in all subjects including science of Practicum course. Science Practical facilitates the students to work on scientific field. In the scientific work is necessary to have critical thinking skills to analyze the results of observation and deducing lab results. Thus in the preparation of the assessment of critical thinking skills requiring students who complete the course should use the material from science lab.

Based on these descriptions, it needs to develop the critical thinking skills assessment in accordance with the specific characteristics of

the students and the course being undertaken. Assessment of critical thinking thought needs to be validated either construct validation and validation of content.

2. Method

This study uses research and development adaptation of 3D development model (Define, Design, and Develop) (thiagarajan 1974) [3]. This study develops an assessment to measure critical thinking skills of students of the Open University, Surakarta following the lecture Science Lab.

2.1 Define

In the define stage, it is done by front-end analysis, requirements analysis, task analysis, analysis of students, and analysis concepts. Front-end analysis aims to bring up and establish the basic problems faced in learning (Thiagarajan 1974) [13]. Basic problems faced in the 21st century learning is the gap between the demands of 21st century learning requires students critical thinking skills to pick the facts has not developed critical thinking skills of students. Needs analysis aims to assess the needs assessment of students' critical thinking skills. Based on the gap analysis phase of the front-end will require the preparation of a curriculum that is integrated with critical thinking skills. Thus the required assessment uses to measure students' thinking skills. Some assessment of critical thinking skills by Ennis and Facione have been developed, but not with the development of Watson-Glaser's thinking skills. The task analysis aims to identify the main academic skills assigned by the government in this case the president of the university open. Based on UT Rector Decree No. 3466 / H31 / KEP / 2008 lectures Science Lab is expected that students are able to understand the concept of skilled learning of science. Analysis of the students is aimed to determine the character of the Open University students. Unlike the students in general, Open University students have the main characteristics

Description: r_{xy} = correlation coefficient of variables x and y variables; x = score item of questions; y = the total score; n = number of samples. Reliability is calculated using Cronbach's alpha as follows:

on students' age that are varied. Analysis of the concept aims to identify concepts of lab science subject. The course of Science Lab contains the concepts of living things, the relationship of living things and the environment, food, mechanics, heat, waves, optics, electricity, magnetism, and the earth and the universe (Rumanta 2008) [14].

2.2 Design

At the design stage, it aims to produce a draft assessment of the glaciers Watson's critical thinking skills for learning science lab. Based on the analysis performed on the define phase, the formulation of indicators produces on Watson Glaser's critical thinking skills consisting of recognition assumption, evaluate arguments, and draw conclusion. This indicator was developed with the purpose of learning science lab practicum consisting of living creatures, creatures' relationship with the environment, food, mechanics, heat, waves, optics, electricity, magnetism, and the earth and the universe. Then, it is continued with questions highlight making and guidelines about scoring tests critical thinking skills to learning science lab. At the end of the design phase, it obtains WGCTSA design for learning science lab in the form of multiple-choice test questions totaling 62 items. Furthermore, the design of prototype I. The Lattice of WGCTSA is presented in Table 2.

2.3 Develop

At the develop stage, the validity test is done with prototype I. Validity includes content validity and construct validity. The validity test of the contents includes validity, reliability, different test, and the index of difficulty. It is done by giving the questions to 33 students of the Open University who have finished the Science Lab on September 2015. The validity of the items is measured by the product moment correlation coefficient (Pearson). Pearson correlation test uses the following formula:

$$r_{xy} = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{\{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)\}}}$$

$$r_{11} = \left(\frac{n}{n-1}\right)\left(1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right)$$

Table 2. The Lattice of WGCTSA

No.	Sub Topics	Indicators	Critical thinking skills
1.	Conducting experiments on respiration in living things	Recognizing assumptions about respiration through experiment	*Recognize Assumptions*
		Evaluating arguments in the trial of respiration	*Evaluate arguments*
		Respiration trial concludes	*Draw Conclusions*
2.	Conducting experiments detergent effect on the growth of the roots of onion	Recognizing assumptions about the effects of detergent pollution through experiments on the growth of the roots of onion	*Recognize Assumptions*
		Evaluating arguments at trial the effect of detergents on the growth of the roots of onion	*Evaluate arguments*
		Summing trial detergent effect on the growth of the roots of onion	*Draw Conclusions*
3.	To test the carbohydrates, protein, and fat.	Recognizing assumptions about the nutritional content of foodstuffs through trial	*Recognize Assumptions*
		Evaluating arguments on test trials groceries	*Evaluate arguments*
		Summing up the test trials groceries	*Draw Conclusions*
4.	Experimenting change the length expansion	Recognizing assumptions about the expansion changes substances through trial	*Recognize Assumptions*
		Evaluating arguments in the trial of expansion changes in solids, liquids, and gases.	*Evaluate arguments*
		Summing trial expansion changes in solids, liquids, and gases.	*Draw Conclusions*
5.	Doing simple pendulumexperiment Experimenting resonant sound	Recognizing assumptions about the wave through the simple pendulum experiment and resonant sound	*Recognize Assumptions*
		Evaluating arguments on a simple pendulum experiment and resonant sound	*Evaluate arguments*
		Summing simple pendulum experiment and resonant sound	*Draw Conclusions*
6.	Experimenting with a convex lens Experimenting with a concave mirror	Recognizing assumptions about the optics through the trial of a convex lens and a concave mirror	*Recognize Assumptions*
		M en gevaluasi arguments in the trial of a convex lens and a concave mirror	*Evaluate arguments*
		Summing up the trial of a convex lens and a concave mirror	*Draw Conclusions*
7.	Conducting experiments electrical energy Experimenting how to make a magnet	Recognizing assumptions about electricity and magnetism	*Recognize Assumptions*
		Evaluating arguments at the trial about electricity and magnetism	*Evaluate arguments*
		Summing experiments on electricity and magnetism	*Draw Conclusions*

Description: r_{11} = reliability; n: number of items about; Σ = Total variance score of each item = the total variance. Difficulty index is calculated using the following formula:

$$P = \frac{B}{JS}$$

Description: P = index of difficulty; B = the number of students who answered correctly; JS = number of samples. The discrimination is calculated by the following formula:

$$t = \frac{\overline{X_u} - \overline{X_a}}{\sqrt{\left(\frac{S_u^2}{n_u} + \frac{S_a^2}{n_a}\right)}}$$

Description: t = discrimination; = average of the top group; = Average lower group; = Variance of the top group; = Variant under the group; = Number of the top group; = Many groups below. The result of the calculation discrimination is classified with bad, normal, good, and excellent. Sudijono (2001) classifies the matter of discrimination item as presented in Table 3 [15].

Table 3. Interval Discrimination Item

interval	Classification	Interpretation
P <0.20	Bad	bad discrimination
0.20 ≤ a <0.40	Satisfy	needs revision satisfy discrimination
0.40 ≤ a <0.70	Good	good discrimination
0.70 ≤ a <1.00	Excellent	excellent discrimination

The result of item difficulty index calculation is classified with the range of easy, medium, and hard. Arikunto (1999) classifies the difficulty index presented in Table 4 [16].

The test results are then evaluated the content validity and revision produce prototype II. Then, conducted validity of construction carried out by an expert to examine the item about the indicators of critical thinking skills as well as Science Lab course learning objectives. Test results for the construct validity was evaluated and revised to become assessment used for further research. Development model is presented in Figure 1.

Table 4. Scale of item difficulty index

The difficulty index	Category Problem
t> 0.70	Easy
≤ 0:30 t ≤0.70	moderate
t <0:30	difficult

3. Result

The results of this study consist of testing content validity and construct validity. Content validity of the test results includes validity, reliabilities, different level, and the index of difficulty. While the validity of the test item construction includes test questions with indicators of Watson-Glaser‘s critical thinking skills and Science Lab course learning objectives.

3.1 Content Validity of Test Results

Summary of Results the validity, Different level and difficulty index are presented in Table 5. According to the table 5, it can be seen that most of the items about to meet the criteria but its discrimination is bad. Reliability test result uses SPSS 18 as presented in Table 4.

Table 4. Results of Reliability Test WGCTSA

Reliability Statistics

Cronbach's Alpha	N of Items
,643	63

Based on Table 34 it can be seen that the result of the acquisition of reliability statistics Cronbach's Alpha of 0.643> 0.34. These results suggest that the assessment WGCTSA is reliable.

3.2 Construct Validity of Test Results

The construct validity WGCTSA’s assessment is conducted by two experts, a professor in the field of primary education and the second a doctorate in science education. Both experts’ summary assessments are presented in Table 6.

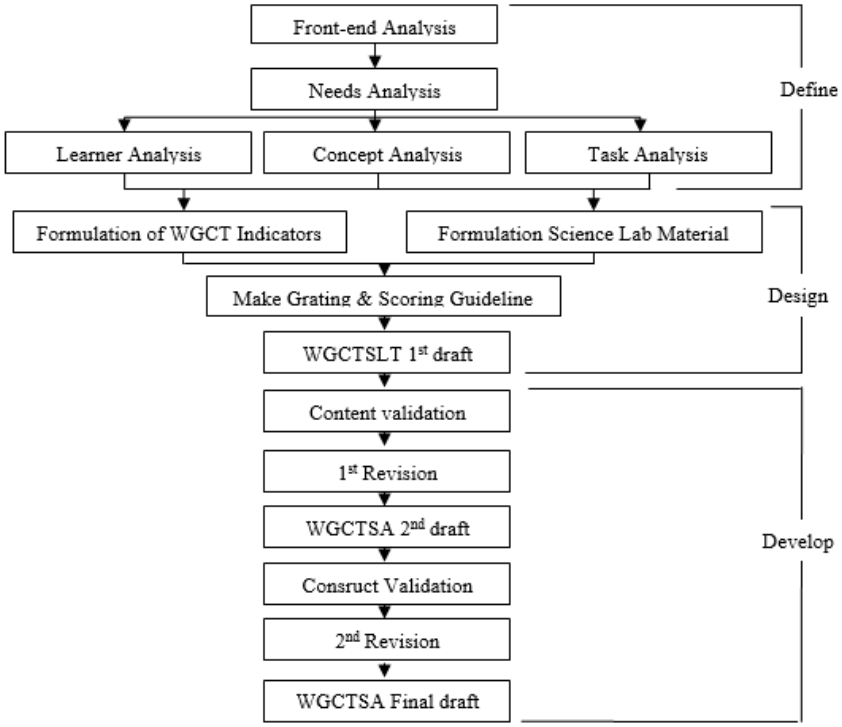

Figure 1. Development Model of Watson-Glaser's Critical Thinking Assessment Skills

Based on the Table 6, it can be noted that the total score of the first expert assessment as 4x3 plus 12x4 = 60, the total score as many experts both 6x3 plus 10x4 = 58 (maximum score 64).

4. Discussion

4.1 Content Validity

Content validity of the test result includes validity, reliability, power is different, and the index of difficulty.

Based on table 5, it can be seen that the results of product moment correlation calculation for each item about each varies. The results compared with the value $_{of}$ r $_{table}$0.34 for sample size of 32. If the value of r $_{xy>}$ r $_{table}$ the item about valid, otherwise if $_{xy}$ r <r $_{table}$ then the item question Valid (revised). Item question no 9, 10, 25, 27, 28, 37, 38, 43, 49, and 62 obtain the value of r $_{xy}$ <r $_{table}$ so that question item is invalid and must be revised. Based on the evaluation, about a valid item is influenced by several factors. The first, in-writing, there are words that are not legible. This happens because of an error during the process of propagation assessment technique to be tested. Second, the question is ambiguous and less understood by students. Tiruneh et al (2016) explains that in preparing the item about the critical thinking skills is necessary to prepare a framework well. Item about others obtaining the value of r $_{xy>}$ r $_{table}$ so that it meets the valid criteria. These results indicate that in general the item about valid criteria and a few items that need to be revised.

Reliability test results showed that the value of statistical reliability Cronbach's Alpha of 0.643> 0.34. Thus WGCTSA can be used consistently from time to time. The same result with El Hassan, K. & Madhum, G. 2007 reliability testing Watson Glaser's Critical Thinking Appraisal for nursing students. Tiruneh et al (2016) also indicated the same results on the measurement of critical thinking skills in materials electricity and magnetism [17].

Table 5. Summary of Test Validity, Different Power and Trouble Index WGCTSA

item	Pearson Correlation		Discrimination		difficulty Index		note
	r_{xy}	Criterion	*D*	criterion	*IN*	criterion	
item 1	0.38	valid	0.13	bad	0.73	easy	revision
item 2	0.80	valid	0.38	average	0.48	average	valid
item 3	0.46	valid	0.25	average	0.55	average	valid

item	Pearson Correlation		Discrimination		difficulty Index		note
	r_{xy}	Criterion	*D*	criterion	*IN*	criterion	
item 4	0.37	valid	0.25	average	0.79	easy	valid
item 5	0.37	valid	0.13	bad	0.85	easy	revision
item 6	0.41	valid	0.31	average	0.76	easy	valid
item 7	0.79	valid	0.44	good	0.45	average	valid
item 8	0.44	valid	0.25	average	0.48	average	valid
item 9	-0.17	revision	0.06	bad	0.09	difficult,	revision
item 10	-0.10	revision	-0.13	bad	0.61	average	revision
item 11	0.52	valid	0.25	average	0.73	easy	valid
item 12	0.39	valid	0.06	bad	0.88	easy	revision
item 13	0.55	valid	0.31	average	0.64	average	valid
item 14	0.48	valid	0.44	good	0.39	average	valid
item 15	0.43	valid	0.19	bad	0.70	average	revision
item 16	0.45	valid	0.06	bad	0.76	easy	revision
item 17	0.36	valid	0.00	bad	0.79	easy	revision
item 18	0.36	valid	0.00	bad	0.85	easy	revision
item 19	0.39	valid	0.25	average	0.12	difficult,	valid
item 20	0.39	valid	0.31	average	0.76	easy	valid
item 21	0.44	valid	0.00	bad	0.48	average	revision
item 22	0.46	valid	0.31	average	0.45	average	valid
item 23	0.37	valid	0.00	bad	0.48	average	revision
item 24	0.39	valid	0.19	bad	0.27	difficult,	revision
item 25	0.02	revision	0.06	bad	0.52	average	revision
item 26	0.37	valid	0.13	bad	0.55	average	revision
item 27	-0.28	revision	0.06	bad	0.45	average	revision
item 28	-0.15	revision	-0.13	bad	0.61	average	revision
item 29	0.46	valid	0.19	bad	0.70	average	revision
item 30	0.40	valid	-0.19	bad	0.70	average	revision
item 31	0.39	valid	0.19	bad	0.82	easy	revision
item 32	0.41	valid	0.00	bad	0.48	average	revision
item 33	0.42	valid	0.00	bad	0.79	easy	revision
item 34	0.54	valid	-0.06	bad	0.82	easy	revision
item 35	0.23	revision	0.00	bad	0.91	easy	revision
item 36	0.37	valid	0.06	bad	0.82	easy	revision
item 37	0.28	revision	0.06	bad	0.82	easy	revision
item 38	0.29	revision	0.00	bad	0.61	average	revision
item 39	0.40	valid	0.13	bad	0.61	average	revision
item 40	0.39	valid	0.00	bad	0.79	easy	revision
item 41	0.38	valid	0.06	bad	0.88	easy	revision
item 42	0.61	valid	0.31	average	0.58	average	valid
item 43	-0.24	revision	0.00	bad	0.85	easy	revision
item 44	0.51	valid	0.19	bad	0.39	average	revision
item 45	0.35	valid	0.06	bad	0.09	difficult,	revision
item 46	0.38	valid	0.06	bad	0.76	easy	revision
item 47	0.54	valid	0.25	average	0.61	average	valid
item 48	0.44	valid	-0.06	bad	0.76	easy	revision
item 49	-0.34	revision	-0.06	bad	0.64	average	revision
item 50	0.44	valid	0.38	average	0.36	average	valid
item 51	0.51	valid	0.13	bad	0.61	average	revision
item 52	0.39	valid	-0.06	bad	0.64	average	revision
item 53	0.55	valid	0.13	bad	0.12	difficult,	revision

item	Pearson Correlation		Discrimination		difficulty Index		note
	r_{xy}	Criterion	*D*	criterion	*IN*	criterion	
item 54	0.41	valid	0.25	average	0.85	easy	valid
item 55	0.45	valid	0.13	bad	0.06	difficult,	revision
item 56	0.39	valid	0.38	average	0.36	average	valid
item 57	0.42	valid	-0.06	bad	0.39	average	revision
item 58	0.42	valid	-0.13	bad	0.73	easy	revision
item 59	0.63	valid	0.38	average	0.67	average	valid
item 60	0.37	valid	0.19	bad	0.15	difficult,	revision
item 61	0.40	valid	0.25	average	0.30	average	valid
item 62	-0.02	revision	-0.06	bad	0.94	easy	revision

Table 6. Summary of assessment ratings WGCTSA by experts

No.	Aspect	Indicator	1st expert				2nd expert			
			1	2	3	4	1	2	3	4
1.	Instruments format	The numbering system is clear				v				v
		The type and size of the corresponding letter				v				v
		Conformity space / layout				v				v
2.	Instrument content	Questions in accordance with aspects to be measured				v				v
		The limitation of questions is clearly formulated				v				v
		Covering students' perceptions are representative				v				v
3.	Construction	The instruction in filling the test questions is stated clearly			v					v
		The instruction of doing the test is clearly stated.			v				v	
		No ambiguity on the questions				v			v	
		The formulation of test questions uses interrogative sentence or a clear command			v				v	
		Clear scoring technique				v				v
4.	Language	The general instruction uses appropriate language to Indonesian basic rule				v				v
		The instruction on each question of test uses the appropriate language to Indonesian basic rule				v				v
		The general instruction uses simple language and easily understood				v			v	
		The instruction on each question of test is simple and easy to understand			v				v	
		The Using of the terms (words) are known/ familiar to students				v			v	
		Total			4	12			6	10

Based on Table 5, dominant discrimination including in the criteria is bad. This is due to the characteristics of students who were sampled to test this assessment varies. It is the nature of an open university which is open to anyone who wants to continue his studies in accordance with the last diploma or graduation regardless of certain ages. Prajoko, S (2014) reveals that the profile of the Open University students in one class varies between 19-60 years old. Age effects on his/ her ability to think about others [12]. Murphy et al (2014) explains that the thinking skills among children and adults are different one another [18]. Therefore, it is necessary to construct the proper learning environment. Item which obtains discrimination values including bad categories (<0.2) can still be used with the revised terms.

Based on Table 5, the index of difficulty of assessment varies from the level of hard, medium, and light. As many as 39% of items about the category of easy, 50% about the items categorized as moderate, and 11% items including category difficult matter. These results indicate the dominant item about the medium category. This is in accordance with Ruseffendi (1998), which revealed that about a good item based on benchmark of Reference National (PAN) is a medium that meets criteria [19]. The difficulty of moderate level will provide individualized information biggest difference.

Based on the test of validity, reliability, different, and difficulty index of WGCTSA

assessment, it needs improvement on a number of items including the criteria which are valid and bad discrimination features. However, these tests, as a whole meets the validity contents of the revision on a number of items (El Hasan et al, 2007) [20]. Suwarto (2007) explains that the need to revise the items about which do not meet the criteria validity of the content [21].

4.2 Construct Validity

Based on table 6 it can be seen that the second assessment of the experts on this assessment, including the excellent category. Aspects of the constructs in this study include: 1) the clarity of general instructions to answer questions; 2) clarity of instructions about the workmanship of each section; 3) is not ambiguous; 4) the clarity of the formulation of the question; 5) clarity scoring techniques. Item matter is in conformity with WGCTSA indicators also Science Lab formulation of learning objectives.

Format instrument using numbering is clear. The type and size of letters is in conformity with the standards. The layout and spatial is appropriate and good in writing.

The contents of the instrument are in accordance with aspects of the measure. Limitations of questions have been formulated clearly. Include student representation in general.

Aspects of language are in conformity with the rules of Indonesian Good and True basic rules. Writing has already used terms that are easy to understand. A number of records are provided by the experts in the assessment in order to provide primary cover and need a clear separation between the briefing and question items.

5. Conclusions and Advice

Based on the results of the research, it can be concluded that it meets the criteria of assessment WGCTSA content validity and construct validity. The assessment can consistently be used from time to time by acquiring Cornbach Alpha coefficient of 0.643. Secondly, most of the items about need to be revised because it does not meet Pearson and obtain bad different matter. Revision is made by changing item about which has the same concept. Advice can be given based on the results of this study in the cancellation of the items about need to give more attention to the characteristics of students who will use the trial. Students' characters are very influential especially to the content validity on discrimination.

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DEVELOPMENT OF A TEST TO PROBE STUDENTS' UNDERSTANDING OF THE NATURE OF ELECTRICITY

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Abstract

The purpose of this study is to construct a concept test that probes student understanding of the nature of electricity and classify their understanding according to existing theories, namely, the two-fluid theory, the one-fluid theory and the electron theory. The historical models students used in explaining their understanding of electricity were determined by taking into account student choices on each item and through their explanations on the second tier of the test. From the initial 21-item draft of true-false test, the test was revised into a 15-item true-false-two-tiered test after the validation of experts. The respondents were also required to explain their choice after each item. Responses of the samples revealed that among the three historical models of electricity – one-fluid, two-fluid and electron – the electron model was used distinctly. Other students explained their understanding using two models but more students would use multiple models in explaining their understanding of the nature of electricity. Based on the results of the study, responses of the students about the nature of electricity should further be explored to understand how the alternative models were constructed by them. It is further recommended that the test be used as a pre-test before starting a lesson in electricity for the teacher to determine the models withheld by the students to aid the teacher in designing the lesson and correct the alternative conceptions of the students about the nature of electricity.

Keywords: physics education research, concept test, electricity

1. Introduction

Each student before entering a physics class possesses a system of beliefs and intuitions about physical phenomena from their personal experience [1]. Several students' conceptions often appear endowed with strong internal logic and seem to coexist in their minds for a long time [2]. These certain conceptions are stable and resistant to change and survive several years of science teaching.

Several concept inventories have been developed for the past fifteen years to address misconceptions of students. Concept inventories are an invaluable tool for the assessment of student learning and curricular innovations. They are an excellent instrument with which to validate the effectiveness of new teaching methodologies [3]. Physics Education researchers of Arizona State University developed an instrument called the Mechanics Diagnostic Test (MDT) that measured the discrepancy between the students' common sense beliefs and their belief in the Newtonian force concept [1]. In 1992, an improved version of the MDT was published as the Force Concept Inventory (FCI). The value of these two instruments has led to the development of other multiple-choice concept tests in mechanics and other content areas of the introductory physics course [4].

Electricity is one of the basic areas of physics which are important at all levels of physics teaching. At the primary level, young children already gain experience with simple electric circuits. At the following levels, electricity is systematically taught and is a significant topic in all kinds of schooling [5]. Students typically come to study electricity with a basic primary conception, the metaphor of "moving fluid." For students, this "fluid" has a mixed character [2]. Historical models and students' individual mental models have a common origin. A study concluded there are similarities between students' models and historical models of simple electric circuits [6].

Thus, this paper aims to construct a concept inventory that will probe students' understanding of electrical phenomena with regards to the existing theories of electricity.

Review of Related Literature

Mental Models. Students come to class with naïve mental models for how the physical world works – often referred as preconceptions. Each one already had experiences with the physical world and had organized these experiences into mental models [7]. People

reason about unfamiliar domains through analogical mappings. Analogies are used to map a set of transition rules from an unknown domain in to a new target by constructing a mental model [8]. To understand a phenomenon is to have a working model of it; a model that may contain some simulated element. This "working model" is a structured analogue of the world and may be just a kind of representation needed for a specific purpose [9].

Mental models consist of propositions, images, rules of procedure, and statements as to when and how they are used. Elements of a mental model do not have firm boundaries. They may be incomplete and may contain contradictory elements [7].

High school students start new science lessons armed with a repertoire of models of explanation most of which may be inappropriate. As the teacher gives examples, it is left for the students to pick up appropriate ways of explaining. When something new occurs, students ask questions and seek to redescribe an event [9]. A child reasons according to a kind of "internal model" similar to nature but reconstructed by his intelligence. Since children of age five to eight are at a stage where they are unable to comprehend the nature of explanations, they simply describe an event through juxtaposition. Another mode of explanation that children learn early is that replacing one word by a simpler one with the same meaning. The success of this kind of response encourages the answering of questions in a semantic rather than analytical sense. Sometimes when children struggle to explain an idea the words they choose give an impression that another domain of experience is being used in an imaginative way [10]. Metaphorical usage is now common in science lessons. Children use simile in a scientific context. Distanced simile is commonly used in science due to its semantic displacement between objects being compared [9].

These findings about children's use of comparison are valuable in school science, though, not essentially scientific. A number of writers argued that explaining by a kind of comparison is like the scientific method – a more elaborative version of metaphor. A scientific explanation is also called a "metaphorical redescription." Theories-as-metaphors asserts that if the metaphors and their deductive consequences prove valuable they can correct or replace the original literal description of the phenomenon. There are two substantially different types of scientific metaphors. The first is exegetical or pedagogical that introduces terms which are descriptive. The other type introduces theoretical terminologies where none previously existed [9].

Students always construct their knowledge but what they construct depends on how new ideas interact with what they already have. In order to change an existing model, the proposed replacement must be understandable, plausible and useful. But since each individual constructs his or her own mental ecology, different students have different mental models for physical phenomena and different mental models for learning [7].

Historical Models of Electricity. Historical models of electricity date back in the 18th century. The history of concept formation of electricity until 1790's was concentrated on the area of electrostatic phenomena. The discovery of this phenomenon and prequantitative experiments on it date mainly in 17th and 18th centuries when the first measuring and collecting instruments of static electricity were constructed. The concept formation in electricity up to 1790's concentrated in electrostatics and progressed to construction of the two important electrostatic laws - to finding out the basic quantities in the electrostatics phenomena, and to formation of a clear conception of the basic properties of these quantities [6].

Two-Fluid Theory. The theory was proposed by William Watson and was popularized by Charles Du Fay. There exist two electric fluids, one called positive (+) and the other negative (-). They are somewhat like substance, in that the amount can be enlarged or diminished, but the total in the isolated system is preserved. The two electricities are called fluids, because they are capable of being transferred from one body to another, and are, within conducting bodies, extremely mobile. The other properties of fluids, such as their inertia, weight, and elasticity, are not attributed to them. A body is electrically neutral if the positive and negative electric fluids exactly cancel each other. Two electric fluids of the same kind cancel each other; while two of the opposite kind attract [11] [12] [13] [14].

One-Fluid Theory. Everything is the same as in the theory of Two Fluids except that, instead of supposing the two substances equal and opposite in all respects, one of them, generally the negative one has been endowed with the properties and name of Ordinary Matter, while the other retains the name of the Electric Fluid (Positive Electricity). Benjamin Franklin imagined that electricity is a single fluid found in all objects and that is capable of being circulated among objects. The flow of electric fluid is

initiated by rubbing (friction), a process in which one object, say B, acquires an excess of electrical fire while another objects, say A, receives a deficit. Thus Franklin introduces the terms positive and negative to describe electricity – not to distinguish different types of charges but to describe the states of objects having a greater or lesser amount of electrical fire in proportion to their normal share. Electrical fluid is not created or destroyed; it moves from object to object. When an object has its natural amount of electrical fluid, it is not electrified. When an object gains or loses some of its electrical fluid, the object becomes electrified. An object with a shortage of electrical fluid and an object with extra electrical fluid will attract each other. When two objects have extra fluid or when two objects have a shortage of fluid, the two objects repel one another, because neither can make a contribution to even out the fluid. When an object with extra electrical fluid is touched by an object with a shortage of electrical fluid, electrical fluid is exchanged and both objects could end up not being electrified (with their natural amounts of fluid). When objects are rubbed together, electrical fluid moves from one object to the other and both become electrified (one has extra electrical fluid and one has a shortage). There is a tendency for electrical fluid to even out so that all objects have their natural amounts [11] [13] [14] [15].

Electron Theory. It was discovered much later that the "fluid" was actually composed of extremely small bits of matter called electrons, so named in honor of the ancient Greek word for amber. Experimentation has since revealed that all objects are composed of extremely small "building-blocks" known as atoms, and that these atoms are in turn composed of smaller components known as particles. The three fundamental particles comprising atoms are called protons, neutrons, and electrons. Each electron has a negative charge, and each proton a positive charge. In equal numbers within an atom, they counteract each other's presence so that the net charge within the atom is zero. If electrons leave or extra electrons arrive, the atom's net electric charge will be imbalanced, leaving the atom "charged" as a whole, causing it to interact with charged particles and other charged atoms nearby. The process of electrons arriving or leaving is exactly what happens when certain combinations of materials are rubbed together: electrons from the atoms of one material are forced by the rubbing to leave their respective atoms and transfer over to the atoms of the other material. In other words, electrons comprise the "fluid" hypothesized by Benjamin Franklin. When two solid objects are rubbed together both become electrified as electrons move from one object to the other. Protons in the object stay put. Uncharged objects that gain electrons become negatively charged and uncharged objects that lose electrons become positively charged. Objects with large net charges attract or repel each other more than objects with small net charges. The greater the distance between charged particles or objects, the less they attract or repel; the smaller the distance between charged particles or objects, the more they attract or repel [14] [16].

Related Studies

In their article, Learning and understanding key concepts of electricity from the chapter two of the book Connecting Research in Physics Education with Teacher Education published by the International Commission on Physics Education, Reinders Duit and Christoph von Rhöneck [5] summarized briefly findings on students' pre- and post-instructional conceptions in the domain of electricity and on their double role in teaching and learning processes. Also, they discussed the case of learning difficulties in electricity to point to more general aspects of the role of students' pre-instructional conceptions in learning physics.

The learning difficulties revealed in this study appear to have three key concerns:

(1) Current flow and energy flow have to be clearly differentiated from the very beginning in order to address students' idea of current consumption which has proven to withstand instruction in a very serious way.

(2) Current and voltage have to be differentiated from an early stage on in order to provide students with a view of the phenomenon of current flow that includes the idea of a flow of something in a circuit and the idea of a driving "force" of that flow but that also allows to distinguish these issues.

(3) In order to address the "local" and "sequential" reasoning dominating students' views of current flow it is necessary to guide students to a "system view" of the electric circuit from an early stage on. Whenever there is a change of some sort in one point of the circuit there are simultaneously changes in other points also. An adequate model would not draw on individually moving charges (or particles) but on a view where all particles are intimately interconnected.

Results of this research clearly show that students' pre-instructional conceptions deeply influence or even determine learning. Most of students' conceptions have proven impediments

of learning as they are in stark contrast to the physics concepts to be learned.

As students' pre-instructional knowledge necessarily has to be the starting point of every learning process, the impediments have to be overcome in certain intelligent ways. This research has provided valuable approaches that may lead to more efficient and more pleasing physics teaching and learning for teachers and students alike in the domain of electricity and beyond.

In another study by S. Johsua and J.J. Dupin [2], they examined the methods for overcoming epistemological obstacles in the study of physics, focusing on the study of electricity. Students typically come to the study of electricity with a basic primary conception, the metaphor of "moving fluid," that is they believe that "something" (electricity) is stored in a battery and "moves" in the wires. Students believe that this "fluid" has a mixed character. Physicists classify the aspects of electricity separately as "energitical" or as "material." By using these two different notions the physicist can account for current conservation and the "wearing out' of the battery supplying the circuit at the same time. However, students cannot make this distinction, and as a result, even when they accept a circulatory model of electricity, they are challenged by the contradiction how a fluid is worn out but conserved at the same time. This contradiction supplies the basis of the conception "wearing out of the current" – the fluid circulates and wears itself out at the same time. This accounts for the numerous difficulties of students beginning to study electricity.

Based on the results of the study, the authors note:

(1) as long as the pupils do no change their interpretative paradigm, the experiment itself is not enough to shake their conviction, especially if their conviction is the object of social consensus.

(2) almost any single experiment can be reinterpreted within the students' conception; this conception is apt to assimilate much more new data than generally believed possible.

Based on their instructional experience with the subjects of the study, the authors observed that no "crucial experiment" or "brief cognitive conflict" that can resolve conflicting convictions. On the other hand, students initial conceptions constructed to account for the phenomenon can be very resistant; they survive and reappear regularly, sometimes in new forms.

The authors summarized that, students' incorrect conceptions serve as the basis for reasoning and evaluation behavior. For instructions to be effective, scientific knowledge needs to build against these "natural" conceptions. As discussed by the authors, student conceptions have a great capacity for logical adaptation. These adaptations often develop including new experiences and at the same time becoming wrong from the point of view of physics. These conceptions can be changed to be more correct through the use of appropriate tactics.

According to Engelhardt and Beichner [17] students' patterns of response to questions about circuit phenomena often are in conflict with those accepted by the physics community. They developed the Determining and Interpreting Resistive Electric Circuit Concepts Test (DIRECT) to evaluate students' understanding of a variety of direct current resistive electric circuit concepts.

The first step in developing the DIRECT was the construction of the instructional objectives based on the extensive examination of high school and university textbooks and laboratory manuals and informal discussions with the instructors using those materials. The objectives were presented to a panel of independent experts to ensure that no fundamental concepts were overlooked. The test was developed first in an open-ended format so that distracters for the multiple-choice version could be constructed. Efforts were made to write several items per objective.

The multiple-choice version 1.0 of DIRECT was administered to 1135 students from high schools and universities across the United States. The 29-item test took approximately half an hour to complete. The statistical analysis of the test showed that it was a difficult test. An analysis of the results as well as individual follow-up interviews indicated that DIRECT version 1.0 needed to be revised to improve its reliability as well as to clarify questions that were confusing to students. There were two main revisions. The first was to increase the number of answer choices to 5 for all questions. The second was to redraw the circuit diagrams as the interviews indicated that students were confused about the representations. Thus, DIRECT version 1.1 was developed.

The authors concluded that both versions of DIRECT appear to be reliable and valid. Results indicate that either version could be useful in evaluating curriculum or instructional methods as well as providing insight into students' conceptual understanding of DC circuit phenomena. They want to stress that DIRECT is not the end-all-be-all of tests. It simply provides another data point for instructors and researchers

to use to evaluate the progress of students' understanding.

Nicolas, E.S. [18] developed the Process Skills Test in Physics for High School Students. The forty-item, four-option multiple choice test measures students' knowledge of science process skills, namely: measuring, identifying variables, observing, inferring, formulating hypothesis, graphing and interpreting data, and testing hypothesis. The item functioning of the test was determined by computing the mean score, standard deviation, difficulty index, discrimination index, coefficient of reliability, and standard error of measurement. Results of the field testing shows that the test is considerably valid and reliable and can be used as valuable instrument for both instructional and research purposes.

Another unpublished master thesis was done by Ricky Magno [19] in De La Salle University. The author developed and validated an Integrated Science Process Skills. This study has three major stages. Stage 1 is the Development Stage that deals with the identification of science process skills, description, adaptation and construction of the test items. The researcher after thorough evaluation of relevant materials included the following process skills in the instrument: identifying variables, operationally defining variables, inferring and formulating hypothesis as well as graphing and interpreting data. In Stage 2 is the Validation and Field Testing Stage that describes the data gathering stage which includes the content validation, pilot testing and item analysis. The third stage is the Statistical Data Analysis stage.

Synthesis

The literatures and studies reviewed in this paper directs the researcher in coming up with the problem posted in this study. One physics phenomena that is hard to think about is electricity. Most of the electrical phenomenon requires at least some skillful effort, and often some specialized equipment to witness. Students' patterns of response to questions about this phenomenon often are in conflict with those accepted by the physics community. Some researches disclosed that historical models and students' individual models have a common origin. Taking into consideration the three historical models of electricity – one-fluid, two-fluid and electron – a test on student understanding of the nature of electricity can be constructed. With the help of the developed instrument, students' understanding of the nature of electricity can be probed.

Conceptual Framework

Evaluating about students' understanding can bring students' alternative conceptions and misconceptions to light so that difficulties can be addressed in order to improve teaching and learning. Students' understanding of the nature of electricity can be probed by the use of test instruments.

The figure below shows the research paradigm of the study.

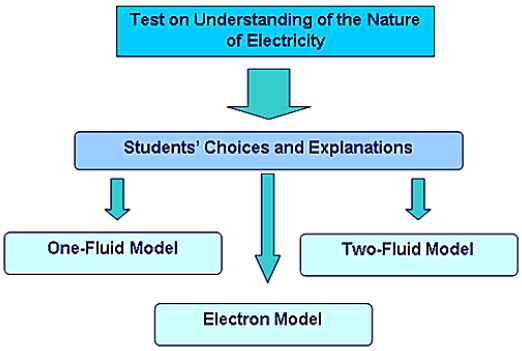


Fig 1. Conceptual Framework

This study works under the premise that the students' understanding of the nature of electricity can be explored using an appropriate assessment tool. The answers provided by the students in the first tier and the explanation they supplied to justify their chosen answer in the 2nd tier aided the researcher to explore/determine the historical models students' used to explain their understanding. Their explanations are classified as one-fluid, two-fluid and electron models.

Statement of the Problem

The purpose of this study is to develop a concept test that probes student understanding of the nature of electricity and classify their understanding according to existing theories, namely, the two-fluid theory, the one-fluid theory and the electron theory.

Specifically, it sought to answer the following questions:

1. What historical model/s do students used in explaining their understanding of the nature of electricity with regards to the following topic?
   a. attraction
   b. repulsion
   c. electric current
   d. voltage
2. What is the prevailing historical model that students used in explaining their understanding of electricity?

Significance of the Study

This research hopes that after the validation and revision of the instrument, it can be used for instructional purposes as well as for further research. In particular, it is hoped to be used to evaluate instruction, to know the effectiveness of instruction in modifying students' initial common sense misconceptions. Then, as a diagnostic test for identifying and classifying specific misconceptions. In general, this test after being validated and revised is hoped to be useful in evaluating instructional methods as well as provide insights into students understanding of the nature of electricity.

Scope and Limitation

This study is limited to the development of the test on student understanding on the nature of electricity. It aims to classify students' understanding of electricity as Two-Fluid, One-Fluid or Modern. The topics only covered are electrostatics, current and voltage.

The stages of the study are focused on the identification of the theories of the nature of electricity, development of the test, content validation and probing of student understanding.

2. Method

Research Design

This study developed a two-tier concept test on the nature of electricity to probe students' understanding about it. The developed instrument aims to find out what historical models do student use in explaining their understanding of the nature of electricity and to determine the level of scientific understanding in electricity of the students. Thus, qualitative and quantitative approaches were employed, and a descriptive design was utilized.

The Stages of the Study

There are five major stages of the study, namely: (1) identification of the different theories of electricity, (2) construction of test items, (3) content validation, (4) pilot testing, and (5) data analysis.

Stage 1: Identification of the Different Theories of Electricity

Relevant sources that include science history books, textbooks, modules, workbooks and journals to determine the different theories of electricity. After thorough evaluation of the mentioned materials, the following theories are included in this study: One-Fluid Theory of Electricity by Benjamin Franklin, Two-Fluid Theory as popularized by Charles Du Fay and the Modern Theory of Electricity to explain phenomena in electricity.

Stage 2: Construction of Test Items

True-False-Two-Tiered Test format was constructed to assess students' understanding of the nature of electricity. The first version of the test was composed of 21 items including 7 items for each theory. The items of the test were arranged according to the table of specification below.

Stage 3: Content Validation

At this stage, the test was subjected to the review of experts to determine the content validity of test. Content validity is concerned with whether the content of a test elicits a range of responses that are representative of the entire domain of skills, understandings, and other behaviors that a test is designed to measure. The content validity of a test is evaluated by analyzing the composition of the test to determine the extent to which it represents the objectives. One way of accomplishing this is to compare the test's content with a table of specifications concerning the subject matter to be covered by the test.

Experts from De La Salle University-Manila and Mindanao State University-Gen. Santos City validated the first version of the test. The requested experts were provided with a copy of the test with spaces for their comments and background information of the three theories involved.

Some items were discarded from the initial draft and others were revised following the comments and suggestions of the experts and the adviser. As a result, the researcher and his group came up with the revised test (version 2). The table below shows the table of specification of the second version of the test.

Table 1. Table of Specifications

Topic	Framework			Total Number of Items
	Two-Fluid Electricity	One-Fluid Electricity	Modern Theory of Electricity	
Attraction of Unlike Charges	2	1	7	3
Attraction of Charged and Uncharged Objects	3	8	5	3
Repulsion	4	9	6	3
Current	10	14	15	3
Voltage	13	11	12	3
Total Number of Items	5	5	5	15

Stage 4: Pilot Testing

After the content validation by the experts, a second version of the test was constructed. The revised 15-item test was administered to fifty (50) Grade 10students taking up Physics.

Step 5: Marking of Papers

Inter-rating checking of papers was observed in marking students' responses. After the researcher checked the responses of the on the test his group mates counterchecked the markings.

Students' responses to each item were classified as follows:

One-Fluid

*The student agreed to one-fluid model statement of the nature of electricity and explains his understanding using the same model.

*The student disagreed to the electron model and two-fluid model statements of the nature of electricity but explains his understanding using the one-fluid model.

Two-Fluid

*The student agreed to two-fluid model statement of the nature of electricity and explains his understanding using the same model.

*The student disagreed to the electron model and one-fluid model statements of the nature of electricity but explains his understanding using the two-fluid model.

Electron

*The student agreed to electron model statement of the nature of electricity and explains his understanding using the same model.

*The student disagreed to the one-fluid model and two-fluid model statements of the nature of electricity but explains his understanding using the one-fluid model.

Partial One-Fluid and Two-Fluid

*The student agreed to the one-fluid model statement of the nature of electricity but explained his understanding through the two-fluid model, or vice versa.

Partial One-Fluid and Electron

*The student agreed to the one-fluid model statement of the nature of electricity but explained his understanding through the electron model, or vice versa.

Partial Two-Fluid and Electron

*The student agreed to the two-fluid model statement of the nature of electricity but explained his understanding through the electron model, or vice versa.

No Conception

*The student agreed or disagreed to the statement in each item but had irrelevant explanation, repeated the question or unclear response.

Different Conception

*The student agreed or disagreed to the statement in each item and his response reflects alternative conception other than the three historical models included in the study.

Each agreement to a particular historical model on the first tier of the test is scored 0.5 points; a disagreement earns zero points. The model regarded by the explanations of the respondents on the second tier of are scored 0.5 points; wrong and no explanation earns zero points. The total score for each model are all summed of for each student to determine the prevailing historical model employed by the respondent in explaining the nature of electricity.

Step 6: Data Analysis

To determine the prevailing historical model used by the students, the following scheme was devised by the researcher:

One-Fluid Model. The highest score among the three models is the one-fluid model and it has a difference of at least 4 points from the next highest scored model.

Two-Fluid Model. The highest score among the three models is the two-fluid model and it has a difference of at least 4 points from the next highest scored model.

Electron Model. The highest score among the three models is the electron model and it has a difference of at least 4 points from the next highest scored model.

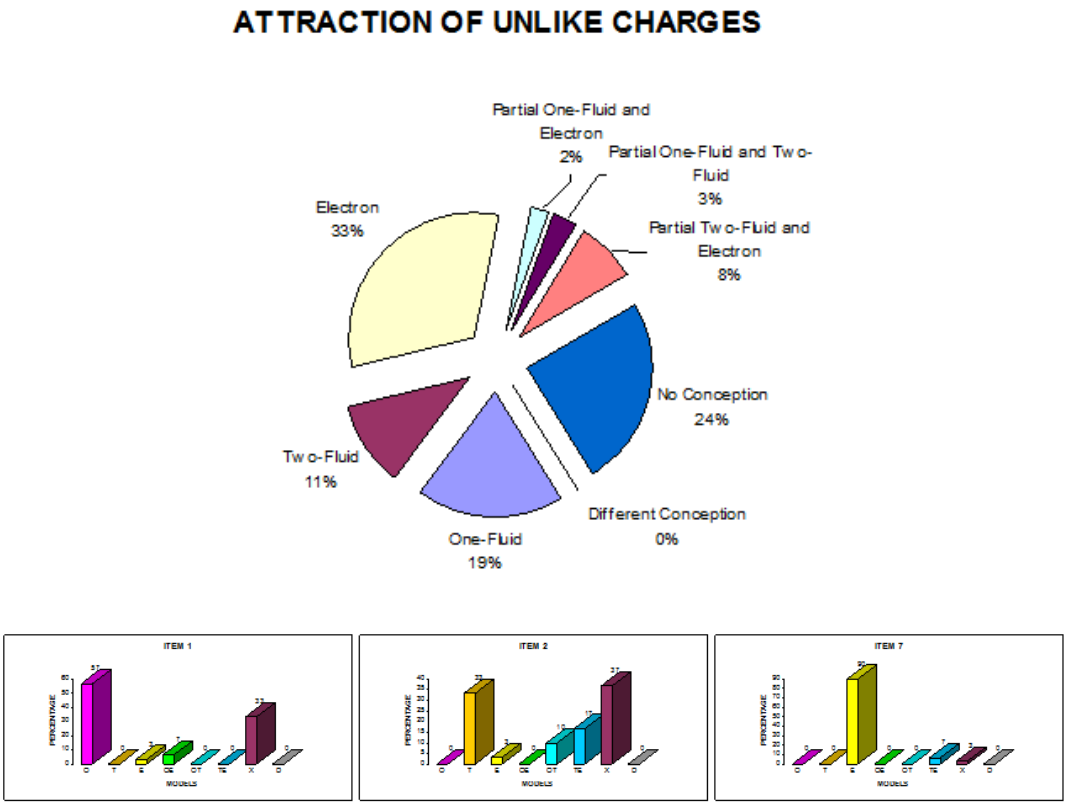
Partial One-Fluid and Two-Fluid Model. The two models are equally scored provided that they have a difference of at least 3 points from the next highest scored model. And, the difference between the highest scored model and the next highest scored model is 3 points provided that the second highest scored model has a difference of at least 3 points from the least scored model.

Partial One-Fluid and Electron Model. The two models are equally scored provided that they have a difference of at least 3 points from the next highest scored model. And, the difference between the highest scored model and the next highest scored model is 3 points provided that the second highest scored model has a difference of at least 3 points from the least scored model.

Partial Two-Fluid and Electron Model. The two models are equally scored provided that they have a difference of at least 3 points from the next highest scored model. And, the difference between the highest scored model and the next highest scored model is 3 points provided that the second highest scored model has a difference of at least 3 points from the least scored model.

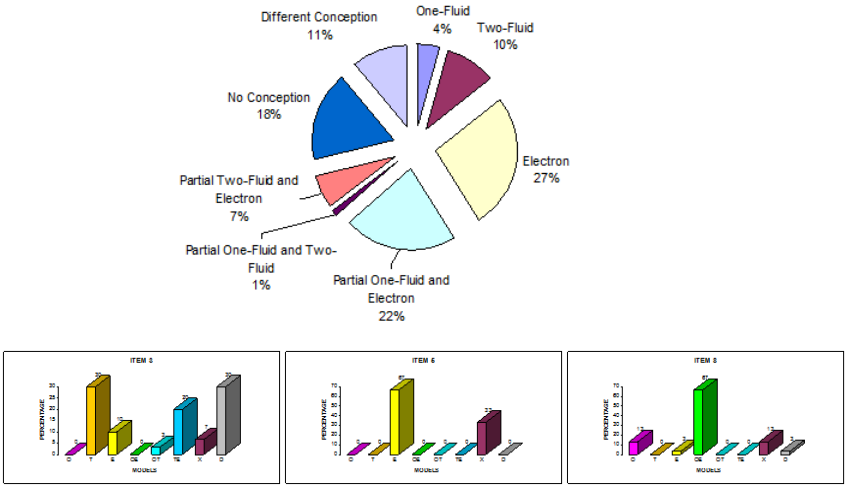
Multiple Models. The three models are equally scored. And, the difference between the scores of each model is 2 points or less.

3. Results and Discussion



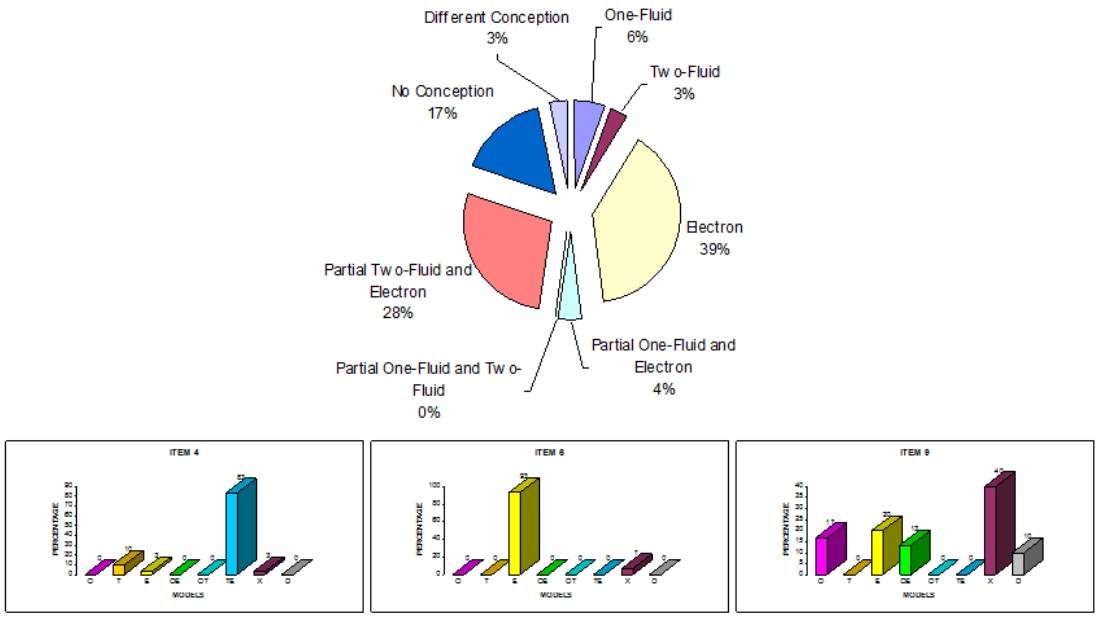
Items 1,2 and 7 of the tests deals with attraction of unlike charges. Item number 1 is about the occurrence of lightning and is designed to probe students' understanding of the one-fluid nature of electricity. Half of the respondents agreed to the statement that there is a shortage of electric substance in the ground and excess in the clouds and this excess substance will flow from the clouds to the ground thereby creating lightning. Item number 2 is about the two-fluid nature of electricity. This has something to do with rubbing of two different materials. Sixty percent (60%) of the respondents agreed to the statement that the balloon will have an excess of electrical substance after rubbing and there will be a shortage of electrical substance in the flannel. But only thirty-three (33%) of the respondents explained it through the two-fluid model. The rest of have knowledge about the topic explained their understanding through their dual model of One-Fluid and Electron Models and Two-Fluid and Electron Models. Item 7 probes students' conception of the nature of electricity through the electron model. Students' explanations clearly revealed that they understand the electron model of electricity and that unlike charges attract each other.

ATTRACTION OF CHARGED AND UNCHARGED OBJECTS



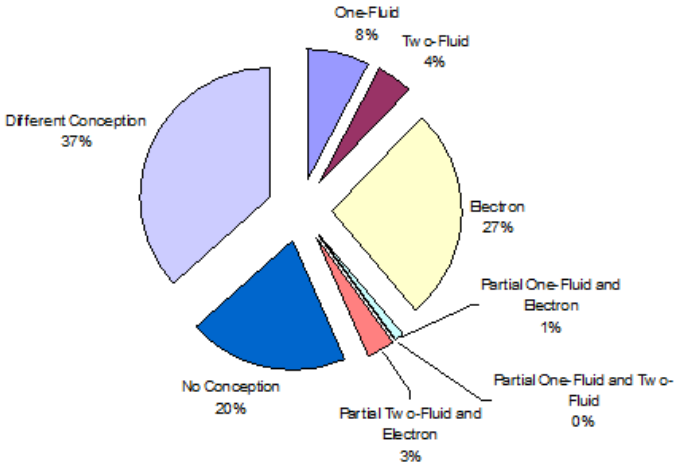
Items 3, 5 and 8 deal with the concept of attraction of charged and uncharged objects. Item 3 is a statement about the two-fluid nature of electricity. Among the ninety-seven percent (97%) who showed understanding of the topic, only thirty percent (30%) consistently explained their understanding through the two-fluid model. Others have explained it through by merging the Two-fluid model and the electron model. Some students believed that it is the negative electric fluid that flows not the positive fluid, a reason that is not also accepted in our modern view of electricity. Item 5 probes students' conception of the nature of electricity through the electron model. They believe that charged objects attract uncharged objects attract each other. Item 8 is about the one-fluid nature of electricity. Most of them agreed that a charged object has less or more electric fluid than the normal. But their explanations to their choice show that they use multiple models. They are able to explain that an object is charged when it has more or less electrons than the normal. Most of them agreed to the one-fluid model of attraction of charged and uncharged objects but they use the electron model in explaining their understanding.

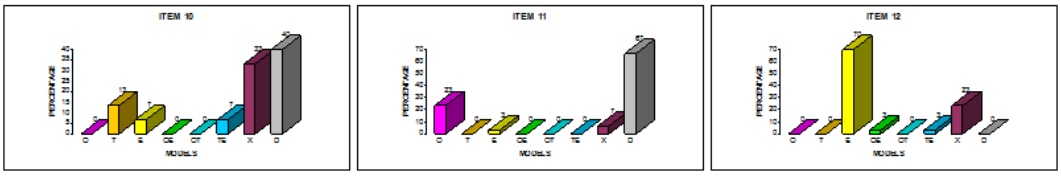
REPULSION



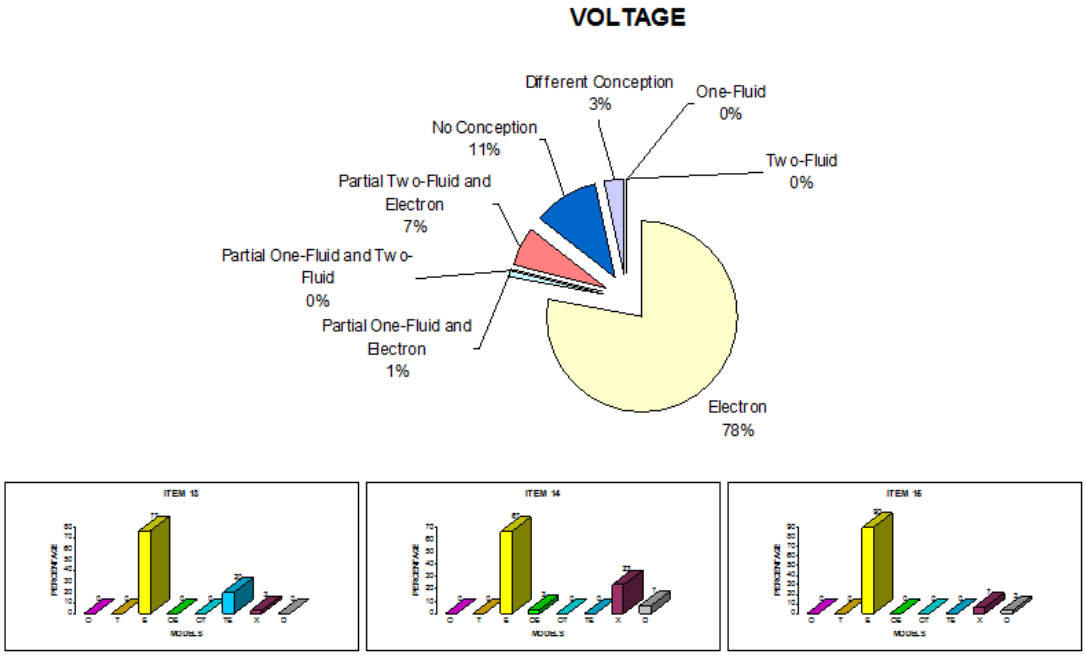
Items 4, 6 and 9 are about the repulsion of unlike charges. Item 4 is a statement about the two-fluid nature of electricity. Item 4 shows that the respondents have a very strong conception about charges. Among the ninety-seven percent (97%) who agreed about the two-fluid model of repul1sion, only ten percent (10%) consistently explained their understanding using the two-fluid model. Majority of who agreed to the two-fluid model of repulsion explained it through the electron model. They know that same charges repel while opposite charges attract. They agreed to the statement that the glass shoe and the hair repel because they have the same kind of electricity but had explained it through the electron model. It revealed that students hold two models in explaining electrical phenomena. Item 6 probes students' conception of the nature of electricity through the electron model. Students' explanations clearly revealed that they understand the electron model of electricity. They believe that like charges repel each other. Item 9 is about the one-fluid nature of electricity. Only thirty percent (30%) of the respondents agreed to the one-fluid model of repulsion but only seventeen percent (17%) consistently explained it through that model

CURRENT

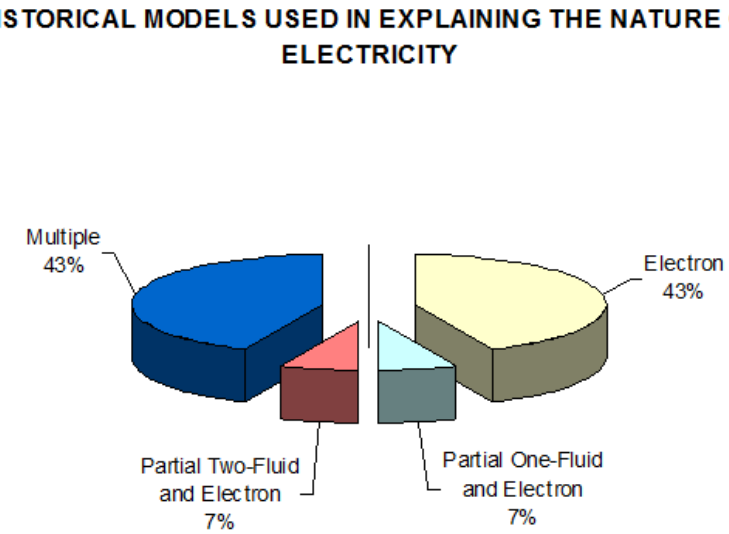




Items 10, 11 and 12 presents the topic of electric current. Item 10, a statement about the two-fluid nature of electricity. Only twenty percent (20%) agreed to the two-fluid model of electricity but only thirteen percent (13%) consistently used the model in explaining their understanding. Some used the electron model in their explanation. Most of the respondents (40%) have an alternative understanding of the topic. The students disagree to the idea that positive and negative electric substances flow in the circuit – most of them reasoned that only negative electric substance flow, a reason that is not also accepted in our modern theory of electricity. The researcher observed that students adopt terms/words in their explanation from the stem of the statement. Item 11 describes the one-fluid nature of electricity. Sixty-seven percent (67%) showed an alternative understanding of the nature of current flow. Students' explanations to this item can be classified into two groups – the idea that only negative electric substance flows and the idea that current only exist if there is a flow of positive and negative charges. These ideas are also naïve conceptions of electricity. Item 12 explains the flow of electron through a circuit. Almost all of the respondents are convinced that a lamp is dim or may not light because the electrons flowing through the circuit are less "energized."



Items 13, 14 and 15 are about the topic electrical voltage. These items discussed the potential difference of the battery and its relationship with current. Item #13 uses the term "net electric substance" suggesting a one-fluid nature of electricity while item #14 refers electricity as a "positive substance" – a term suggesting the two-fluid nature of electricity. Item 13 talks about the two-fluid nature of electricity. Item 14 is about the one-fluid nature of electricity. Most of them agreed that adding batteries in series would result to higher potential difference between the terminals. The respondents have varied explanations about what flows in the circuit. Some agreed that it is the positive electric substance that flows, others believe that is it the negative substance while the rest argued that both the positive and negative substance flow around the circuit. Item 15 explains that the difference in electrical pressure drive electrons in the wire to move around the circuit. Most of them recognized that the difference in electrical pressure drives the electrons around the circuit thereby producing current. They are also able to explain the direct relationship between voltage and current. In general, in can be inferred from the graph above that the respondents have a solid understanding of the electron model of explaining the concept of electrical voltage.



The figure above shows the prevailing historical models of electricity employed by the students to explain their understanding. Among the three models – one-fluid, two-fluid, and electron – the electron model was used distinctively. Other students explained their understanding using two historical models. Some would explain their understanding by partially using the two-fluid model and the electron model. Others would explain their understanding by partially employing the one-fluid model and electron model. There are items in the test showing that students interchange their use of terminologies. They agreed to the substance model of electricity but explain it through the electron model. This observation agrees with the observations made by Shipstone and Gunstone [20] that lack of precision in children's use of terminology plays a very significant role in reducing the efficiency of students' communication. They further reasoned that successful pupils possessed only some superficial knowledge and lacked an appropriate scheme which they could call upon in a wide range of circumstances. Their interviews also showed that pupils lacked confidence in applying what they knew.

It appears that students have a firm grasp of the electron model of explaining electrical phenomena but the relatively high responses to other models show that students use multiple models in explaining their understanding.

Item 3 of the test presents a situation about charging by friction. Most of them disagree that positive electric fluid flows from the silk cloth. They reasoned that the negative electric fluid should be the one that is to flow from the silk cloth. The negative electric fluid meant by the student here is the electron that has a negative charge. This means that they clearly understand the electron model that only electrons flow during charging. This situation shows that the students did not precisely use the terminology making their explanation still wrong. As Shiptones and Gunstone [20] mentioned, the students lacked confidence in applying what they know.

Students' responses to item 4 are also the same with that of item 3. In Du Fay's two-fluid model, there are two kinds of electricity – the negative electricity and the positive electricity. The students agreed that same kind of electricity repels, which is wrong in our modern conception of electricity. But their explanations strongly reveal that they understand the electron model. The students did not use the terminologies correct.

Another note taking thinking framework of students are their explanations to item 10. Some of them disagreed to the statement for the wrong reason. They disagree to the two-fluid explanation of how electric substances flow along a circuit. They reasoned that the current will not go back to the source because it is consumed in the lamp. This reason is the same with Shiptone's model, the unipolar model. This model explains that there is current from one terminal of the battery only and all of this is used up.

4. Conclusion

Based from the data gathered, the following conclusions were made by the researchers of the study:

The electron model was dominantly utilized by the respondents to manifest their understanding of attraction of charges but a lot also agreed to the one-fluid model of attraction but explained their understanding through the electron model.

Most of the respondents showed understanding of the concept of repulsion of unlike charges through the electron model. Others agreed to the two-fluid model statement but explained their understanding through the electron model.

Among the three historical models, the electron model was prevalently used by the respondents in explaining their understanding of electric current but most of the respondents used a different model to explain their understanding. Most of them reasoned that only negative electric substance flow and that current only exist if there is a flow of positive and negative charges.

Majority of the responses revealed that the electron model was used to explain students' understanding of electrical voltage. They recognized that there is current flow in the circuit due to the potential difference between the terminals of a dry cell.

Analyses of students' responses show that students have a firm grasp of the electron model of explaining electrical phenomena but the relatively high responses to other models show that students use multiple models in explaining their understanding.

Recommendations

Based on the results of the study, responses of the students about the nature of electricity should further be explored to understand how they constructed the alternative models. The research recommends that the constructed test on student understanding of the

nature of electricity be conducted to a greater number of students and preferably to heterogeneous samples. It is further recommended that the test be used as a pre-test before starting a lesson in electricity for the teacher to determine the models withheld by the students to aid the teacher in designing the lesson and correct the alternative conceptions of the students about the nature of electricity.

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DEVELOPMENT OF BLENDED LEARNING MODEL IN OBJECT ORIENTED PROGRAMMING FOR ENHANCING VOCATIONAL STUDENTS' ENVIRONMENTAL AWARENESS

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Abstract

Floods, landslides, forest fires, often made headlines in recent times. The disaster is of natural origin that occur due to human activities that have an attitude less of environmental awareness. Therefore, the government seeks through the Ministry of Education to make environmental awareness as one of the indicators for the educational value of cultural and national character. Motivated by a desire to increase environmental awareness among students of vocational schools, the learning required is charged about environmental awareness by utilizing information technology elements, leaving no direct guidance patterns of teaching and broader use of learning resources. One of the efforts is to conduct research to design the modeling of blended learning. This study aims to find a design model blended learning and determine the increase environmental awareness among vocational students' through the implementation of the model on the subjects of object-oriented programming. The research using Research and Development carried out in a span of one year. The instrument used a questionnaire to measure the attitude of environmental awareness among vocational students' and observation to observe the learning. Outcomes research is expected the application model and implementation of blended learning that consists of manual models and assessment, and increased environmental awareness from the scale of attitudes and knowledge of vocational students. Results of research on secondary vocational students' show that models provides increased environmental awareness in attitudes and behavior of vocational students'. However, further research could be explored from various aspects which can increase environmental knowledge and attitudes of secondary vocational students'.

Keywords: Blended learning, blended learning design, vocational education, students' environmental awareness.

1. Introduction

Floods, landslides, forest fires, often made headlines in recent times. The disaster is of natural origin that occur due to human activities that have an attitude less of environmental awareness. Therefore, the government seeks through the Ministry of Education to make environmental awareness as one of the indicators for the educational value of cultural and national character.

The reform of educational processes and systems is crucial for the creation of new development ethics[1]. The last forty years has come out of the challenges associated with environmental degradation and sustainable development and has important implications related to education and schools. The concept of environmental education is now widespread on the national policy of education, curriculum documents, curriculum development initiatives and conservation strategies[2].

One key characteristic of environmental education is action, as it must promote human responsibility and, in doing so, encourage learners to use their knowledge, personal skills, and assessments of environmental issues.

The goal of environmental education is to produce a population aware of the environment and concerned about problems relating to this concept. Environmental education is based on the knowledge, skills, attitudes, motivations and commitments of individuals and collectives willing to work towards solutions of current problems and the prevention of new ones.

One model of learning that is expected to raise environmental awareness for vocational students' are learning to use a mixture of several models. This concept is often also termed the mixing of the E-Learning with the conventional so-called blended learning. The definition of blended learning has evolved over the past few decades and continues to change. Singh and Reed (2001) defined blended learning as a learning

programme where more than one delivery mode is being used with the objective of optimising the learning outcomes and the cost of the programme delivery[3] .

The definition of blended learning is illustrated in a two-dimensional matrix (Figure 1). Most studies to date have situated blended-learning models across a linear spectrum, with "mostly face-to-face" on one end and "mostly online" on the other. The matrix below captures the geographic spectrum of blended learning as well by mapping the programs onto a plane, rather than a line[4].

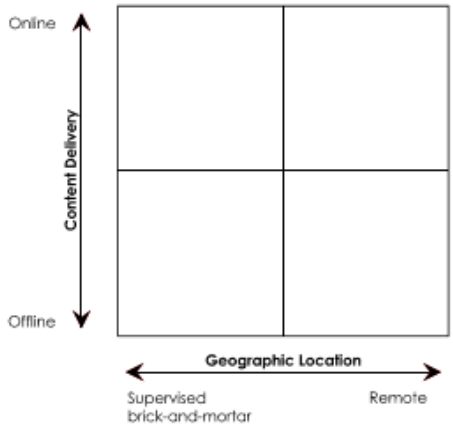

Figure 1. Blended Learning Matrix

In most cases the design of blended learning is mostly aimed at putting technology into the learning environment without taking into account how that technology contributes to the learning outcomes[5]. Blended learning gives greater flexibility for student learning in terms of learning style and study pace. However, in this research aim to show that models provides increased environmental awareness in attitudes and behavior of vocational students'. With the adoption of a wide range of delivery methods, blended learning can successfully improve students' environmental awareness.

2. Method

The method used in this study Research and Development is a research method that is used to produce a particular product, and test the effectiveness of the product. The research design as shown in Figure 2.

The research involved quasi-experimental model. Conducting experiments in the classroom that is already available with no change classroom situations and learning schedule. how the subject was taught was that the selected topics were not delivered in the traditional classroom environment. The teacher did not have to conduct the classes and discuss the notes with the students. the theacher using technology for the selected Blended Learning topics which was then uploaded and shared with the students. Students were instructed to view the topics and prepare a carefully designed assignment with the purpose of assessing the students understanding. The assignment required the students to further search for more relevant information which was related to the Blended Learning topic and share their findings during their presentations in class. The assessment method is used would be the more traditional methods of written quizzes and tests. In the written examination for the subject which was held at the end of the semester, the Blended Learning topics had separate exam questions from the non- blended learning topics. The questions were designed to assess the students from the perspective of the cognitive domain of the Bloom's Taxonomy. Questions assessed students' ability to apply the principles they had learned from the Blended Learning topics when answering the exam questions.

The control group used traditional model. The experimental group used blended learning model for object oriented programming. This examined the students to determine the extent of environmental awareness, to assess their theoretical and practical skills both before and after the model. The experimental group was also assessed before and after training in the same manner as for the control group. Pretest-posttest control group design as shown in Table 1.

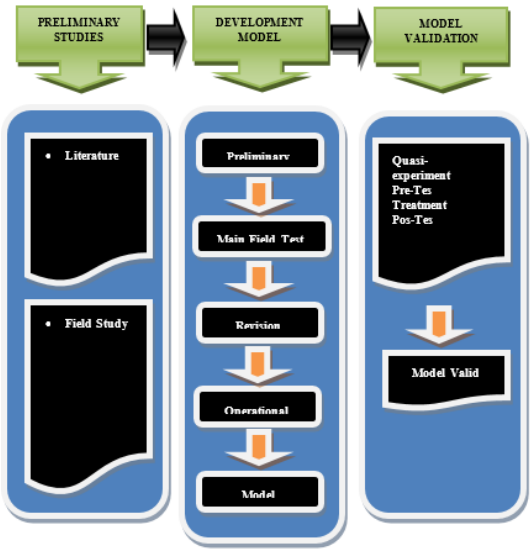

Figure 2. Research design

Table 1. Pretest-Posttest Control Group Design

Group	Pretest	Treatment	Posttest
Experiment	X_1	Y_1	X_2
Control	X_1	Y_2	X_2

Data analysis by calculating the gain. To see the difference in results between experimental class and control class using t-test.

3. Results

Research results attitudes increase vocational students' environmental awareness includes average score pretest, posttest and n-gain as shown in figure 3. The quantity increased environmental awareness experimental class is higher than the control class.

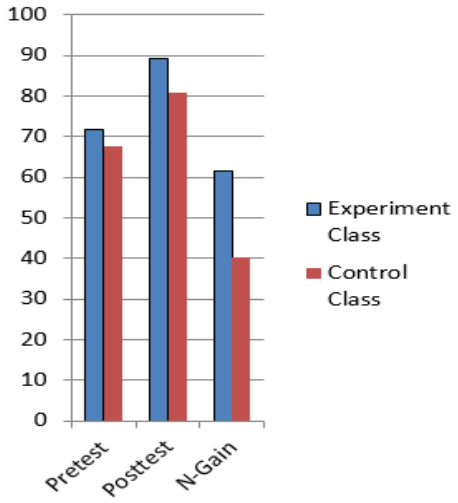

Figure 3. comparison of the average value of pretest, posttest and n-gain

Based on Figure 3. The average value of the experimental class pretest of 71.59% from the ideal score, while the average value of pretest control class is 67.66% of the ideal score. Furthermore, the average value of 89.07 posttest experimental class of an ideal score, while the average value for the posttest control class is 80.69% of the ideal score. Thereby improving the attitude of caring environment for experimental class amounted to 26.37%, while the increase for the control class is 13.52%. The percentage of N-gain mean score for the experimental class amounted to 61.42% (0.61) including the moderate category and grade control of 40.13% (0.40) including the medium category. The quantity increase environmentally conscious attitude experimental class is higher than the control class. T-test data is environmentally conscious attitude of students in the two classes shown in Table 2.

Table 2. T-Test

Data Source	t_{hitung}	t_{table}	Decision
Experiment Class	33,68	2.00665	significantly different
Control Class	15,05	2.00324	significantly different
N-Gain	7,22	2.00488	significantly different

Based on the data in Table 2. The visible even t-test, it can be concluded that there is a enchance significantly between the environmental awareness experiment classroom with the control class. This means that there the difference between the classes get liberation lesson using blended learning models with class getting learning to use conventional models. This is a implication of blended learning model application in the experimental class. Students further improve enchanging environmental awareness after studying through blended learning models.

4. Discussion

Blended learning can significantly increase student's environmental awareness in vocational education which is supported by the data, indicating that the blended learning model significantly affected student attitude, yielding a higher rate for vocational students' environmental awareness (Table 2). This finding is in agreement with other studies on blended learning in different disciplines. Sitzmann et al. (2006) conducted a meta-analysis of 96 experimental studies on online and classroom instruction between 1996 and 2005. Their findings indicate that blended learning is more effective than face-to-face classroom instruction for teaching both declarative and procedural knowledge. they concluded that blended learning optimizes the instructional advantages of both online learning and classroom instruction[6].

In another research, Zhao et al. (2005) found no difference in overall effectiveness between online and face-to-face learning, and the authors noted that courses applying blended learning resulted in better learning outcomes than distance or face to face education alone[7]. Blended learning has the potential to improve learning experiences by adding the advantages of online instruction to traditional classroom settings. Blended learning, however, is not a single recipe[8]. There are many ways of combining online and face-to-face learning, falling within a spectrum between entirely face-to-face and entirely online education. The optimum balance can vary depending on the

subject matter and the learning situation. Learning and communication theories suggest that the key to finding the perfect blend for each situation is a better understanding of the role of interactions in the learning process. Previous studies indicate that the quality and quantity of interactions affect academic results, the level of higher-order learning, and students' perception of their learning experience. The prevalence of blended learning is increasing, so higher education and corporate training managers should develop strategic plans and directions with a focus on pedagogical methods in blended learning (Bonk et al., 2006). The present study indicates that blended learning can play a vital role in vocational training sessions, in educational organizations and workplaces[9].

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TEACHING FACTORY LEARNING PROCESS AT VEHICLE'S BODY REPAIRING AND PAINTING WORKSHOP OF FACULTY OF ENGINEERING YOGYAKARTA STATE UNIVERSITY

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Abstract

The learning objectives of teaching factory learning process are to: 1) improve the students' competency, 2) increase the students' entrepreneurial spirit, 3) produce the products/services that have added value, 4) increase the schools' sources revenue, and 4) increase the relationship with industry. This research use approach research and development.. The location of this research at the Automotive Engineering Education of Faculty of Engineering Yogyakarta State University, with research subjectsare lecturers and students, practitioners of the industry. Collecting data grouped into two parts, namely, the study introduction and development of the model, as well as model validation. Data analysis techniques using descriptive analysis with percentage. Teaching factory learning process to be applied in the Vehicle's Body and Painting Workshop of Automotive Engineering Department of Faculty of engineering Yogyakarta State University consists of planning, implementation, and evaluation. The planning process consists of making the syllabus, lesson plans, instructional strategy, methods, and media preparation. The learning process consists of socialization to students about teaching factory, industrial visits, learning-based training, and learning-based production. While the evaluation system consists of competency test, consumer satisfaction questionnaire, and economic analysis of students' activities while producing goods/services. The conclusion of this study are: 1) The level of competence of conformity subjects very accordance with the needs of the industrial (82.11% and 86.75%). 2) Achievement of student competence are very well. 3) The resulting product is a body repair services and painting and reconditioning body components so that the vehicle fit for sale back. 4) Enhance cooperation with industry are invited cooperation consisted of 8 workshops body repairs and painting, one industry Sales of paint, and one vocational school. 5) Teaching factory model that will developed consist of: a) the resulting product, in the form of reconditioning and repair of body components are damaged, b) management of teaching factory, c) facilities and supporting infrastructure, d) financial, e) cooperation with the industry, f) curriculum, g) learning process, and h) human resources. The learning process will be applied as part of the development of teaching factory model at Vehicles' Body Repairing and Painting Workshop of Automotive Engineering Education of Faculty of Engineering Yogyakarta State University.

Keywords: Teaching Factory, Learning Process, Vehicle's Body Repairing and Painting

1. Introduction

a. Definition of Teaching Factory

In simple concept teaching factory is the development of a production unit that is already implemented in vocational educational institutions. Furthermore, the concept of teaching factory is the development of vocational schools into a school based production. According to Grenert and Weimann in Heru Subroto (2004), there are three basic models of production schools, namely: 1) Simple production schools; 2) Develop production schools and 3) Teaching factory schools.

The third model, teaching factory school, is the school where production in the form of factories as places of learning. Teaching factory integrating the learning process and work at the same place. There is no longer separated between the delivery of theoretical and production/practice material. Implementation of teaching factory at a vocational school in Indonesia is formed of production activities or services that are part of the learning process (Moerwishmadhi, 2009). Thus the school is required to have a factory, workshop or other business units for learning activities.

Factory, workshop or other business units of the production have to produce goods and services that meet the quality standards that can

be accepted by consumer. Similarly, Directorate PSMK (2008) notes that teaching factory integrating learning process to produce a product or service that is worth selling to generate added value for schools. Moreover, production activities in form of goods or services can be widely foster vocational school to explore the sources of financing. It could give more subsidy for the learning process in the vocational schools.

It can synthetically concluded that the teaching factory is the learning activities in which students directly perform production activities in the form of goods or services in the educational environment of the school. Goods or services produced has a quality that is worth selling and accepted by the public or consumers. The result of the gains expected to increase sources of schools' income that are useful for the sustainability of education. Teaching factory brings the industry/real work in the school environment to prepare graduates are ready to work.

Teaching factory can be implemented by various strategies/methods in accordance with the conditions of the school institutions. Models of teaching factory according to Zainal (2014), namely: a) Model 1: Teaching factory is a workshop and laboratory owned by the vocational schools itself. Teaching factory management and implementation are integrated into the academic system. Students practice in the workshop/laboratory to generate a product in the form of goods or services sold to consumers, b) Model 2: Vocational schools made an agreement with industry to build teaching factory. Teaching factory is located inside or outside the school depends on the agreement. Teaching factory management is not integrated with the academic system, but the students could use it to practice regularly according to academic schedules, and c) Model 3: Teaching factory built in cooperation with industry/company as special programs (collaboration class). The students have to go to the industry during their practice. It's similar like on job training, but it's more manageable for the content material and activity during the class in the industry. Implementation of teaching factory support the implementation of competency-based curriculum. Competency-based curriculum is currently the curriculum applied in Europe (Biggs & Tang, 2007; Bergstroom, 2011) and also in Indonesia.

Teaching factory at vehicle's body repairing and painting workshop of Automotive Engineering Education Department of Faculty of Engineering Yogyakarta State University is in the process of development. The development was conducted to producing products (good/service), integrating with academic activities, fostering cooperation with industry, and creating teaching factory model for vocational education. Teaching factory model was created in vehicle's body repairing and painting workshop because of the students' achievement and strong correlation with the industry.

b. Suitability of the body repairing & painting courses with the needs of industry and students' achievement.

Body repairing and painting courses are one kinds of courses taught in Automotive Engineering Education Department of Yogyakarta State University. Body repairing and painting courses consist of 3 credits semester, 1 credit semester of theory and 2 credit semester of practice. The level of competence conformity taught in body repairing and painting courses with the needs of industry are very high with the suitability rates of 82.11% and 86.75% respectively (Noto Widodo, et al, 2015). While the students achievement in the body repairing and painting courses are sufficient with the number of students scoring above B in 2013 were 69 students (83.13%) and 74 students (91.36%) respectively, and in 2014 were 37 students (84.09%) and 70 students (88.61%) respectively (Noto Widodo, et al, 2015).

The data showed in the previous paragraph become one of the main drivers of the teaching factory development at vehicles' body repairing and painting workshop. Suitability level courses to the needs of the industry indicates that the learning process has been very beneficial for students to preparing their self to go to the industry. And students' achievement levels indicated that students have the ability to repairing and painting vehicles' body. Learning and assessment process carried out recently is limited on learning based training. The learning process using the object-based training and simulation practices of real-work conditions. Therefore, it is necessary for the development of practice with real objects and engage consumers as a factor in the assessment/evaluation in the form of teaching factory activity.

Questions to be answered in this study is: Does the implementation of teaching factory can: 1) improve the competence of students? 2) increase the entrepreneurial spirit; 3) produce the product in the form of goods and/or services that have added value? 4) increase the sources of schools' revenue? 5) increase the colaboration with industry or relevant business entities ? and

6) How does teaching factory models that can be implemented in vocational school

2. Discussion

a. Teaching factory learning process

Learning is viewed as a series of activities that progress from simple to more complex, higher-order cognitive processes. Lower level cognitive processes typically include knowledge acquisition, understanding and application, all of which contribute to an ability to transfer and recognize principles in other situations. And higher-level processes are closely linked to analysis, evaluation, and creative thought (Krathwohl, 2002). Moreover, learning is a process by which the learners builds and constructs new knowledge based on their experience, application, and reflection (Golowich, 2013).

Learning in college aims to provide academic skills/hard skills, soft skills/success skills, entrepreneurship skills, and leadership skills so that students are ready to enter the real working world/industry after completing the study (HELTS, 2004; Mursid, 2013). To achieve these objectives, the learning process should be conducted in accordance with the learning objectives. Therefore, before the learning process was implemented, it's necessary to preparing the models, methods, and also the strategies to achieve the learning objectives.

The purpose of the teaching factory learning process are to producing and selling products in form of goods/services in the market in order to increase students' competency and entrepreneurial spirits. To achieve these objectives, the teaching factory learning process at Vehicles' Body Repairing and Painting Workshop of Automotive Engineering Education Department of Yogyakarta State University includes planning, implementation, and evaluation/assessment of students' achievement (Figure 1).

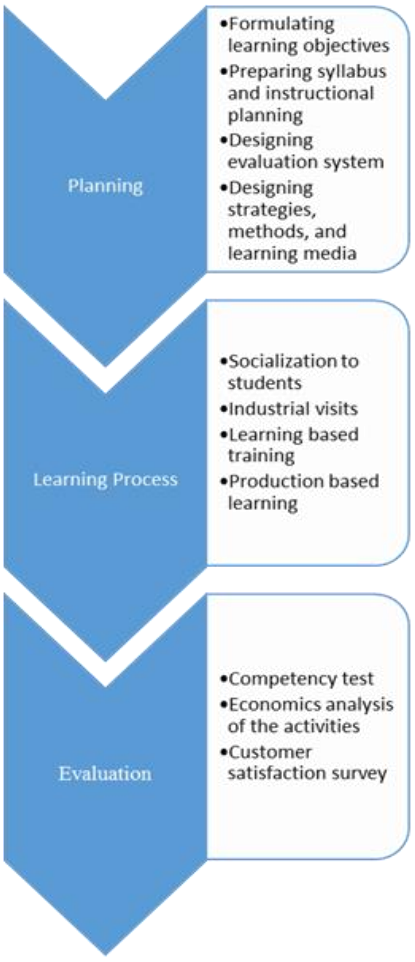

Figure 1. Teaching factory learning process

1) Planning

Setting the instructional design is a routine matter for instructors. But the instructors should be aware with the activity. Instructional design is one of the important steps from whole actions. In the proposed instructional design process, the clear delineation of objectives is an essential foundation for the next steps in learning activity (Hamilton & Klebba, 2011). From beginning to end, the process typically includes assessing the need for instruction, analyzing students' characteristics, defining the learning objectives, selecting the appropriate teaching approach, trying out the strategy to see how effective they are, making revision, as well as implementing and maintaining the instruction (Eberhardt, 2012).

Instructional design of teaching factory learning process was conducted on the formulation of learning objectives, syllabus and instructional plans, and evaluation systems design. Instructional design of teaching factory

learning process also consists of selecting appropriate learning strategies, methods, and media. Furthermore, instructional design of teaching factory learning process also contains the time allocating for each topics or activity during the learning process (Arends, 2004). All those activities purport to create productive environment fostering the students to achieve the learning objectives.

The learning objectives of teaching factory learning process are to 1) improve the students' competency, 2) increasing the students' entrepreneurial spirit, 3) produce the product in the form of goods or services that have added value, 4) increase the sources of schools' revenue, and 4) increase cooperation with industry or the relevant business entities (Sudiyanto, Yoga, Ibnu, 2012). To achieve the learning objectives, there are some activities conduct in teaching factory learning process. The activities include socializing and explaining of teaching factory learning process to students, visiting the body repairing and painting workshop of the industry partners, training about body repairing and painting, producing goods or services, and evaluating the students' achievement.

Body repairing and painting learning courses carried out during 1 (one) semester or 16 weeks. Each week consists of 1 x 50 minutes of theory and 4 x 50 minutes of practice. Each class meeting should divided into some activities according to the learning objectives. Time allocating for teaching factory learning process on Body repairing and painting courses showed in the table 1.

Table 1. Time allocating of teaching factory learning process on Vehicles' Body repairing and painting courses.

No	Week	Activity
1	1	Socialization and explanation of teaching factory learning model to students
2	2 & 3	Industrial visits
3	4,5,6,7,8,9,	Body repairing and painting training/practice
4	10,11,12,13,14	Producing teaching factory products
5	15&16	Evaluation

Development of strategies, methods, and media learning and evaluation systems are described further in the learning process.

2) Learning process

a) Socialization and explanation of teaching factory learning model to students

Socializing and explaining to the students needed so that the students know the teaching factory learning process to be followed. Socialization activities carried out with gave explanations to the students on the learning objectives, the learning activities to be carried out, as well as the evaluation systems. One of the important thing should be knowing by students that the learning process of teaching factory is also associated with the consumer. Therefore, students need to get details on how to communicate with consumers and facing complaints from consumers. Socializing and explaining to the students performed at the beginning of the lecture.

b) Industrial visits

A visit to the body repairing and painting workshop of industry partners in order to observe directly on body repairing and painting workshop's activities. Students visiting the body repairing and painting workshop of industry who have formed an agreement to cooperate.

Activities commenced during the industrial visit include observation on body repairing and painting activities ranging from consumer acceptance, body repairing and painting activities, and the calculation of body repairing and painting services charges. The industrial visits are expected to improve the students' interest and motivation about body repairing and painting industry. The activity is providing additional knowledge and experience to students by directly observing the activities in the industry and associating them with the learning process in the schools (Bhusry & Ranjan, 2012). Industrial visit is also a sample of experiential learning techniques through the students' involvement in specific service learning activities (Robinson, Sherwood & DePaolo, 2010).

c) Body repairing and painting training/practice

Succeeding implementation of the teaching factory learning process is the body repairing and painting practice. Time allocating for the students to practice consists of 6 times meeting/class. Moreover, the topics of body repairing and Painting practice shows in the table 2.

Table 2. Learning activities during training/practice

Week	Body repairing	Body painting
1	Creating car's door profile	Surface preparation
2	Creating car's door profile	Putty application and sanding
3	Creating car's door profile	Masking
4	Creating car's body panel	Color matching
5	Creating car's body panel	Painting
6	Creating car's body panel	Painting

In addition, the learning activities during body repairing and painting training similar with the activities in the body repairing and painting industry, but on a smaller scale. Thus, the learning activities enable students to learning by actively engaging and increase of its transferability to the more realistic, intricate situations encountered in a real situation (Hamilton & Klebba, 2011). The final results of the body repairing and painting training evaluated by lecturers and technicians in order to determine the groups for the next activities.

d) Producing goods and/or services of teaching factory

The learning process following the training is conducting production goods/services on body repairing and painting. Time allocating for the production of goods/services consists of 5 times meeting/class. The production activities conducted in groups. Each group consists of 4 to5 students. The formation of groups based on the training results has been done before. Each group consists of students pursued with heterogeneous competencies that can enable peer learning among students systemically occur.

The products of teaching factory learning process of body repairing and painting are the recycling of vehicle body components and/or painting services. The activities on producing part of body components recycling and/or painting services offering activity that are students needed to achieve specific learning goals within a specific time frame (Utley, 2012). Because of the inadequate time, the students asked to produce simple part of vehicle body recycling and/or repairing/painting small scratch on the car. Time allocating to produce goods and/or services only 5 times. And each times consists of 4 x 50 minutes. Its mean that the totally time available are 1000 minutes or 16 (sixteenth) hours. Time needed to repairing and painting of small scratch on vehicle body estimated no more than 3 days. Even tough, it's no more than 1 day if the treatments needed are simple. Considering the consumer needs and students' activity on the other courses, the process of body repairing and painting is possibly done by block systems.

Consumer need refers to consumer expectation when they repairs their car. The consumer need to fixes their car as soon as possible. They don't want to leave their car in the workshop for long period only for small/simple damages. And students' activity on the other courses refer to students' activity in the same semester. Commonly, the students take 7 to 10 courses each semester. The students have to allocating time for other courses activities. And the block systems indicated that the learning activity can be finished in one time (2 days). If the students can finish the job, they don't have to do it again in the following week. The students only waiting for the competency tests.

The products of teaching factory learning process of body repairing and painting are the recycling of vehicle body components and/or painting services. Who are the consumer for the products? The consumers may possibly come from the peoples around the university, teachers, employees of the university, students, or industry partners who already forming an agreement to support the teaching factory activities.

The teaching factory learning model requested the students to generate a product at least 1 product/service for each semester and each group. Each student are nurtured to have a real experience on repairing and painting vehicles' body. The learning process through real-world activities encouraging students to scaffold theirs knowledge and skills (Tanner, 2012). The activities support the students to learning through concrete experience, reflective observation, active experimentation, and abstract conceptualization (Jong & Wierstra, 2006).

During the teaching factory learning model are implemented, there are some points to be

concerned. Depdiknas (2003) notes that (1) the learning activities need to pay attention to individuals' ability differences to develop their talents and potential optimally (competency based learning); (2) the learning activities focused on the establishment of real experience in daily life according to the needs of the industry and related on the application of concepts, rules, principles, and disciplines; (3) the learning activities directed on the encouraging students to communicate their knowledge and finding to the public; and (4) the learning activities aimed on creating a climate of competition which can lead students to be more innovative and productive.

3) Evaluation

Evaluation/assessment is an integral element within the instructional design and learning process (Bowman, 2015). Evaluation is one of important stage in the learning process (Mursid, 2013). The main purpose of evaluation is to provide valuable information to teacher and stakeholders to made decisions about the learning process or whole curriculum (Stufflebeam & Shinkfield, 1985).

The evaluation/assessment depends on the syllabus, learning objectives, teachers' approach on teaching (teaching methods), and on how the learning environment is arranged. (Bergstrom, 2011). There are some types of evaluation/assessment. Each evaluation approach has their own strengths and weaknesses (Alkin & Taut, 2003; Bauman, 2008). There is no a single evaluation approach or strategy that appropriates with all instructional design/process (Boody, 2009). For instance, if the learning objectives are dominant on students' knowledge, the writing tests are sufficient as the assessment. Nevertheless, if the learning objectives are dominant on students' skills, the performance test are more appropriate. Assessment on students' competency directed to measure and assess the students' performances (knowledge, skills, and attitudes), either directly at the time of learning activities and indirectly is through evidence of learning outcomes (evidence of learning) in accordance with performance criteria/indicator (Winarso, 2013).

The evaluation/assessment of the teaching factory learning process consists of competency test, questionnaire of customers' satisfaction, and economics analysis of the students' activities on producing goods/services during the learning process. Competency test aims to assess the students' competency individually. Competency test of the body repairing and painting courses are both in the form of theory and practice. While the following evaluation method are the questionnaire of customers' satisfaction. The questionnaire given to the consumer who entrust their car fixed by the students. The questionnaire shows the level of customer satisfaction with the students' work. The consumer could be from the industry partners who have forming partnership. Involving consumers in evaluation/assessment reveals the consumer recognition on the products/services produced (Winarso, 2013).

Additionally, the next evaluation methods are a report analysis of the economic calculation on the students' activities during the producing goods/services in the teaching factory learning model. The analysis conducted to encourage the students reflecting on all the activities. Reflection is one of the activities that encourage students to achieve higher order of thinking skills (Hamilton & Klebba, 2011).

This research use approach research and development (R&D) simplified step, ten step (Borg & Gall, 1983: 773), into three stages, namely: study the introduction, development, and testing implementation. The location of this research at the Automotive Engineering Education of Faculty of Engineering Yogyakarta State University, with research subjects are lecturers and students. In this study also involving experts and vocational education practitioners of the industry in order development of model design and validation / test implementation.

Collecting data grouped into two parts, namely, the study introduction and development of the model, as well as model validation. In preliminary studies and development, selected technical questionnaire, observation, and documentation. Data analysis techniques using descriptive analysis with percentage.

3. Conclusion

The conclusion of this study are: 1) The level of competence of conformity subjects taught in to be applied in the Vehicles' Body Repairing and Painting courses very accordance with the needs of the industrial (average concordance rate of 82.11% and 86.75%). 2) Achievement of student competence in the Vehicles' Body Repairing and Painting courses are very well with the number of students scoring above B is 69 students (83.13%) in 2013 and 74 students (91.36%) in the year 2014 in the Vehicles' Body Repairing subjects and 37 students (84.09%) in 2013 and 70 students (88.61%) in the year 2014 for the course painting. 3) The resulting product is a body repair services and painting and reconditioning body

components so that the vehicle fit for sale back. 4) enhance cooperation with industry are invited cooperation consisted of 8 workshops body repairs and painting, one industry Sales of paint, and one vocational school. 5) Teaching factory model that will developed consist of: a) the resulting product, in the form of reconditioning and repair of body components are damaged, b) management of teaching factory, c) facilities and supporting infrastructure, d) financial, e) cooperation with the industry, f) curriculum, g) learning process, and h) human resources. The learning process will be applied as part of the development of teaching factory model at Vehicles' Body Repairing and Painting Workshop of Automotive Engineering Education of Faculty of Engineering Yogyakarta State University.

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LECTURERS' PATRONAGE AND INTEGRATION OF MORAL VALUES IN SPORT PSYCHOLOGY LEARNING AS A MEANS TO BUILD STUDENTS' OBEDIENCE AND HONESTY

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Abstract

This research is aimed at identifying the impacts of lecturers' patronage and the implementation of moral values in sport psychology subject toward the students' obedience and honesty character building in Physical, Health, and Recreation Education (PHRE) study program at Faculty of Sport Science (FSS) of Yogyakarta State University (YSU). To achieve the objective and provide clearer direction, this research was conducted based on lesson study framework. The actions which were used to solve the problem were performed by developing sport psychology lesson plan containing moral values that the lecturer presented during learning process and the lecturers' patronage through coming punctually and discipline in providing the lecture. The targets involved in the study were the 5th-semester students of class A of PHRE study program attending the sport psychology course. The result of this research indicates that the lecturers' patronage in terms of providing examples, i.e. coming punctually in teaching the sport psychology class is able to improve the students' obedience, i.e. being punctual in attending the lecture or not being late in attending the sport psychology course. Moreover, the lecturer who integrates moral values during the lecture of sport psychology subject is able to provide impact on the students' honesty character building, i.e. honest behavior or not cheating during examination.

Keywords: lecturer, patronage, character, obedience, honesty, students

1. Introduction

In college, lecturers play very important role for their institution advancement. This fact has been realized by them for long time. It is indicated by their individual efforts in order to force them to have competence and become experts in their field, and also be responsible to carry out their main job description which is teaching. However, it has been becoming a public secret that many lecturers ignore their teaching assignments. Even the Chief of Indonesian Legislative Assembly in a workshop in the University of Indonesia (UI) by theme 'College's Future in Indonesia' states that many lecturers in college concern more on the projects they are handling, so that it subtracts their critical mind (Tirta, 2012). On the other hand, Boyer (1990) states that the emergence of various university researches creates a situation in which material and research subject findings as sources of knowledge become more important for the lecturer than spending their time to educate their students. Thus, teaching process becomes the second priority for most lecturers. Eventually, their focus is more directed to what they teach, not for how to give knowledge and learning for students, so that teaching students is often placed to a very low priority (Wilshire, 1990).

Meanwhile, it is not easy to involve community members of college in a serious discussion about the importance of giving education towards students that can develop not only strong knowledge basic, but also skills required in decision making about morality as a foundation of future life in society. Most lecturers individually recognize the how a strong character is important to be possessed by student. The question is 'Why do not the lecturers support their students' character building and development in an open manner and why do some of them even show the converse behavior?' That question seems like a simple question, but actually, its root is deeply embedded to the question 'Do the college management, the dean, and the chief of the study program recognize the essence and important meaning of building students' character as a main part of education goal in college?'

Sometimes, the activists of character education ignore college management's restrictive reason so that it makes them seem always in a contrary manner with the college's main goal. On the other hand, the activists' enthusiasm towards character education and

college management also ignores the chance to discuss about the conviction of the importance of character education. However, by starting such a dialogue in a democratic academic community, filled with mutual understanding and consensus, then long-term changes can be achieved. This move is the best way to take in order to make sure that character education can be conducted in permanent and more pervasive ways.

The main objective of education in college is that education should be shown to develop all aspects of individual students in total. The fact is that it is no longer seen as the main purpose of college, particularly what is happening in the research university, even higher-education institutions producing educational teacher (Institute of Teachers Education). Ellen Condliffe Lagemann (2003), the Dean of Harvard Graduate School of Education argues that the latest report mentions education in universities lately has become more focused on the technical and professional education compared to the era of the 1970s. Furthermore, he states that the students are more narrowly focused on the 'vocational preparation' (Lagemann, 2003). In many places and for a while, the college has failed in its mission in providing education to students who are able to 'set the guilt on themselves' or being honest, give empathy towards others, and to be good citizens, and being effective as well as being able to prepare each student to 'participate in defining and dealing with the issues in his day' (Lagemann, 2003).

In Indonesia, such phenomena also occur in teaching profession. Many lecturers fail to carry out teaching assignments. On the other hand, many of them come late to teach and easily leave the teaching assignments without any obvious reason, so do the students. Many students who arrive late to the class will disturb the lecturing process. In order to regulate and prevent such bad behavior performed by the lecturer in future, good model and systematic resolute action from college policy maker are required. This is a challenge in the context of formal education today in which the education movement of the students' characters is emphasized more at primary and secondary schools, while the focus of the character education in college seems lost (Berkowitz & Fekula, 1999; Joseph & Efron, 2005). According to Ray and Montgomery (2006), the character development in college needs commitment at every level or element of college. Kamm et al. (2003) confirm that 'Research has demonstrated that effective character education requires knowledge, interest, and commitment from the leader as well as others involved in the educational efforts.'

The success of implementing character education has to be supported by all elements of college together. It means that if we want to build students' character, the lecturer, as one of the basic elements of college, must be integrated and become the role model on well-behaved teaching in the classroom as well as campus behavior in general. During the actual lecture process, the example and behavior shown by the lecturer have a very central role in efforts to shape students' character. Until now, however, there has been no study of the authors' knowledge about the systematic efforts made by a lecturer in building character through student coursework. On the other hand, the lecturer directs the students more to enhance knowledge during coursework process, regardless of the aspects of character development. Hatten et al. (2001) confirm that one of the main problems nowadays is the lack of educators who teach ethical behavior towards their students.

Starting from the background, this research reveals that the extent of lecturer's patronage and implementation of moral values during the lecture of sports psychology can improve students' obedience and honesty character. Sports psychology was the object of this research because the authors are lecturers of this course. On the other hand, the development of the current learning model has rapidly advanced. Many colleges have executed changes of their learning process from teacher center model to student center. However, in the real process, not all of those colleges conduct learning process referred to student center model. It also occurs in sports psychology learning process. Based on those explanations, the problem is formulated as follows: can the lecturers' patronage and implementation of moral values during the sports psychology lecture shape students' obedience and honesty characters? Therefore, the goal of this research is to find out the impact of lecturers' patronage and implementation of moral values in sports psychology lecture towards students' obedience and honesty character building.

2. Method

In general, the objective of this research was to find out the impact of the lecturer's patronage and the implementation of moral values in sports psychology lecture towards obedience and honesty character building of PHRE study program students in the Faculty of Sport Science of Yogyakarta State University. In order to achieve this objective, the approach of

lesson study design was employed with the research approach stages as follows:

2.1 Arranging learning plan

In this stage, the planning of sports psychology learning was arranged. It contained the action planning of responsibility, discipline and honesty moral values which would be integrated to the lesson by the lecturer in order to improve, enhance, or modify students' behavior and attitude in terms of obedience and honesty characters. The steps undertaken in the planning stage included (a) establishing material/ topics of sports psychology in which the moral values would be included, (b) establishing students' attendance sheet/ list, (c) setting out the students' actions that should be observed by the observer; (d) explaining the observer in detail about the moral values that should be observed when the lecturers were teaching, (e) arranging the learning plan of sports psychology subject integrated with moral values; (f) compiling the learning scenario of sports psychology course with moral values, (g) arranging and explaining the observation sheet to assess students' behavior during lectures and exams to the observer, (h) setting out the measurement tool used to reveal the aspects of this compliance character using observation sheet of student attendance list; (i) explaining the observer about the implementation indicators of moral values that were injected by the lecturer during the learning process, (j) determining and explaining the observation sheet for lecturer's activities in order to implement sports psychology learning which included moral values.

2.2 Carrying out action and observation (do)

This stage contained activities that should be conducted by lecturer (researcher) in improvement efforts, i.e. the occurrence of changes in desired student's behavior, which is, having adherence and honesty characters. Other lecturers served as collaborators observed the actions taken by the lecturer serving as the researcher. There were two principal stages carried out by the lecturer in this action: (a) the lecturer served as patronage, meaning that the lecturer had to be discipline shown in the punctual presence (at least 5 minutes before the admission/ bell ringing, the lecturers had to be already in the class), (b) the lecturer served as the researcher who had to integrate moral values; namely honesty, trust, justice, respect, and responsibility; they all were included during the eight times face-to-face meeting of Sport Psychology course. Each moral value was delivered in one meeting respectively. At the beginning of the lecture (inaugural lecture), the lecturer explained the behavior codes in sport psychology coursework, one of which was setting out a commitment about the attendance in the lectures. The agreed commitment was the consequence of students' right to leave the courses which would be prevailed if the lecturer came late to the class (empty course would be replaced in other day), and conversely, if the students were late, they would be prohibited to enter the class.

2.3 Reflection (see)

In this stage, the researcher and collaborators reviewed and investigated the results or impacts of the actions taken together, then discussed the observations result to determine and assess whether in the implementation of that learning process, the teacher served as patronage in term of arrival punctuality and whether the moral values had been included appropriately during the instructional activities in the courses of sport psychology. This discussion result served as an input for improvement in the next meetings.

2.4 Observation and data recording during the course

Observation and data recording were conducted to assess whether the action conducted by the lecturers or students could run smoothly or not. Thus, there were several types of observation and recording conducted, listed as follows:

2.4.1. Observation on lecturer's teaching performance

During the implementation stage, the observer conducted observation towards lecturer's activity (researchers) for eight-time face-to-face meeting with the use of the observation sheets which had been prepared. Observations were carried out to find out whether in the implementation of that lecturing process, the lecturer could give patronage in the form of always coming on time and also conveyed moral values of responsibility, discipline and honesty in the right manner.

2.4.2. Observation on students' behavior

To find out the impact of lecturer's patronage and success in embedding those moral values towards the character changes of students' obedience, thus, students' behavior was observed during a lecture process conducted by a Professor (researcher). Moreover, to find out students' honesty character, the situation during midterm

was observed to know whether the students cheated or not.

2.5 Data collection and analysis

After the data were collected, the next things to do were collecting and analyzing data and observations from the data entry field. Based on the data collecting techniques and tools, as mentioned above, the data analysis techniques used were as follows: qualitative analysis, as for the steps of data analysis to be performed were: (1) after the data were collected, the data reduction through encapsulated field reports were conducted by the researcher; (2) the data were then arranged systematically based on the categories and specific classifications; (3) the data were displayed in the form of table; (3) cross site analysis was arranged; (4) the findings of the study were presented, and conclusions were drawn in the form of a general trend of sports psychology learning implementation conducted by the lecturer.

3. Results

3.1 Students' obedience character

Students' obedience character refers to students' behavior to be punctual in each meeting (never coming late) for attending sport psychology course. The emergence of this character is an impact from lecturer's patronage behavior which is discipline behavior shown during the eight-time meeting of sport psychology course.

Table 1 shows students' attendance data during the 8 times meeting of sport psychology course.

Table 1. Students' attendance on sport psychology course

Meeting:	Total students	Students' attendance			
		present		late	
		f	%	f	%
I	29	26	89,66	3	10,34
II	29	27	93,10	2	6,90
III	29	27	93,10	2	6,90
IV	29	28	96,55	1	3,45
V	29	28	96,55	1	3,45
VI	29	29	100,00	0	0,00
VII	29	29	100,00	0	0,00
VIII	29	29	100,00	0	0,00
average	29	27,875	96,12	1,125	3,88

Students' attendance during the eight times meeting of sport psychology course as a reflection of students' obedience is visually presented in a diagram in figure 1 and figure 2:

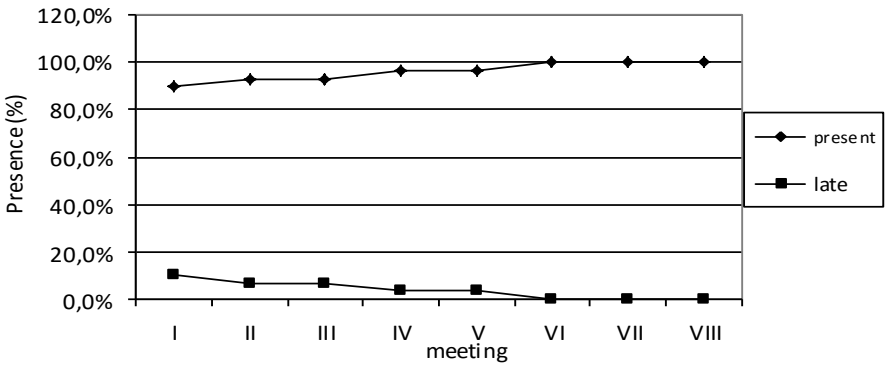

Figure 1. The percentage of students' presence and lateness

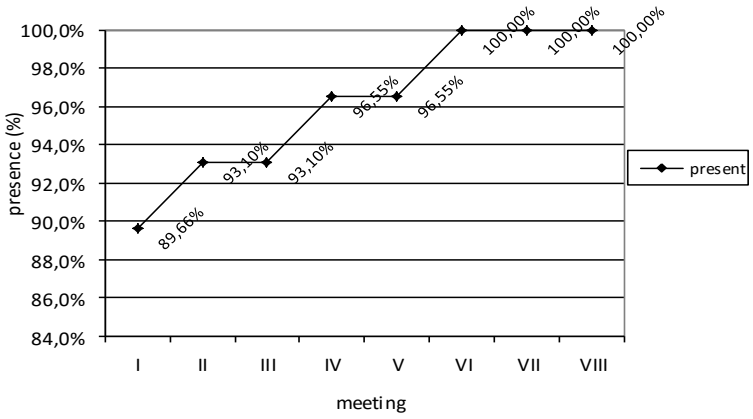

Figure 2. The percentage of students' presence on sport psychology course

Based on the both diagrams, it is indicated that students' presence on sport psychology course from the first meeting until the eighth meeting has increased. It means that presence percentage of punctuality has increased from the first meeting until the eighth meeting, and even their presence on the sixth, seventh, and eighth meetings are 100%. It also indicates that students' obedience character has increased.

3.2 Students' honesty character

In this study, students' honesty character means students' behavior for not cheating during the midterm test. Based on the result of observation towards 29 students' behavior during the midterm exam, it is noticed that there is no student who cheats. This behavior reflects that the students have honesty character. The emergence of students' honesty character is an impact of lecturer's behavior who always integrates moral values during the eight-time meetings of sport psychology course. It means that when the lecturers are teaching sport psychology course, they always include moral values namely (1) honesty, (2) trust (3) justice, (4) respect, and (5) responsibility in the course

4. Discussion

4.1 Improving students' obedience character

The result of this research indicates that the students' obedience character reflected on their presence of being punctual in attending sport psychology course is an impact of the lecturer's exemplary behavior of always coming on time to the instructional activities. It means that the improvement of students' obedience character cannot be separated from the role of the lecturers' punctuality to teach. This patronage has an influential impact towards the changes of students' obedience character reflected in their presence of not being late to attend sport psychology course. This fact strengthens a well-known proverb on education field that says '*guru kencing berdiri, siswa kencing berlari*.' The proverb insists that all teachers' behavior will be imitated by their students. Good behavior demonstrated by an educator, either it is a teacher or lecturer, will give a positive impact towards their students' behavior. Hatten et al. (2001) confirm 'In this case, however, I am convinced that "ethics" is primarily a matter of positive role modeling. Quite simply, "good" teachers produce "good" students' (p. 12). Supporting this idea, Roni on his speech in Unesa 47th *Dies Natalis* states that in college, the lecturer's patronage is a real example for students' character education because the best way of embedding character education is not by lecture or course, but by real example and action (Masruroh, 2011).

Theoretically, the honesty and obedience character formed toward the students as an impact from examples of the lecturer's behavior can also be explained by social learning theory of Bandura. Social Learning Theory (SLT) also focuses on learning which occurs in social contexts (Bandura, 1977). Considering that student learns something completely including various concepts such as observational, imitation and modeling, SLT explains that behavior on continuous interaction will influence the cognitive of behavior itself and the surrounding. Furthermore, Akers (1998) confirms that there are four key elements of SLT: (a) imitation, (b) definition, (c) association difference, and (d) difference of reinforcement. Sellers, Cochran,

and Branch (2005) explain those key elements with more detail description as follows:

4.1.1. Imitation

It refers to which extent for someone to emulate good behavior. The role of other model for someone is significant. The ones have experienced personal relationship and the rest is observed directly on behaves.

4.1.2. Definition

It is the second element of social learning theory and refers to attitude and individual. It contains values about law of morality in general and also specific deviant behavior and guiltiness.

4.1.3. Association difference

It is the third element of SLT. It refers to definition influence (attitude) and the significance of other's behavior towards individual behavior. According to social learning theory, definition description and other's behavior with whom someone interacts have a strong influence on the definition of self-behavior. There are various impacts of this risk in accordance with frequency, duration, intensity, and priority of different individuals to have relationship with others.

4.1.4. Difference of reinforcement

A general principle of SLT is that individual can learn by observing other's behavior. Behavior result is influenced by reinforcement and punishment. This theory states that behavior can be learned through modeling strategy which is the main strategy used in social skill training. Bandura (1977, p. 22) confirms that:

> *Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behaviour is learned observationally through modelling: from observing others one forms an idea of how new behaviours are performed, and on later occasions this coded information serves as a guide for action*

In addition, Bandura (1977) states that modeling is influenced by learning process particularly through informative function. Along with the description of model behavior, the observers obtain symbolic representation from model activity served as guideline for suitable performance. The fifth social learning process can be conducted by observations, which include (a) attention, (b) retention (including cognitive organization and motor training), (c) motor reproduction (including physical capability, observation of self-reproduction, and feedback's accuracy), (d) motivation (including external and internal reinforcement), and (e) the observer's characteristics (such as sensory capacity, enthusiasm level, perception regulation and past experience). According to Bandura (1977, p. 29):

> *Modelling can be increased by reinforcing matching behaviour.... Facility in observational learning is increased by acquiring and improving skills in selective observation, in memory encoding, in coordinating sensory motor and idea motor systems, and by the ability to foresee probable consequences of matching another's behaviour.*

Bandura also confirms that reinforcement has a role in learning, particularly as an introduction of consequent influence. Furthermore, he informs that reinforcement anticipation is one of several factors which can influence what is observed. Besides, learning observation can be achieved more effectively by delivering the observer's information first about the benefit of behavior adoption modeled by waiting until the adoption happens and then giving reward for it. More importantly, the process can be used in social skill instruction.

Based on those reviews and theories, it is more reinforced that the reflection of students' character changes of obedience is an impact from the exemplary behavior demonstrated by the lecturer during the learning process of sport psychology.

4.2 *Shaping students' honesty character*

The result of this research also indicates that there is improvement on students' honesty character as an impact of the lecturer's behavior, which is, always integrating moral values in sport psychology course.

The interaction which occurs between students and the lecturer during sport psychology course is known as a learning process. Rooijakkers (1990) says that each actual learning effort is aimed at emerging or improving behavior. In educational context, achieving behavior improvement can be done by placing the lecturers to serve as role model in order to make their students able to learn and master the lesson. Thus, they will achieve one determined goal such as improved knowledge (cognitive), and also be able to influence attitude changes (affective) and the students' skill (psychomotor). Therefore, learning gives impress that there is merely one side, which is the lecturer side, which takes part. Whereas, learning actually indicates

that there is interaction between teachers or lecturers and their students. According to Hansen (2008), affective skill or affection is more emphasized on learning experience related to individual's emotion, such as attitude, interest, attention, awareness, and values which are directed to reflect affective behavior.

In this context, it can be explained that learning process is a helpful effort which is given by lecturer in order to form students' process of knowledge and science achievement, mastering skill and character, and attitude as well as trust building. The lecturers who include moral values in their lessons actually have conducted affective learning. Affective learning is an effort which is carried out by lecturer related to the building and development of students' character in order to develop students' morality. Therefore, it can be concluded that affective learning in the context of sport psychology learning can attain its goal at developing and forming honesty character which is reflected on students' behavior by being honest and not cheating during the examination.

5. Conclusion

In college, lecturers play highly strategic double role, which is outside the main source of institution advancement, they also play central role to educate their students so that their students become professional persons and have strong character. However, in fact, there are many lecturers who are not successful yet in carrying out their mission to educate their students in order to form individuals who have honesty and empathy character so that they will be good and effective citizens. It is a challenge, considering that on formal education context today, character education movement in college has not been given serious attention yet. To form students' character in college, commitment from each level or existing element in college, particularly the lecturer, is needed. In this context, it must be noted that lecturers have a role to be a model in various life aspects, particularly while they are teaching their students. The findings of this research give valuable information for the researcher specifically and the lecturer in general that actually, lecturer's patronage to always become punctual in teaching sport psychology course can improve students' obedience character. Moreover, the lecturer's decision to include moral values during the learning process of sport psychology gives impact toward the emergence of students' honesty character which is reflected on their good behavior during the examination by not cheating. These findings reinforce social learning theory and give further information about the impact of lecturer's patronage for always implementing structured moral values during the learning process of sport psychology and it is able to improve students' obedience and honesty. By some limitation, this research result is expected to be useful as a worth model for future research concerning with patronage aspects and moral values owned and delivered by lecturer in order to improve students' obedience and honesty.

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THE DIFFERENCE OF THE FATIGUE PERCEPTION, EXERCISE PULSE RATE, AND BLOOD LACTIC LEVEL AFTER DOING MULTY STAGE FITNESS TEST AND YO-YO INTERMITTEND RECOVERY TEST

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Abstract

Physical capacity is the initial of sport development. To support the achievement of the purpose of the exercise, needed an instrument evaluation to determine whether there is progression that occurs during exercise program is running. Along with the development of science and technology, a variety of physical capacity assessment instrument to emerge following modification. Interest modifications and developments are based on some adjustments, including physical characteristics; the basic skills of the sport movement; and the specific energy system. Multi Stage Fitness Test and Yo-Yo Intermittent Recovery Test are two types of fitness test that often used to determine athlete's physical capacity, especially related to cardio-respiratory fitness. Although it has similar objectives, but at the time of execution, there are several differences. Objectives to be gained from this research are: knowing the difference in the achievement of the athlete's VO2max; the perception of fatigue; determine the increase of exercise pulse rate; determine levels of blood lactate athletes after Multi stage fitness test and Yo-yo intermittent recovery test. The research design is quasi-experimental research, studies conducted with quantitative approach. Subjects consisted of 13 Basketball athletes. Determination of the study subjects by purposive sampling. The subject of research is basketball athletes who have followed an intensive training program for at least six months. Basketball men's team Senior High School 4 Yogyakarta already has many achievements as a junior athlete at the championship on regional and national level. The results showed: the characteristics of the subjects based on the mean age was 17 years, mean body weight 69 kilograms, and the average height of 175 cm. The result of the athlete's VO2max using multistage fitness test lower than Yo-yo intermittent recovery test, the athlete's perception of fatigue multistage fitness test lower than Yo-yo intermittent recovery test. Increased exercise pulse rate athletes to Multi stage fitness test lower than Yo-yo intermittent recovery test. Increased levels of blood lactate athletes after a multistage fitness test lower than Yo-yo intermittent recovery test. Based on the description of the results, it can be concluded that the intensity of Yo-yo intermittent recovery test is higher, because psychologically athletes perceive (use: The Borg Rating of Perceived Exertion/RPE scale) this test is needed high exertion, and physically athletes increased exercise pulse rate and blood lactate higher than after do Multistage fitness test. But instead, the result of the athlete's VO2max higher when measured by Yo-yo intermittent recovery test compared Multi stage fitness test.

Keywords: perception of fatigue, exercise pulse rate, blood lactate levels, multi stage fitness test, yo-yo intermittent recovery test.

1. Introduction

Physical capacity is the initial prestatif sports development and is the basis for a person if want to get involved in sport and obtain optimal results. To support the achievement of the goals of an exercise program. The necessary existence of an instrument evaluation to determine whether there is progression that occurs during exercise program was running, not least the biophysical capacity of athletes. The scope of practice together all the information from the sources of scientific and societal used by trainers, along with his knowledge of the athlete in order to produce an effective exercise program. In the process of training required to practice various supporting knowledge that exercise can succeed as expected. The supporting knowledge of sports according Bompa (2000), among are: Anatomy, Physiology, Sports Medicine, Biomechanics, Statistics, Test And Measurement, Psychology, Motor Learning, Educational Science, Nutrition, History, And Sociology. All supporting science will be obtained in full in the lecture bench in college sports. Therefore, in the world of sports achievement training process that is done to

achieve it is a job that is very unique and full rehearsal, the actualization of each child's activity practice is strongly influenced by factors feelings, thoughts, emotions, and physical condition.

Many instruments have been developed, which aims to measure each component of the biophysical capacity of an athlete. Even in its development, modification of the instrument is not only based on physical components to be measured, but also consider the instrument test the sport what it will be used, adapted to the characteristics of motor skills and energy systems that run on certain sports.

Athletes not making machine medals, as individuals, athletes have a psychological component that can not be released. Therefore, it naturally follows that each person's actions must be the result of psychological component analysis, although then poured in a physical activity. Perception of fatigue is one of the psychological elements that can be measured. Psychologically this perception associated with thoughts, feelings, and emotions of athletes, or commonly referred to mental factors. Because one of the critical success factors of sports performance of an athlete is the mental readiness, of course, also be supported with physical readiness, techniques, and tactics. Mental readiness of an athlete associated with motivation, self-confidence, and emotions that can affect the performance and behavior of athletes, both during training and in matches. Many empirical studies that prove that the mental factor plays an important role (80%) in determining the athlete's performance (Lilik Sudarwati and Zainal Abidin, 2012).

Related to mental factors, then the athlete's perception of an instrument of measurement is also a thing to consider. Assuming that, if a person is perceptive considers a test in actual burdensome, then mentally will affect the internal motivation of athletes to carry out such tests, which ultimately will provide optimal results.

In the psychological aspect, perception of fatigue associated with thoughts, feelings, and athlete emotions, or commonly referred to mental factors. Readiness of an athlete's mental and behavior associated with motivation, self-confidence, and emotional. Many studies prove that mental factors play an important role in determining sport achievement. Athlete, is a complex individual who is not acting as a medal molding machine, beside the physical capacity factor, psychological component is also the most influence factor on the athlete's achievement.The perception of an athlete of the test implementation, will Affect athletes seriousness and internal motivation in completing the test. Multistage fitness test or bleep test is a test performed on a flat pitch 20 meters. Testee required to run in accordance with the command from audio CD that starts at low speed and will grow slowly. Testee run from the starting line follow the cue and had to return to the starting line after hearing the continuation of the command from audio CD. Testee will keep running back and forth with the speed increases slowly until the Testee was unable to maintain his pace at a certain level. This level will indicate cardio-respiratory endurance, capacity of participants converted with VO_2max tables. Yo-yo intermittent recovery test is a variation of the Multi stage fitness test. In its implementation using the same equipments with Multi stage fitness test, the different is Yo-yo intermittent recovery test had a time of active rest for 10 seconds. The rest, participants will continue to run follow audio CD command, such as the Multi stage fitness test.

Based on these assumptions, the researchers are interested in performing analysis related komparasional a measurement instrument that is often used by athletes to determine their physical capacities; multy stage fitness test and Yo-yo intermittent recovery test. Objectives to be gained from this research are: Knowing the achievement of VO_2max measured using multy stage fitness test and Yo-yo intermittent recovery test; Knowing athletes fatigue perception against multy stage fitness test and Yo-yo intermittent recovery test; Knowing increased pulse rate occurring in athletes after multy stage fitness test and Yo-yo intermittent recovery test; and increased of blood lactate levels after multy stage fitness test and Yo-yo intermittent recovery test.

2. Method

This research was conducted using the method of test and measurement, conducted to see the differences in the level of some components related to the capacity of the athletes as measured using Multystage Fitness test and Yoyo Intermittent Recovery test. Data were presented descriptively. This research is descriptive percentages and methods used in this research is survey method with test and measurement techniques to retrieve data.

2.1 Subject

In order to achieve such a feat, then of course the athletes must have not only the

physical readiness, but also techniques and good psychic capacities. Subject of the study were selected based on purposive sampling method intended to minimize the data bias, assuming heterogeneity can be controlled. Based on some of considerations the subject of this research are basketball athletes that had been engaged with at least six month training programe, in aditionally was compete in nasional level. This research was involving 13 basketball junior athletes of Senior High School 4 Yogyakarta that can be assumed that the biophysical capacities are able to perform physical tests, which are given for research data collection process. It is conducted in UNY outdoor basketball court.

2.2 Measurement Procedures

The study is divided into two stages of implementing: the first stage done multistage fitness test, the second stage Yo-yo intermittent recovery test. Data collected by the implementation stages as follows: (1) Subjects were given an explanation of the purpose, objectives, and benefits of research (2) The research subjects fill out a form of basic data, and signed a statement of willingness to engage in research (3) Subject performed two data retrieval research done on different days. On the day of data collection, the subjects follow the research procedure; at first Subject briefed execution of tests, than Subject pre-test pulse rate calculated, before doing the test. After that, their initial blood lactate levels calculated, and Subjects doing the test (Multystage Fitness test and Yoyo Intermittent Recovery test in the different day). Subsecuently, Subject post-test pulse rate is calculated, Subject measured blood lactate levels after the test, and finally Subject fill fatigue assessment instrument perceptin (RPE).

2.3 Multystage Fitness Test

The athlete's maximum oxygen uptake (VO_2 max) can be determined from the MSF-Table using the Level and Shuttle achieved. The objective of the Multi-Stage Fitness Test (MFT), developed by Leger & Lambert (1982), is to monitor the development of the athlete's maximum oxygen uptake (VO_2 max). This test is very good for games players such as Basketball and soccer. Test reliability will depend upon how strict the test is conducted and the individual's level of motivation to perform the test. This test provides a means to monitor the effect of training on the athlete's physical development. There are published VO_2 max score equivalents for each level reached and the correlation to actual VO_2 max is high. For an assessment of your VO_2 max to see the VO_2 max normative data tables is needed (Mackenzie, B. 1999).

2.4 Yoyo Intermittent Recovery Test

This test was developed by the Danish soccer physiologist Jens Bangsbo. Essentially repeated 40m (2x20m) runs with a recover period in-between. The Yo-Yo Intermittent Tests are similar to the commonly known Beep Test. However, in the intermittent tests the participants have a short active break (5 and 10 seconds for the intermittent endurance and intermittent recovery test, respectively). The objective of the "Yo-Yo Intermittent Recovery Test" is to monitor the development of the athlete's maximum oxygen uptake (VO_2Max) and ability to perform repeated interval work. Reliability will depend upon how strict the test is conducted and the individual's level of motivation to perform the test. This test provides a means to monitor the effect of training on the athlete's physical development (Jens Bangsbo, 2005).

3. Result

Characteristics of RespondentsData results showed, has a specific research subjects were described as characteristics of respondents in general. Characteristics of respondents described in the following table:

Table 1. Caracteristics of Subject

Variable	Min value	Maks value	Average
Age	16 tahun	18 tahun	17 tahun
Weight	51 Kg	95 Kg	69 Kg
Height	162 Cm	186 Cm	175 Cm
BMI	18	31	22.5

Based on the table overview of the subject of research by the mean age was 17 years, mean body weight 69 Kilograms, and the average height of 175 Cm. Subjects body mass index average is within normal.

3.1 Cardiovascular Endurance (VO_2Max)

Data obtained from multistage fitness test is a data level and the shuttle which is then converted to the table predictive value that has been validated and adopted, while the yo-yointermittend recovery test data obtained is the total distance participants calculated using the formula of VO_2max from Bangsbo, et al. (2008). Data VO_2max of each test are then categorized using tables VO_2max of Heywood (1998). The results of the study cardiovascular endurance levels or VO_2max using multistage fitness test and yo-yo intermittent recovery test subjects are as follows.

Cardiovascular endurance (VO_2max) based on the cardiovascular endurance test methods multistage fitness test and yo-yo intermittent recovery test. Cardiovascular endurance levels of the test method or VO_2max multistage fitness test and Yo-yo intermittent recovery test are presented in the following table.

Table 2. Cardiovascular endurance (VO_2max) based on the method of multistage fitness test and Yo-yo intermittent recovery test

No	Category	Test-method			
		MFT	%	Yo-yo	%
1.	Very low	0	0	0	0
2.	Low	2	15,4	0	0
3.	moderate	5	38,4	5	38,4
4.	Good	5	38,4	7	53,8
5.	Very good	1	7,7	1	7,7
6.	High	0	0	0	0
	Jumlah	13	100	13	100

According to the table or the cardiovascular endurance VO_2max above can be illustrated with the following bar chart.

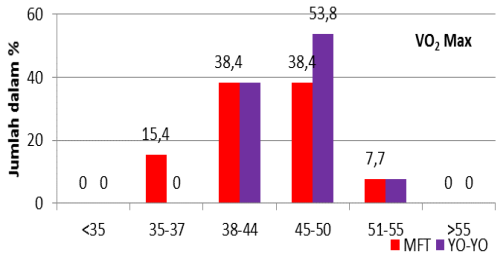

Figure 1. The bar chart cardiovascular endurance (VO2max) athletes based on the method MFT and Yo-yo test

3.2 Fatigue Perception Index (Rating of Perceived exertion/RPE)

Index fatigue in this study was conducted using the fatigue scale rating of percieved exertion (RPE), which is used by the Borg. Scale used starting from 6 scale (do not feel tired at all) to a scale of 20 (very, very heavy unbearable). Participants test measures the fatigue index of the two tests by selecting the appropriate scale with the perception of fatigue felt by the participants. Athlete fatigue perception index of the cardiovascular endurance test using multistage fitness test and yo-yo intermittent recovery test are presented in the following table (Borg. GA., 1982).

Table 3. Fatigue index (RPE) athletes to the method of multistage fitness test and yo-yo intermittent recovery test

No.	Skale RPE	Fatigue description	Test Methode			
			MFT	%	Yo-yo	%
1.	6	No exertion at all	-	-	-	-
2.	7	Extremely light	-	-	-	-
3	8		-	-	-	-
4.	9	Very light	-	-	-	-
5.	10		-	-	-	-
6.	11	Light	1	7,7	-	-
7.	12		-	-	-	-
8.	13	Somewhere hard	4	30,8	5	38,5
9.	14		-	-	-	-
10.	15	Hard (heavy)	7	53,8	7	53,8
11.	16		-	-	-	-
12.	17	Very hard	1	7,7	1	7,7
13.	18		-	-	-	-
14.	19	Extemely hard	-	-	-	-
15.	20	Maximal exertion	-	-	-	-
		total	13	100	13	100

Based on the index table fatigue (RPE) above can be illustrated with the following bar chart.

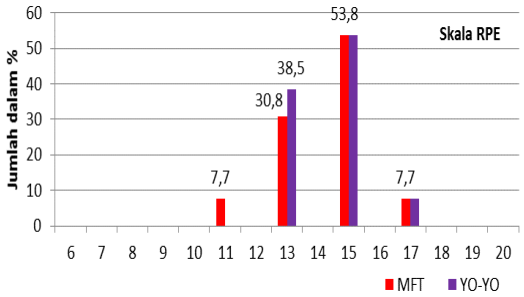

Figure 2. The bar chart fatigue index multistage fitness test methods and **yo-yo intermittent recovery test**

3.3 Pulse Exercise

Based on the research results, data showed normal pulse rate and pulse rate athletes workout while doing multistage fitness test and yo-yo intermittent recovery test.

Table 4. Difference pulse after a multistage fitness test and yo-yo intermittent recovery test

	Test Method	
Value	MFT	Yo-yo
Min	36	56
Max	100	117
Mean	62.92308	81.08333
Avarage %	62.15385	94.23077

The table shows the differences in the difference increased pulse rate athletes while doing multistage fitness test and yo-yo intermittent recovery test. It appears that the average value increased pulse rate in athletes while doing multistage fitness test lower (62.92) than the yo-yo intermittent recovery test (81.08). Meanwhile, when viewed from the percentage of the multistage fitness test only provides increased pulse rate amounted to 62.15%, while the yo-yo intermittent recovery test provides increased pulse rate of 94.23%.

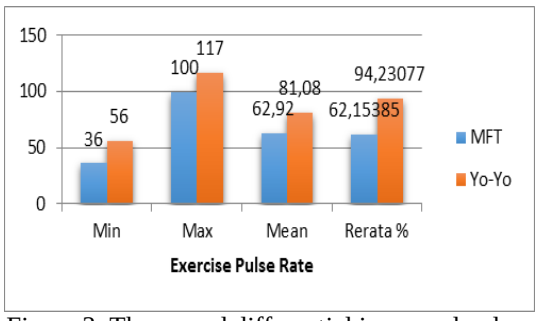

Figure 3. The spread differential increased pulse rate exercise on a multistage fitness test and yo-yo intermittent recovery test

3.4 Blood Lactate Levels

Lactate is a substance that produced by of one's metabolic processes, an increase in lactate levels can be caused by several things. For instance, it produced when anaerobic heavy physical activity occur or when the body is in certain health conditions. Multistage fitness test and yo-yo intermittent recovery test is basically a method used to determine a person's aerobic endurance. But the governance phase of combustion energy in the body, going through anaerobic phase first before running the aerobic phase. Therefore, someone who does multistage fitness test and yo-yo intermittent recovery test also produces lactate. the blood lactate concentration difference between the multistage fitness test and yo-yo intermittent recovery test presented below.

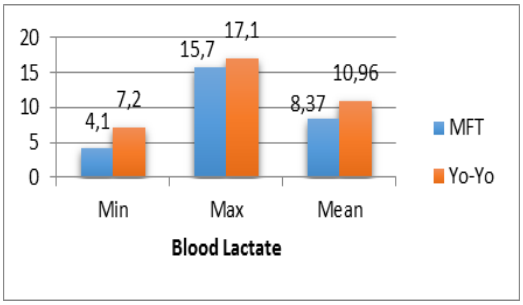

Figure 4. Differences in blood lactate levels after a multistage fitness test and yo-yo intermittent recovery test

4. Discussion

Cardiovascular endureance (VO_2max) is a major factor in the game of basketball. Basketball game requires players to play with intermitatent explosive so need the encouragement of the cardiovascular endurance is good. Basketball game made for 10 minutes in 4 quarters, so claim the players to play very quickly to produce the scors. In his Introduction to the 'Theory and Methodology of Physical Training', Sukadiyanto (2011) states, The relationship between resistance and performance (appearance) Physical sportsman whom are added: (1) the ability to perform activities of working continuously with high intensity and in the long term, (2) ability to memperdek recovery time (recovery), especially in sport competitions and games, (3) the ability to receive training burden heavier, longer, and vary. Thus sportsman who has good resistance will benefit during the match, including sportsmen will be able to: (a) determine the rhythm and pattern of

the game, (b) maintaining or changing the rhythm and pattern of the game as expected, and (c) to fight for ductile and do not give up during the contest.

Yo-yo intermittent recovery test is a test of endurance developed pulmonary heart of the multistage fitness test in 2008 by Bangsbo so that such tests are not widely known by athletes. Knowledge athletes less against the test affect a person's perception accordingly as described by David Krech cited by Diesty Eka Kurnia Wati (2009), stating a person's perception is influenced by: Frame of Reference, which is a framework of knowledge that is owned and influenced from education, reading, research, and Frame of experience, that experience he had experienced that can not be separated from the state of the surrounding environment.

Based on the results of the data level of durability heart lung that has been described can be seen level of durability heart lung or VO_2max athlete of the multistage fitness test lower than the yo-yo intermittent recovery test because the level of endurance heart lung or VO_2max athlete of the yo-yo intermittent recovery test no one is in the category of low and very low.

Yo-yo intermittent recovery test has an active recovery that is not owned by multistage fitness test.Yo-yo intermittent recovery test according to the type of exercise performed at a basketball game that has an active recovery between games are explosive. Type the same exercise with the yo-yo intermittent recovery test affects the cardiovascular endurance levels correspond to that described by Brian J. Sharkey (2003: 80), factors exercise can enhance the function and capacity of the respiratory system, cardiovascular and blood volume, but changes the most important occurs in muscle fibers that are used in practice. Muscle fibers undergo these changes make it easier for the athletes perform cardiovascular endurance test by the method of yo-yo intermittent recovery testsehingga get a higher level of VO_2max.

Science and technology will always experience growth for refined and certainly to facilitate human in doing the job. Tests and measurements of cardiovascular endurance is also experiencing growth as the multistage fitness test and yo-yo intermittent recovery test. Yo-yo intermittent recovery test is carried out at intermittent sports such as basketball suite is described by Lilik and Zainal (2012: 27-28), cardiovascular endurance test Aerobic exercise should use the same type carried out by participants with a general time of about 8 -15 minutes, if shorter and increase the anaerobic energy then this test will be less valid.

Perception mental fatigue will affect the ability of the athlete on the pitch and counter the perception of fatigue is felt on the pitch. Various sports psychology article said "80% of the athletes victory is determined by the mental factor". That is the mental factor plays a very important in determining achievement of an athlete (Lilik Sudarwati and Zainal Abidin, 2012: 4-5) Athletes who have good mental will be able to fight during the game, on the contrary if the athlete has a mental low will not be able to survive against fatigue is felt on the pitch.

Based on research data of fatigue perception index that has been described above, it can be seen athletes fatigue perception index of the multistage fitness test method is lower than the method of yo-yo intermittent recovery test. However, athletes cardiovascular endurance achievement used yo-yo intermittent reovery test higher than the multistage fitness test.

Athlete fatigue perception index which is measured by RPE scale of Borg is within a scale of 11 (mild) totaled 1 (7.7%), a scale of 13, amounting to 4 people (30.8%), a scale of 15 amounted to 7 people (53.8%), a scale of 17 numbered 1 (7.7%). The scale shows the perception of fatigue endurance athletes to test heart lung using multistage fitness test. Athlete fatigue perception index of the cardiovascular endurance test using yo-yo intermittent recovery test is in the scale of 13 (moderate) of 5 people (38.5%), a scale of 15 amounted to 7 people (53.8%), totaling 17 scale 1 (7.7). Based on the results of these data can be seen on the perception of fatigue athletes multistage fitness test lower than the yo-yo intermittent recovery test due to the perception of fatigue athletes to yo-yo intermittent recovery test does not exist that is on a scale of 11 (mild).

Based on the results of these data it can be seen that the increase in lactate levels in the blood of athletes after conducting test methods multistage fitness test lower than the yo-yo intermittent recovery test, which means it can be assumed that the intensity of physical activity undertaken during the test yo-yo intermittent recovery test higher, so that the athletes increased blood lactate more than after a multistage fitness test. All exercise draws first on intramuscular stores of ATP and creatine phosphate; initially these are replenished by anaerobic glycolysis. The lactic acid produced contributes to the rapid development of fatigue in high intensity exercise. Aerobic metabolism (at first mainly of glycogen, later increasingly of fat) is the principal route of ATP resynthesis in activities lasting longer than 2 min, but can only maintain work-rates about

1/4 of those possible in very brief bursts (Spurway NC. 1992; Guyton, 2006).

Robergs and others showed that this common understanding has some flaws. It turns out that anaerobic respiration functions all the time, turning sugar into a compound called pyruvate, releasing some hydrogen ions at the same time. Aerobic respiration works to clean up the pyruvate, using oxygen to burn the pyruvate into carbon dioxide and water, which can be exhaled. The aerobic process also consumes acid (hydrogen ions), which retards the buildup of acid in the muscles (Robergs, R. A 2004).

The generation of lactate is actually a side reaction: when excess pyruvate and acid start to accumulate (when the rate of anaerobic respiration overtakes the aerobic system's ability to remove the waste), the body uses a pyruvate molecule and a hydrogen ion to create lactate, another way in which it can slow down the buildup of acid. The lactate can also be shuttled out of the muscles, into the blood, and burned in other areas of the body for more energy (Jeff, NY).

Heart rate (HR) monitoring is the most popular indirect method of estimating intensity of exercise and it also seems to be the most practical and low-cost method. Previous studies have not generally found differences in terms of HRmax measured during the Yo-Yo test and in different treadmill, also found no significant differences in HRmax values between the Yo-Yo continuous and intermittent tests as well as maximal exercise treadmill test with continuous and intermittent protocols (Barıs Karakoc, 2012). The pulse is one of the main indicators that describe the person's physiological performance, the heavier the intensity of physical work done will be directly proportional to the increase in pulse rate. Based on these data it can be seen that the increase in pulse rate training athletes to test methods of multistage fitness test lower than the yo-yo intermittent recovery test, which means it can be assumed that the intensity of physical activity undertaken during the test yo-yo intermittent recovery test is higher than the multistage fitness test.

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BRINGING VOLUNTARY FINANCIAL EDUCATION IN EMERGING ECONOMY: ROLE OF FINANCIAL SOCIALIZATION DURING ELEMENTARY YEARS

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Abstract

Financial literacy is the ability to use knowledge and skills to manage financial resources effectively to achieve financial well-being. Citizens who have financial competence will be able to play an important role in economic stability of nations. Financial experts recommend that Financial Education should be thought in the early age. Thus, it is necessary to provide financial socialization started from when students are enrolled in the elementary school. Financial socialization begin with acquiring information and thenceforth developing values, attitudes, standards, norm and behaviors that provide context for one's financial practice; However, current information and financial literacy education for children is very limited. Curriculum in Indonesia has not developed its financial literacy integrated in the education. Therefore, we instigate financial socialization by developing teaching material of Financial Education for elementary school students and examine its effect on financial knowledge. By using an experimental method, results showed that elementary students are able to learn financial topic and through learning, their financial knowledge are improved..

Keywords: Financial literacy, Financial Education, Elementary school

1. Introduction

Financial literacy is the ability to use the knowledge and skills to manage financial resources effectively to achieve financial well-being. Citizens who have financial competency plays an important role in the functioning of financial markets and the economic stability of nations (OECD, 2005; Hilgert, Hogarth, & Beverly 2003). The inability of people making financial decisions in managing finances can have negative impact on all aspects of the economy of a country (Mandell, 2009). Some financial experts recommend that financial education should be given early (Mandell, 2009). Over the last decade, major initiatives on financial literacy and education have been undertaken by a number of high-income countries. Some studies of financial literacy which have been conducted at primary schools in the developed countries (Grody and Sutliff, 2008; Schug and Hagedorn, 2005; Hagedorn, Schug and Suiter, 2015; Berti and Monaci, 1998) found that for elementary students, financial education can improve their financial knowledge. In the last few years, there is a rising interest in financial literacy issues in both of the low and middle income countries for many different causes, i.e. Concerns with the perceived low level of financial capability, financial access or use; and the recognition that finance is a critical element for innovation and growth (OECD). However, limited studies examine the effect of financial education in the middle income country.

The level of financial literacy tend to be low in children, adolescents and the elderly than in those in adulthood (Lusardi and Mitchell (2011a). Everyday, children are involved in financial decision making activities, so it is needed to equip students with skills and knowledge about finance. Knowledge of financial literacy that is given early will have an impact on improving their financial competency in the future. Financial education provided by schools will not only improve the level of financial literacy of the children, but also will be able to reach all children in the school, including those who have little chance to get financial literacy outside of school. In addition, the school environment will also facilitate financial education to be integrated into other topics, such as mathematics (Beverly & Burkhalter, 2005). Financial education at the primary and secondary schools has a positive influence on improving the students' competency in finance (Sherraden et

al., 2011). Harter (2009) examined the implementation of financial education curriculum for primary and secondary school classes and found a significant improvement compared to the control group. Sosin et al, (1997) found evidence that the student will gain a cumulative learning if they received financial literacy education since in the youth level (Sosin et al., 1997). Some researchers propose financial education to be given starting at the primary school level (McCormick, 2009). Suiter and Meszaros (2005) also showed that young people can benefit from financial education by make better financial decisions and control themselves not to spend money to follow the fashion trends and advertisements. However, current information and financial literacy education for children is very limited (Sherraden et al., 2011). Specifically for Indonesia, the Curriculum in Indonesia has not developed its financial literacy integrated in the education.

Every developmental stages (pre-elementary, elementary and adolescence and young adult) have appropriate foci for financial capability interventions. Those interventions are including executive function, financial socialization, and financial skill building (Drever, 2015). Executive function is critical for pre-elementary students and it refers to the cognitive abilities for staying focused on long term goals, and also acquiring and processing financial information. Financial socialization is the key for elementary students and it refers to acquiring and developing values, attitudes, standards, norm and behaviors that provide context for one's financial practice. Financial skill building is vital for adolescents and young adults, and it focuses on the development of both financial skills and habits.

Children already have control of money (Doss, Marlowe, and Godwin 1995) and driven by the media to actively contribute as consumers (Suiter and Meszaros, 2005). Most children already have the knowledge and attitude about his role as a consumer before they start to school (Kuhlumann 1983). According to Jelks, children had a premature affluence behavior if they are supported by financial resources (2005). At the primary school-age, children begin to understand the assortment of brand and make judgment about a person based on the goods they consume (John 1999). Thus, personal Finance Instruction should be given early, including teaching children on how to stand firm from consumer culture. Among elementary students, guidance in basic learning financial skills and healthy financial attitudes and habits is a key. Therefore, we examine financial socialization practice by developing teaching material of Financial Education for elementary school students and examine its effect on financial knowledge.

The experimental design randomized by classroom allow us to examine whether after participating in financial education intervention will increase students' understanding of financial knowledge.

2. Literatur Review and Hypothesis Development

World Bank's definition of the low- and middle-income countries is assigned related to their access to financial services of the World Bank Group, which is associated with the threshold gross national income (GNI) per capita. The low- and middle income countries become interested in financial literacy issues because of the low level of financial literacy of its citizens, lack of access to and use of financial services, and awareness that financial literacy is an essential element for innovation and growth.

There are differences characteristics between low income countries (LICs), midle-income countries (MICs) and high-income countries (HICs), in terms of Access, poverty, informality. Access to financial services in LICs is limited to a very large population. In Low Income countries (LICs), less than 20% of its citizens have access to financial services institutions; while High income countries (HICs) have access to over 80%, and MICs are somewhere in between. In Indonesia, only 20% of its citizens have access to formal financial institutions (Bank Indonesia, 2012). Most of the population in LICs lives in rural areas, where access to financial services is limited. It leadss to more limited cash needs, and assets are predominantly in the form of land, cattle, seeds or gold. LIC communities typically work in the informal economy sector.

These characteristics lead to differences in the way individuals behave "financially" and how they will react to review their interventions to change behavior, and how financial capability can be measured. Therefore, the goals and objectives of financial literacy in LIC and HIC are different.

Financial socialization is the key for elementary and middle school children. Financial socialization means acquiring and developing values, attitudes, standards, norm and behaviors that provide context for one's financial practice (Drever et al 2015). Children understand money, saving, frugality and financial planning by observing the behavior of parents, teachers and other adults. Financial socialization occurs

through multiple pathways, including schools, mass media, peers, parents. Pathways that affect the financial socialization at primary school age can be divided into implicit channel (behavioral finance observation parents) and explicit channel (through the instruction of teachers, parents). Bucciol and Veronesi (2013) found that both implicitly and explicitly channels give effect on financial attitude and behavior. The practice of financial socialization have positive effect on the development of financial well-being of children (Smith and Barboza, 2013; Jorgensen and Savla 2010; Hibbert et al 2004).

Financial education on early stage will give a cumulative learning for students. Some studies examine the impact of financial education on elementary school student and demonstrated the increase of financial knowledge after participating in financial education (Harter and Harter, 2009; Sherraden et al. 2011; Go et al. 2012;. Grody and Sutliff 2008). However, the result of financial education impact for elementary students in the developing countries and as a non mandatory class remains weak. This study fills the gap by developing financial literacy education material and test the effectiveness of the voluntary financial education for elementary students.

3. Method

This study examined the effects of classroom financial education program in financial knowledge. This study develops learning materials for primary school education. The program is designed for elementary school students from grade 1 to 6. The program is designed to be given for 4 weeks, each week for45-minutes, focusing on the need and want, priority needs, earning Income, spending, saving and sharing. The instructional delivery is using interactive strategies. Each lesson includes a short lecture and worksheet, IT-based educational games, and use story as a learning medium. The story is an effective learning tool for elementary school students (Grody and Sutliff, 2008). This financial literacy instruction is integrated in mathematics, Indonesian or art subjects and it does not require an extended school day or additional class session. Before teaching, teachers attended a two-day training, each for 4 hours to get training on financial education.

Financial literacy education is implemented at three different schools in Yogyakarta Indonesia. The school selection mechanism is based on the provision of school district administrators. Each school is representing the characteristic of school with students coming from lower, middle and moderate income level (see Table 1)

There are about 790 students from three elementary schools were used for this study. Classes used for research are chosen randomly; 395 students were in the control group and 395 were in the treatment group (see Table 2).

In order to measure the students' financial knowledge, pre-test is given one week before the program started and post-test is given one week after the program finished. There are 21 multiple choices questions to measure financial knowledge. Test material is adjusted to each student's level. For example, for grades 1-4, tests using more images, while grade 5 to 6 using a survey question because at age of 9 and above children already have the ability to accurately respond to the survey questions (Borgers, De Leeuw and Hox, 2000).

The impact of financial education on financial knowledge is measured using ordinary least squares (OLS) regressions that control for the baseline level of the dependent variable (LaLonde, 1986). Determination of the class used as treatment group is randomly assigned.

$$Y_i = \alpha + \beta_1 \text{Treat} + \beta_2 \text{School1} + \beta_3 \text{School2} + \beta_4 \text{Grade} + \beta_5 \text{Gender} + \beta_6 \text{GPA Math} + \beta_7 \text{GPA Language} + \beta_8 \text{Parent Income Level} + \beta_9 \text{Parent Education Level} + \beta_{10} \text{Teacher Financial Literacy} + e$$

Y is an outcome variable for students i, outcome represents the difference between the post-test - pre-test. School2 is a dummy variable equal to one if the individual goes to school 2 and zero otherwise. School3 is a dummy variable equal to one if the individual goes to school three and zero otherwise. Grade is a dummy equal to one if the individual is in the 5th grade or 6th grade and zero if the individual is in the grade 1th, 2th, 3th, 4th grade. GPA Math is math scores, GPA Language is the language scores, Parent Income level is the level of income of the parents, Parent education level is level of parent's education, and financial literacy teacher is the level of financial literacy of teachers.

The dependent variables include number of financial knowledge test consisting of 21 problems. Financial knowledge is measured by the number of questions answered correctly. Need and want questions are intended to measure improvements in students' ability to distinguish between needs and wants. It is consist of five survey items about making purchase decision, determine priority item to be purchased, and determine need and want. Need priority is intended to measure students' skills in

prioritizing needs. It is consist of five survey items about the ability to prioritize in purchasing the items needed than desired. Earnings money questions are intended to measure students' knowledge in knowing how to earning money. It is consist of five questions about recognize some professions, respects all professions, and knowing that money gained through work. Spending, saving and sharing questions are intended to measure students' awareness of saving and sharing. It is consist of five survey questions about the importance of managing money for saving, spending, and sharing.

4. Results

Table 4 shows the differences of the pre-test and post-test scores between treatment group and the control group. The average increasing score for treatment group is 0.091 and 0.273 for control group.

The test results of independent sample t-test showed a significant difference in the change of pre-test and post-test between sample groups and treatment groups.

Table 5 shows regression estimates, the average treatment effects of education on financial knowledge are positive coefficient 0.184 and statistically significant at the 1%level. This result shows that the treatment financial education can improve learning outcomes by the increase of the value of outcome.

Some of the results for control variables are warrant discussion. Variable school 1 and school 2 were not significant, suggesting that differences in school characteristics had no significant effect on financial literacy learning outcomes. Parent education level positive influence with a coefficient of 0.064 and significant at the 1% level, the higher the parents' education, the higher the financial literacy learning outcomes. Language score and teacher financial literacy do not appear to be an important factor.

Table 1. Description of the economic conditions and education of parents

	SD Sapen (1)			SD Pakel (2)			SD Jogokariyan (3)		
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
Parent's Education Level	3,42	4,0	1,56	3,16	4,00	1,24	2,56	2,00	1,20
Parent's Income Level	3,03	4,0	1,52	2,43	2,00	0,61	1,94	2,00	0,72

parents' income is measured with a scale of 1 if the income is less than Rp500,000; 2: Rp500.000-1.000.000; 3: Rp2.000.000-5.000.000, 4: Rp5.000.000-10.000.000; 5 >10.000.000

Table 2. Number of Participant

	SD Sapen		SD Pakel		SD Jogokaryan	
	Treatment	Control	Treatment	Control	Treatment	Control
1st	27	27	31	31	16	16
2nd	26	26	36	36	20	20
3rd	42	42	38	38	15	15
4th	37	37	36	36	6	6
5th	41	41	40	40	18	18
6th	34	34	34	34	13	13

Table 3. Variable Definition

Variabel	Definition
Treatment	A dummy variable equal to one for students in classroom offering financial education, and otherwise.
Pre Test	The proportion of correct answer on the pre test
Post Test	The proportion of correct answer on the pre test
School2	A dummy variable equal to one if the individual goes to school 2 and zero otherwise.
School3	A dummy variable equal to one if the individual goes to school 3 and zero otherwise
Grade*	A dummy equal to one if the individual is in the 5th grade or 6th grade and zero if the individual is in the grade 1th, 2th, 3th, 4th grade

Variabel	Definition
Gender	A dummy variable equal to one if individual is a girl and zero if boy
GPA Math	Mathematics score
GPA Language	Language score
Gender	Dummy Variable equal to one if the individual is girl and zero if a boy
Parent income level	Parent Income Level
Parent education level	Parent education level
Teacher Financial Literacy Level	Financial Literacy of Teacher

Table 4 difference of outcome averages between treatment group and control group

	N	Mean Increasing of Knowledge (pretest-post test)	SD	T -test
Kontrol	395	,091	,4237	-4,399***
Treatment	395	,273	,7062	

Table 5 OLS Regression Estimates of the Effect of Financial Education on Financial Knowledge

	Coefficients	T	
Treatment	,184	4,456***	,000
School1	,002	,030	,976
School2	,195	1,766	,078
Grade	-,047	-,777	,438
Parent income level	-,062	-1,998**	,046
Parent education level	,061	2,971**	,003
GPA Math	-,004	-1,965*	,050
GPA Language	-,001	-,481	,630
Teacher financial literacy	-,001	-,251	,802
Gender	-,083	-1,888	,059
Baseline	,011	,864	,388
R^2 = 0.051			

Notes: **p<.05, ***p<.01

5. Discussion and Conclusion

This study contributes to design financial education in Indonesia and provide evidence on the impact of elementary school-based financial education program. We found that well-supported financial education increases financial knowledge relative to control group. This study provides an encouraging evidence of the potential for financial education to be offered at students at the early age. Because elementary students can get cumulative knowledge if they receive financial education since the youth level (Sosin et al., 1997). This research are based on five lessons integrated into existing classroom subjects. This study imply that financial education should be integrated into other subjects, and not be a stand-alone subject in order to be effective. Due to financial literacy education in Indonesia is voluntary and included in the assessment of national exams, so this program needs investments of time, effort and willingness of teacher and school. Training and support for teacher was important for the success of the implementation of financial education program.

The education level of parents also has significant effect on improving students' outcomes. The higher the parents' education, the higher the financial knowledge possessed. At children age, parents assert significant influence on financial socialization as a role model (Hibbert, Beutler, and Martin , 2004; Gudmunson and Danes, 2011). Clarke et al. (2005) suggested that such formal instruction by parents is important in shaping future financial behavior at young age. In Indonesia, students are lack of financial education: therefore parents' financial experience will help narrow the gap in financial knowledge (Tang and Peter, 2015). Financial education at school cannot replace financial socialization by parent because at home children always observe parental financial habits. However, as some parents themselves feel unconfident and unqualified to manage their own finance, school can play an active role as a financial agent by giving socialization for students and of course with the discussion with parents.

The limitation of this study is that there are differences in baseline level or pre-test score between treatment and control group. Therefore

our model includes students, teacher and school characteristics as control variable. In addition, we also include baseline value as an independent variable. By controlling baseline value, the regressions estimate changes in the dependent variables from baseline to follow up (La Londe, 1986).

This study contributes to the field by demonstrating that field experiment of financial education are feasible, and that causal effect of financial education on financial knowledge can be proven. This study has shown that elementary school students are appropriate target for financial education. Thus, it is necessary to develop mechanisms for effective learning to improve the financial capability starting at the early age.

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URBAN POVERTY IN YOGYAKARTA: STRUCTURE AND POLICY PERSPECTIVE

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Abstract

This research aims to understand the structure and response of government policy of poverty in Yogyakarta. If structure identified and mapped, government easier to identifying problems so solution that was decided will more appropriate objectives. Urban poverty has its own characteristics compared to rural poverty. Factors such as urbanization, low education level, low income, culture, social also increase complication urban poverty. The development process of city may cause greater heterogeneity in urban living and area.

This research used the survey to identify urban poverty with cluster and purposive sampling which obatained 121 respondent from 9 sub district and 17 area in Yogyakarta. Poor people in Yogyakarta much different characteristics with poverty in Jakarta. Urbanization factors as the main that affect was not large because people in Yogyakarta are native and entrant who have long been resident. Yogyakarta is not too crowd and traffic also affected the social system, in spite of Yogyakarta as a city tourist destinations also contribute in affecting structure this poverty. Thus structure poverty in Yogyakarta including in natural poverty and relatively .This was approached from data described and perception poverty felt by poor people.

A response of government policy is a poverty reduction program that has been carried out by the government of Yogyakarta to overcome poverty in their region. The policies that have been analyzed consisting of the program of poverty that was undertaken by government of Yogyakarta Municipal. The government of Yogyakarta has poverty reduction policies were quite diverse. Poor people are also reflected on how it feels to ask help of the government. In general, the structure of poverty and government policy response of Yogyakarta has been in accordance with the characteristics of poverty, the community is also how it feels to the presence of the government. Policies drawn up next should be more detailed and specific because urban poverty in Yogyakarat not excessively prominent both in the economic and social structure.

1. Introduction

The development of cities affected by the proceedings the urbanization that can be seen based on the aspect of demographic, economic, and social. Pertaining with the demographic, population growth in urban is caused by natural population growth and migration. In addition, developments also caused by the economic changes that can be seen from a result of the shift of job opportunities from the agricultural sector to non-agricultural sector, such as trade and industry. But based on social aspects, the development of urban areas can be seen from the change in the mindset and lifestyle of people (Mcgee, 1971). The urban areas that growing also caused the heterogeneity showing a difference social status (Mcgee, 1995). Further heterogeneity was even more clear evident from the formal sector and informal urban. This occured because of the separation between groups of poor people based on differing economic and social its inhabitants. Formal economic activities in urban areas not capable to absorbing workers with education and low ability, so workers with the low productivity work on the informal sector (Lacabana and Cariola, 2003). In addition, the settlement slum area with limited supporting facilities and infrastructures shows that there has been bags poverty (slum area) in urban areas.

Today through various mass media can be read and it looks about the various the existing problems in various large cities in indonesia. Problems that arise among other: increasing those who live below the poverty line, an increase in the number of unemployment, sea source of drinking water, an increase in the number of fire case in the dry season, many regions which suffered flood in the rainy season, the increasing number of street children and

beggars, the cases robbery, and so on. The problems are often associated with the large number of poor people in indonesia. Based on the report BPS (Anonymous, 2007), the poverty rate in indonesia since 2005 until 2007 increasing and decreasing in poor population, in 2005 there were 35,10 million people (15,97%) poor people in Indonesia, some 12,40 million people (11,68%) poor people in urban areas, while in rural areas as many as 22,70 million people (19,98 %). The phenomenon of poverty is a vicious circle that is difficult to be resolved, required appropriate effort and sustainable. Municipal Yogyakarta has handling policies poverty. But, how these policies respond to poverty as growth of the Yogyakarta not yet known . Hence, needs to be done research on the characteristics of poverty in each parts and response government policy in handling poverty. Based on to the matter above, so formulation problems this research are how characteristics poverty based on the criteria demographic, economic and social? and how response handling policies poverty in Yogyakarta?. This research studies the structure urban poverty (urban poverty who are in Yogyakarta, is it structural poverty, natural or cultural. By knowing poverty structure the policy to the government into clearer to be developed or evaluated. It can be interpreted as an expression of poverty and view of urban poor communities to the government programs.

Urbanization was a process influenced the development of cities in developing countries. Urbanization occurring caused by the increasing number of residents not only caused by natural growth inhabitant of but also migration namely migration village to the city in the hope of obtaining a better life. Urbanization cause cities have the development and growth of having to meet the needs of its inhabitants growing up. In addition, the developmental process which also happened effecting a change of economic and social. Economic changes that happened of them is shifting job opportunities from the agricultural sector to the non-agricultural sector, such as trade and industry A result of the shift sector the job opportunities led to an increase productivity finally improve the city development and activities. While change happening in the society in the urbanization process shown by thinking pattern and lifestyle.(Mc Gee,1971)

The Phenomenon of urbanization cause growth of urban is broader, so as to affect physical structure where not only for large cities but also for small town. Urbanization producing a change, both constructive and destructive that relies on a variety of factors, including capacities, especially physical and economic, the quality of the urbanit, especially in terms of education and self-employed skills , and the policy the local government and a national policy in the city planning and rural order (Bintarto, 1984). Rapid economic growth over the city produces a fundamental change on revenue distribution. It can be seen from a decrease in agriculture and increased industry and a stable from the service sector. Structural changes situation quickly has impact on social organization and space of society. Economic growth creating urban dynamics, a change of land use, the settlement legal and illegal and another problem such as environmental damage, waste and transportation. On social aspects, growing urban areas also have been able to flourish heterogeneity (Mc Gee,1995)

The heterogeneity seen from social distinctions its inhabitants leads to the splitting between groups of poor people based on differing economic and social its inhabitants. Further, separation is evident from the formal sector and informal sector. Based on the economic aspect, formal economic activities in urban areas of which is the form new global integration widespread to other places, but these activities not capable of absorbing workers with low education and ability.In the end, workers with the low productivity work on informal sector (Lacabana dan Cariola, 2003). In addition, also apparent that they have had the formal sector and informal sector in primarily spatial demonstrated by an absence of settlement legal and illegal. This is because the form of urban space formed is a form of competition people activity flourished in it.

The fringe or suburban are part of the suburbs having green space remains broad. In addition, building density in this area was the lowest between two previous areas. Distinction the characteristics on each parts that affected distinction characteristic of poverty. Characteristics of poverty seen in suburban areas for example, a group of certain poverty is getting worse with limited service public infrastructure and facilities and employment opportunities smaller than other city areas facilities. (Feitosa, 2009).

The understanding of Urban Poverty

Poverty is one of the urban problems due to urbanization and is worst by urban fragmentation. This associated with an increase in the needs arises as a consequence of the urbanization process occurring, such as needs of job creation, needs the fulfillment of urban good facilities of housing, economic facilities, and supporting facilities.

Generally development and improvement of cities Indonesia still be solved through thinking and acting traditionally and conventional namely the building or repairing done if problems arise or damage course. Hence development in Indonesia needed new ways of thinking that combine creative and innovative with fresh ideas. Further sustainable development are defined as development that can meet the needs of the present without ignoring the ability of future generations. (Budiharjo,1999) But in the concept is still needed to expressed various the development of the idea of thought and a new concept about sustainability.

2. Research Method

The drafting of this research in terms of research objectives is descriptive research that is explorative who digs data from the shape of poverty and poverty reduction programs. Research trying to present phenomena of urban poverty of the aspect of characteristic and response government policy in urban poverty alleviation occurred in Yogyakarta. Reseaech variable formed from the theory of urbanization and the theory of poverty consisting of the characteristics of poverty and handling policies.

The population in this research was the whole family categorized as poor. The sample collection technique using proportional area random sampling , namely the sample collection based on region in which each part were taken at random. Technique is done due not all of poor people in Yogyakarta categorized as urban poor people although they are the citizen of the city of Yogyakarta.

As for technique data collection during the study is done in two ways: the collection of primary data done through survey research and field research. The result of the collection of primary data is used to complement the secondary data. Collection secondary data done with the survey agencies to get data and review of documentation .

A Model data analysis in this research follow the concept of given Miles and Huberman. Miles and Hubermen revealed that activity in the analysis qualitative data was an interactive place in a continuity at every stage until completed.

3. Result

Description of Urban Poverty Characteristics

The study characteristic of urban poverty is a survey, with the number of respondents obtained by using cluster purposive sampling about 121 poor households in slums, riverbank and densely populated area.

Demographic Characteristics

Common characteristics of urban poverty households based on this study found in all areas of urban poverty concentration area, both in slums, riverbank, and populated area, so as to characteristic it can be said there is no difference in all location. The most respondents are in Umbulharjo about 35 percent comprising 6 urban Pandeyan, Tahunan, Sorosutan, Giwangan, Muja Muju and Warungboto. Most respondents in Umbulharjo because Umbulharjo is the most extensive in Yogyakarta. Areas with the number of respondents at least is Gondokusuman with 1 people .

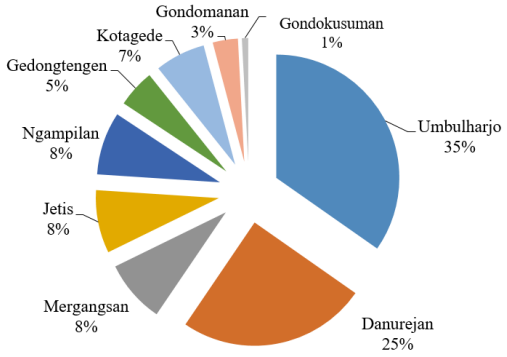


Figure 1. Data of Respondent

Of the number of respondents obtained, largely is a native the area by the number of 66 percent. They born and raised in place live now. While 34 percent are newcomers it is a its inhabitants or residents in their homes. Some who are not included the category placed in people living to hire house or room boarding .

Respondents is mostly the household head or a housewife who manage her family. According to age group, oldest respondents 83 years old and the youngest 23 years. The average age of respondents were 49 years. Respondents have occupied shelter in the area for a long time, that means many of them is a native citizen. They have lived in their area during 29 years on average, while the average age of respondents were 49 years.

Economy Characteristics

Poverty can be evaluated and discerned from the data and in the field. By linking to the theory of poverty can be used as a guide to assessment. The category of poverty that was most easy to use was income. The majority of respondents work in the informal sector so that their income every day and will not same every

month. The average income per month reached IDR 1.000.000 by which the highest revenue is IDR 6.000.000. If the average monthly income being converted into daily income hence revenue IDR 33.000 as much as. The total is the average income as laborers, small traders, becak drivers and other kind of work .

Table 1. Job Type

Job type	Number	Percentage
Labor	29	24
Becak drivers	1	0,8
Security officer	1	0,8
Trader	14	12
Sopir	1	0,8
Office Boy	1	0,8
Baby Sitter	1	0,8
employee	7	6
Entrepreneur	12	10
Jobless	54	45

Form table above 45 percent of respondents derive their main income not fixed or casual, laborers (24 percent), traders (12 percent), entrepreneurs (10 percent) and the employee (6 percent), becak drivers, security guards driver, office boy and baby sitter each 0.8 percent. This indicates that characteristics of respondents generally are employed in sector that allows earn income low and not fixed. These types of work can be carried out not scheduled and can also quickly changed employment types to other .The kind of work program is not found that relating to the Yogyakarta City as a tourist destination as tour guide or interpreter.

Of the respondents who work, some have the kind of specific work as office boy and baby sitter. As for work the most are labors.Traders work was the most are mostly done.Traders here is angkringan, traders birds, traders toy, when the income they do not certain. Another job are security guards and becak drivers. The majority of people poor city yogyakarta is a native, so that they have their own place and permanent. The number of respondents has a residence are 69 percent while who does not belong own were 31 percent, its mean these respondents hire house or room boarding , or the respondents have no right belonging to but not need to pay the rent like occupies a house his brother.

The majority of respondents having a level a good education where 56 percent is senior high school graduates while the primary school in second place the number of as many as 21 percent most of respondents who had been elderly. Next respondents educated junior high school were 17 percent .

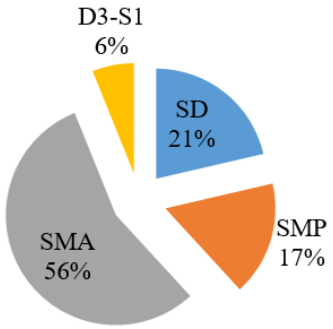


Figure 2. Education Level

Living condition in cities are generally located in slum areas, dense settlements as well as flood plains. An assessment of the environmental conditions based on opinion the research team, cluster poverty according to the government and personal opinions these respondents. From the data research obtained, respondents that is in slum area only 1 percent, a densely populated area 36 percent is the highest then along the river bank 33 percent.

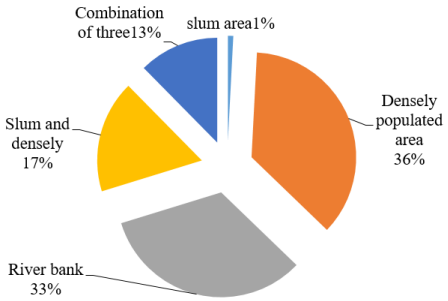


Figure 3. Environmental Condition

Of all three categories mentioned, some respondents said more than one criteria. They felt home is a combination of the three. Respondents who feel living in the slum and solid at 17 percent and who was living in slums, solid and along the river bank there are 13 percent. Respondents residence mostly small and simple reach 68 percent, 22 respondents live in a medium-sized house or 18 percent. Respondents who lived in a house that large enough only 2 people or 2 percent. Of the total 121 respondents used as samples from 15 people or 12 percent live in the rent or boarding. The majority of respondents as many as 84 person or 70 percent his job casual, what he means work but changed. They work if any request. The unemployed was 17 percent. Respondents who have a job keeps it just 16 people or 13 percent.

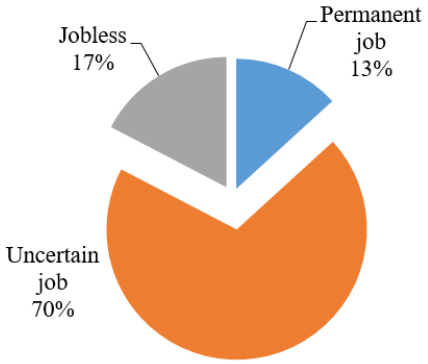


Figure 4. Kind of Employment

Of poor people in urban generally moves in the field of employment of informal so that their income also not able to be ascertained and not standardized like the work of factory workers and the work that incur regional minimum wage or provincial minimum wage. According to data from research known of respondents who did not have earnings or have no job as many as 9 percent, of respondents who had income but not fixed many as 60 percent and the respondents have earnings remain 31 percent. The number of respodent have earnings not fixed about twice as much as that with fixed earning. It concerns the most kinds of the work belonging to respondents as a laborer, the driver, traders, and other steady job.

Accesability and Assets Ownership

Of asset ownership is one of indicators wealth, asset is mistress or saving accumulation set aside good to support work and show social status. In this poverty research especially urban busy and shortness of, of asset ownership represented by motorcycles. Asset ownership as mentioned in studying urban poverty with the area in live like slum, solid and riverbank, assets most likely can owned and measured is bicycle motor, television, a refrigerator, furniture and other can be observed by the research team. Respondents who have motorcycle a number of 82 respondents or 69 percent. As many as 31 percent not have motorcycles. For some people motorcycle is a transportation the cheapest and practical. Motorcycle used to support transportation necessity and work.

Electricity is basic needs, but very possible not every house has the power lines own. Its found that the use of electricity to connect of her neighbour and pay a fee in a given quantity. The research is also found such practices, about 32 percent have no own power lines.

Figure 5. Power Lines/Electricity

The urban poor usually rely on public facilities in the need of the water. The government usually set up a public facility water and rest room in settlements with densely populated and slum. Environmental conditions with a narrow habitation and crowding does not allow any house had a own well. Likewise in this research, of households that have wells itself only 45 percent, as many as 13 percent use PDAM water pipes and the respondents who do not have the own water and thus use public facilities as many as 42 percent.

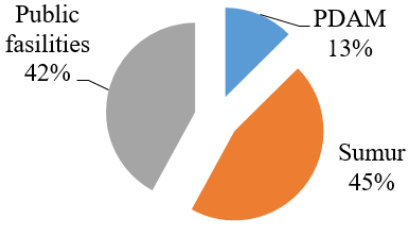


Figure 6. Water Resources

Existing environmental problems often appearing in urban problems is due to the pollution. An assortment of pollution can be shaped like a lot of noise, vehicles smoke. In this research, pollution is not identify the form of these pollution. Pollution it may have been regarded as a normal thing for some urban people so that research only asked about what are the environments affected by pollution or not. The answer of respondents who said there is pollution in their environment as many as 65 percent and feel not exposed to pollution 35 percent

Healthy Acces

Health facilities are subject to be provided by the government, the facility must also easily accessible by people. Respondents said health facilities easily obtained by 96 percent. they use Puskesmas as a means of deal with health insurance. There are only 4 percent said difficult for it. This is because the experience in arranging medical expenses. Health facilities now determined by participation of people in

management board (BPJS social security). The people will be easier access when have JKN Card. Tuition and class determined by the amount of money delivered every month. Membership consisting of 2 kind of the beneficiaries and non recipients. For the poor premium borne by the government. Of the respondents determined, who already have JKN card only 20 percent.

Mobility

Another obstacles for the poor is mobility. Mobility is strongly influenced by the needs and facilities. Mobility does not depend on work, mobility interpreted as travel for their personal use which are secondary or tersier. Half respondents said they are rarely doing a journey or traveling as many as 71 percent. Stating often travelling is 16 percent and not ever traveling is 16 percent. Respondent who are never doing a trip was the respondents who have elderly. Mobility is also determined by instrumentality used to back it up. Motorcycle is a means of most commonly used by the majority of respondents around 65 percent . The respondents who use public transport 22 percent and other facilities 13 percent.

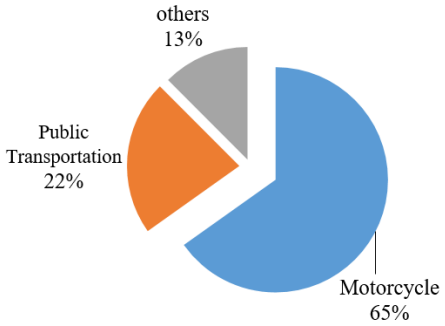


Figure 7. Type of mobility

Social Characteristics

Security and order is the principal thing besides an economic problem. The condition of a social environment will also affect the characteristics of their poverty. A number of respondents stated the condition of its environment safe, was proven by as many as 98 percent respondents and had no respondents who said that the environment not safe. Other social problems that frequently occurs in urban areas is the commotion was both done by the citizens or others . That noise is the impact of friction in which friction is occurring in the community because of social gaps and reduced the nature of family spirit. In the city of Yogyakarta, research respondents said infrequent a tumult or dissension is 90 percent, who said that there had never 4 respondents or 3 percent and who claims to often occurs commotion 8 respondents or 7 percent. Urban community usually individualist and not concerned with its environment. This concern will represent by attitudes to help one another. People in Yogyakarta think help one another a mash high among community members, 78 respondents or about 65 percent said high and 40 respondents being average or about 33 percent. Only 2 percent said mutual help one another inhabitant of Yogyakarta is low. About 75 respondents or 62 percent said mutual trust between the people still high, as many as 33 percent said it is medium and about 6 respondents or 5 percent said mutual trust low of a member of the community.

Public Services to The Poor

Identification of poor people in the city of Yogyakarta done with KMS cards, cardholders will receive some assistant and facilities from the government. From a research conducted by, respondents holding KMS only 68 family or 57 percent and the remaining 52 people do not have it.

Scholarships is very important for the poor community. The government of Yogyakarta give scholarship assistance for poor students with KMS card holders. As many as 80 respondents stated his son receive assistance BSM or equivalent to 71 percent while 29 percent said not accept it.

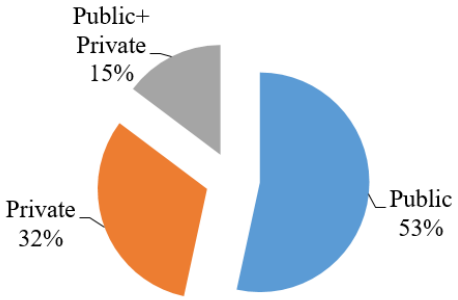


Figure 7. School Status

Most of the respondents going to public school of 53 percent , who are going into private schools 32 percent and the public and private by 15 percent. By doing this it can be seen that government has provide educational assistance indirectly to poor communities to reach education facilities. Raskin is a central government program to reduce poverty especially in the context of fulfilling their food needs. Distribution sometimes has been a problem itself. As many as 66 respondents or 56 percent receive Raskin regularly while 52 people or 44 percent never receive.

For the majority of respondents, assistance most important that they hope is cash assistance because more appropriate objectives and useful and can be directly used. As many as 57 percent of respondents had received monetary assistance in various forms subsidies, meanwhile 43 percent said had no money assistance. Respondents given questions about their feelings and opinions of role of government in reducing poverty especially with regard to them directly. When they asked whether government listens to their lives, the other 47 percent say yes and 53 percent say no. The number of is balanced because of several the community is that had received some the type of assistance while others have been at all receive government assistance. The hope of poor urban community against the government said to vary greatly hanging from social and economic conditions of them in expressing their expectation.

Poverty Characteristics of Yogyakarta

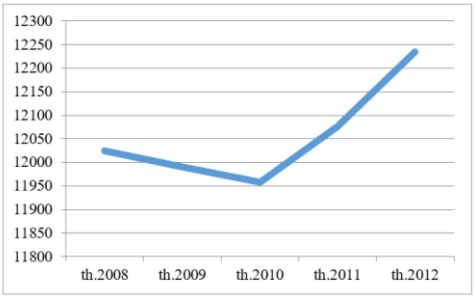
Poor people urban in the city yogyakarta has different characteristics with poverty in large cities like Jakarta and Surabaya. Factors of urbanization as the main factors that affect not too large because the majority of the poor people was people of and the latter long as residents of on the spot. The town of which is not too crowded also affected the social system . Some have a job that non-formal, every day earn a living. Yogyakarta as a city tourist destinations also contribute in affecting poverty structure because there are some work can be done as a result of the tourism and education city.

According to some experts poverty, there are at least three the concept of poverty often used, namely absolute poverty, poverty relatively and poverty subjective. The concept of absolute poverty was formulated by make the size certain concrete and usually oriented to living needs a minimum level of members of the society clothing, food and board. While, the concept of relative poverty formulated by taking into account dimensions the place and time. Basic assumption is that poverty in a different section with poverty in other regions, a measure used are based on considerations certain members of the community, with oriented to degrees feasibility life. While the concept of poverty subjective formulated based on the feeling the poor itself. Hence, it is possible that who according to size a particular individual live below the poverty line, it can so they not consider themselves to be poor, and thus on the other hand. Provisional group in which are in the sight of we are a decent life, perhaps not taking himself a kind of it, similarly on the other hand . This felt by the majority of respondents in this research. They said enjoying life, do not feel the urged. Although live in the slums, narrow and crammed they feel comfort and happiness. The city of yogyakarta which a relatively quiet and unhurried also influence a feeling of the people in the sight of certain the poor category. It was also reflected in their hope to government policy general by taking into account the provision of facilities not on money assistance to receive directly because of the lack of ability and work. From the data research on the table 2 known that the poor expect for the capital to support their small businesses or to be set as capital early to work of hope the greatest the percentage was 37 percent, access to education and scholarship is the variable next expected.

Table 2. Expected Assistance

Variable	Persentase
Capital assistance	37
Healthy access	22
Education access	28
Housing subsidy	8
Cash assistance tunai	3
Others	2

Urban poverty is identical with slum residence and crammed that is in pockets, not found in Yogyakarta. The density of people was still quite loosely so an impression like above not exist. In 2008 a density of people in the Municipal Yogyakarta 12.024 per square kilometers, then year 2009 to 11.990 who showed that decreasing. So in 2010 as much as 11.958. Population density is on the rise again 2011 be 12.077 and 2012 be 12.234. The development of population density indicates which the urbanization process happened. The data shows results relatively stable it means the change occurred because displacement of the family member a household.

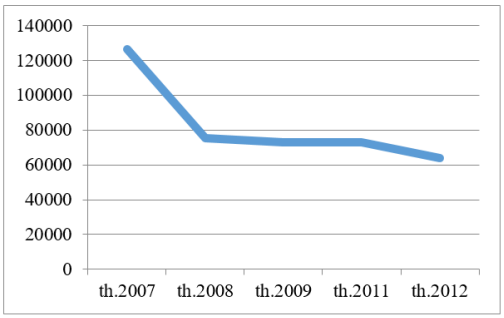


Graphic 1. Population Density

Percentage of poor people in the Municipal Yogyakarta 2013 is 8,82 percent the lowest in the Yogyakarta Special Province where the average of 15,03 percent. The poverty rate if seen from the perspective of urban poverty allow they were to be different. The urban poverty of

Yogyakarta be more interesting because the similarity with rural poverty and poverty in general. Urban poverty of Yogyakarta more precise with residence and types of the job approach. Other factors such as urbanization, social pressure, vulnerability environment, society diseases and other has not appeared here.

Increasing poverty much happens in Kecamatan Gondomanan while a decrease has occurred in Kotagede. Some phenomena of urban poverty can explain the subject. Kecamatan Gondomanan is kecamatan that included regions Malioboro and surrounding much going on temporary urbanization. The decline both in terms of the number and the percentage of people these poor not separated from strategy regional poverty reduction carried out so far. But it should be realized that that the dynamics of social political very quick, as to the effect of globalization are broad has demanded that the local government to renewing and adjust a poverty reduction strategy sustain with the development of actual whether internal and external occurring.



Graphic 2. Decreasing of Poverty

Policy Response of Municipal Yogyakarta

One factor of the success of handling poverty and also a other social as unemployment is by looking at programs and policies that are determined. Today the central government has distributed billions of the fund to reduce poverty in various parts of areas and it has become development priorities. This attended by areas, no exception Yogyakarta. By mapping and review the policy implemented, so is expected to obtained programs what is still feasible passed on, evaluated and the new program as a breakthrough or therapy for the poor.

Response government policy is a program poverty reduction that has been done by a government of Yogyakarta to overcome of poverty in their regions. As for reduction programs are associated with anti-poverty strategy. This analysis using a technique descriptive qualitative described data the results of review of documentation according to variables related. As for policy that have been analyzed consisting of the program of poverty that was undertaken. Government policy come from the central and regional governments . This study did not identify which includes both the policy.

When in terms of the aspect of the source of fund , the program and poverty reduction activities is divided into two parts, namely programs regional initiative and programs launched by the central government . Meanwhile, in the context of a central government program, the program and poverty reduction activities based on cluster of the consisting of 3 clusters: Cluster poverty reduction programs integrated based households, community-based and based of micro and small businesses

Poverty and unemployment phenomenon in Indonesia including a Municipal Yogyakarta is a complex and not can easily seen from one absolute point. City of yogyakarta which known as the city of students and city of tourism with the advent of the city have an appeal that strong against urbanization that influence the population. The diversity culture of society that causes poverty problems and conditions and unemployment in the city of Yogyakarta be very varied with the properties of local strong and experiences poverty different social. Initial steps in the direction of poverty intervention and unemployment reduction pursued a policy of technical provision of facilities and basic needs assistance for the poor by intervention of attribute poverty problems.

Conformity Poverty Structure and Policy Response

Various poverty reduction policies that has been done by Municipal Yogyakarta for program has run well. Policy that is directed at assistance whether they are directly or indirectly is enough perceived by the poor household. Evaluation can be implemented towards of this policy are assistance socialization supposed to be done better, so that the citizens aware of this assistance. Policies that existing in fact is quite a lot and varies, but sometimes in its implementation are not going well. Some policies as KMS very felt by society. Capital assistance policy, actually there has been in the PNPM scheme, but more community members hope for the help personally.

Generally, the structure of poverty and policy response of Municipal Yogyakarta has according to those of poverty, they also have felt the presence of government. Policy should be arranged more detail and specific since poverty

in Yogyakarat not too prominent both in the economic and social structure.

1. Conclusion

The phenomenon of poverty and unemployment in Indonesia includes Yogyakarta complex and cannot easily seen from one absolute point. The city of Yogyakarta known as the city of students and tourism with the advent of town has appeal that strong against urbanization. The diversity culture of society that causes poverty problems and conditions and unemployment in the city of Yogyakarta be very varied with local wisdom poverty and experience different socially. Urban poor has different characteristics of poverty in big cities like Jakarta and Surabaya. The urbanization as the main factors affecting poverty not too large because most poor people are original citizens and newcomers who has long been population in the area. City living not too frenzied also.

Response the government policy is a poverty reduction program carried out by the government of Yogyakarta to reduce poverty in the region. But reductions programs are associated with anti-poverty strategy. This analysis used descriptive with qualitative data described the review of documentation according to related variables. But policies analyzed consisting of the program of poverty that was undertaken in the city of Yogyakarta. The government policy come from national and regional governments. Municipal Yogyakarta has poverty reduction policies were quite diverse as stated above. Poor people are also have felt the government assistance them.

In general , the structure of poverty and policy response Municipal Yogyakarta has according to those of poverty, they also have felt the presence of government. Policy should be arranged next detail and specific since poverty Yogyakarat not too prominent both in the economic and social structure. Municipal Yogyakarta just undertook the identification of poor households personally that would give assistance in more precise, it can be done by social affairs for instance .

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THE CORRELATION BETWEEN LEVEL OF EDUCATION WITH COMMUNITY PREPAREDNESS IN FLOOD PRONE AREA (Batu Benawa District, Hulu Sungai Tengah Regency, South Borneo)

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Abstract

Flood disaster has some influences towards residential area. This research aims to develop a map of flood-prone areas in Batu Benawa district, Hulu Sungai Tengah Regency, South Borneo, and the correlation between level of education with community preparedness in flood prone area. The purposive sampling technique was used to select the research area. The unit analysis is some districts and included in the flood-prone areas. To determine the sample based on flood-prone level, the stratified sampling was used. The result of the research shows that most of the investigated areas prone to flood (63. 02 %), andthere is a positive correlation between level of education with community preparedness in flood prone area.

Key words: correlation, education, community preparedness, prone area

1. Introduction

One of the complex issues currently faced by the cities in Indonesia with its impactthat threaten the existence of the city and its inhabitant is flood (Kahn, 2005dalamHochrainer 2006). The impact of this one of natural disasters called flood, can also alter the balance of environment and the lives of the people who become the victims (Korlena, 2011 in Numanderi et al, 2014; Choirul, 2009). The impact causes each unit of space has varying levels of disaster risk because it consists of diverse supportingelements. Each unit or area has different charateristics, so the resilience of the communities to disaster also varies according to its prone-level.

Flood disaster is a natural disaster which almost certainly happens at every beginning of rainy season. It is as happened in the Batu Benawadistricts of Hulu Sungai Tengah. The impact of floods in the district of Batu Benawa regarding settlements. The effects of disaster is more pronounced if the settlement (Kumalawati, 2014; Kumalawatidkk, 2012; Sakijege, 2013; Itoh*et al.,* 2000; Takahashi*et al.,* 2000; Hutabarat, 2008; WulanMey. E. T, 2009). The population density in the district of Batu Benawa always increase every year (see Table 1).

Table 1. Population Density of Hulu Sungai Tengah Regency

District	Area (km2)	Population Density			
		2011	2012	2013	2014
Haruyan	148. 63	138. 00	138. 54	142. 01	142. 73
Bt. Benawa	99. 00	185. 00	186. 56	191. 24	192. 77
Hantakan	191. 98	61. 00	61. 03	62. 57	62. 88
Batang Alai Selatan	189. 80	115. 00	115. 96	118. 87	119. 07
Batang Alai Timur	247. 94	28. 00	28. 36	29. 07	30. 25
Barabai	40. 72	105. 00	2155. 96	2210. 30	2274. 85
Lab. Amasselatan	86. 54	303. 00	305. 15	312. 87	314. 85
Lab. Amas Utara	161. 81	169. 00	169. 83	174. 12	175. 87
Pandawan	144. 24	213. 00	214. 55	219. 97	217. 17
Bau	70. 00	247. 00	248. 44	254. 67	257. 33
Limpasu	77. 49	127. 00	127. 44	130. 70	135. 02
Jumlah	1458. 15	169. 00	169. 83	174. 11	176. 05

Source: BPS Hulu Sungai Tengah 2011-2014and the result of calculation, 2015

Total of people is one of many resources to cope with flooding. There are still many people in the District Batu Benawa not have knowledge about floods and the lack of readiness faces a flood. Lack of knowledge about the flooding caused by the low level of education

Based on the above background, we can see that the people living in the flooded areas have highlevel of insecurity and vulnerability. Many of the residents had low knowledge about floods. An effort that can be done to reduce the insecurity and the vulnerability of the population against flood in the future is to make a research with the title "The Correlation Between Level of Education With Community Preparedness in Flood Prone Area".

2. Identification of the Problems

The identification of the problems in this research are mentioned below:

a. How the mapping of flood-prone area in Batu BenawaDistrict Hulu Sungai Tengah Regency?
b. How the correlation between level of education with community preparedness in flood prone area?

3. Objectives of the Study

This reaserch is conducted with the objectives stated below:

a. To compile and analyze the maps of flood-prone area level in Batu Benawa District Hulu Sungai Tengah Regency,
b. To compile and analyze the correlation between level of education with community preparedness in flood prone area

4. Research Method

There are three stages administered in this study. They are the preparatory stage, the field survey, and the data processing and analysis stage. Purposive sampling technique is used in this research. Interviewing the residents is one of several activities carried out in the field survey stage. The data processing and analysis stages include primary and secondary data analysis. Secondary data analysis is used for the data from relevant agencies. Multivariate data analysis uses statistical tools, Arc View and Arc GIS for the mapping. The data analysis are mentioned below:

The Analysis of the Mapping of Flood Prone Levels

There are some factors influencing the prone-level mapping of a region towards a threatening danger including (Bacharudin and Wirakusumah, 1998):

a. the geographical situation,
b. the pattern and danger elements distribution,
c. the sensibility of the danger elements,
d. and the specific geomorphology location or position.

The data used to construct the flood-prone mapping is based on four factors that influence the vulnerability are:

a. The map of flood hazard level

The map of flood hazardlevel represents patterns and distributions of the elements of hazard. It is obtained from the river buffer and land use map. The next process is to conduct the scoring of the map of flood hazard level. It is conducted by giving values that indicate the prone level of certain area toward the hazardand the possibility of the loss of life or property. The valuing process of map of flood hazard level is done by dividing the hazardareas into four categories. They are the high hazard area with the value of 4 (300 meters), the medium hazard area (an area that has a distance of> 300 meters - 600 meters of floodedarea) with the value of 3, low hazard area (an area that has a distance of > 600-900 meters away from flooded area) was given a value of 2, safe area (an area that has a distance of> 900 meters from the flooded area) was given a value of 1.

b. The Map of Houses

The map of houses represents geographic situation and the sensitivity the element of hazard. Prior to weighting, weighting map of the house is doneby dividing thehousewithhigh densitygiven weight4, a house with amedium densityis weighted3, houses withlow densityare givena weight of 2, and no house(empty) given a weight of 1.

Bachrudinand Wirakusumah (1998) determine the weight of a particular type of land use based on a result that can arise when a hazard to hit the region. It means that the number of casualties due to the occurrence of hazard in the residential area will be very high when compared to the number of victim scould fall in the area of vacant land/forest.

c. The Map of the Altitude

The map of the altitude represents a place or situation in the study area. Determination of the weight figure is based on altitude. Flood flow speed is highly influenced by the altitude since flood flows towards the lower regions. Weighting map altitude is done by dividing into four classes i. e. <12. 5 meters given weight 4, >12. 5 meters - 25 meters are weighted 3, >25 meters - 50 meters given a weight of 2, and>50 meters are given a weight of 1.

The classification of flood-prone areas

obtained from the accumulated weight classification. The decreasing accumulation of weights is based on criteria matrix weight. Vulnerability mapping results indicate there are four different areas, namely high-prone, medium-prone, low-prone and not no-prone.

The Analysis of the Correlation Between Level of Education with Community Preparedness in Flood Prone Area

The analysis was done by using statistical data processing (statistical tests), i. e. *product moment correlation*, with the formula (Hadi. S, 1996, 1998):

$$R_{xy} = \frac{\Sigma xy}{(\Sigma x2)\,(\Sigma y2)}$$

Explanation:

r_{xy} : correlation index numbers 'r' product moment

x^2 : amount of deviation scores after X squared

y^2 : amount of deviation scores after Y squared

5. Result and Discussion

a. The Map of the Flood Prone Area

Level of Flood Hazard Map

The map of lahar hazard levels represents patterns and distribution of the element of danger. Determination of hazard areas is done by overlaying maps of the river buffer and land use maps (see Table 2, 3and 4 and Figure 1).

Table2. River Buffer of District Batu Benawa Regency Hulu Sungai Tengah

	River Buffer	Number of Buildings	(%)
1	0 – 300	1490	39. 58
2	>300 - 600	224	5. 95
3	>600 - 900	208	5. 52
4	>900	1843	48. 95
	Sum	3765	100. 00

Source: Analysis and Processing Buffer River Map, 2016

Table3. Land Use District Batu Benawa Regency Hulu Sungai Tengah

	Land Use	Area (Hectare)	%
1	Forest	1291	23. 75
2	Garden	97	1. 78
3	Field	249	4. 59
4	Settlement	160	2. 95
5	Paddy Field	1313	24. 15
6	Shrubs	2024	37. 23
7	Water	35	0. 65
8	Vacant Land	267	4. 91
	Jumlah	5437	100. 00

Source: Analysis and Processing Map of Land Use, 2016

Based on the results of an River Buffer overlay map and the Land Use Map can be seen that the most extensive area of high hazard i. e. 46. 63% of the entire study area. Areas that are in the no-hazardand low-hazardarea can be used for evacuation or for referrals of settlement for the people who live in high-hazard and moderate-hazard area.

Tabel4. Flood Hazard Level District Batu Benawa Regency Hulu Sungai Tengah

	Flood HazardLevel	Area (Hectare)	%
1	High	302	5. 56
2	Moderate	450	8. 28
3	Low	1783	32. 79
4	No Hazard	2902	53. 37
	Jumlah	5437	100. 00

Source: Analysis and Processing Flood Hazard Map Level, 2016

Map of Building Blocks (Houses)

The map of building blocks (houses) represents the geographic situation of hazardelement. Settlement is one of the basic human needs. The settlements are healthy and livable is the right of every human being. That right, however, can not to be fulfilled after the flood. Many houses were damaged by the flood, damaged sanitation, hard access to clean water causing to lack of beauty and health of a settlement. The previous residences which are thought to be safe from disaster turned out to have an impact that is not unexpected as was the case in the district Batu Benawa.

Along the river in District Batu Benawa is functioned as densely populated areas. Number offairly dense population along the river in District Batu Benawa create new problems when the floods occur i. e. the damage of the settlements. Settlement residents along the river in District Batu Benawa can be obtained from the interpretation of high-resolution images (see to Figure 2).

Along the river in District Batu Benawa is including densely populated areas and flood hazard area. Information on the number of houses located in flood hazard areas can be seen in Table 5. Overall, the number of houses in the no-hazard area are 183 houses or 4. 86% of total houses in the study area. The no-hazard area is away from the source of the disaster. The house located in a high-hazars level are 1482 (39. 36%). High hazard area possibly can be spread if floods occur with greater force. Houses map at every level of the hazard of flooding in the area of research can be used to determine the mitigation measures to be undertaken. Mitigation efforts to be undertaken are expected to minimize the

impact of floods. Refer to that facet, the low-hazard and no-hazard area can be used as the location of residential development or as a refuge for people living in high-hazard and moderate-hazard area when floods occur again.

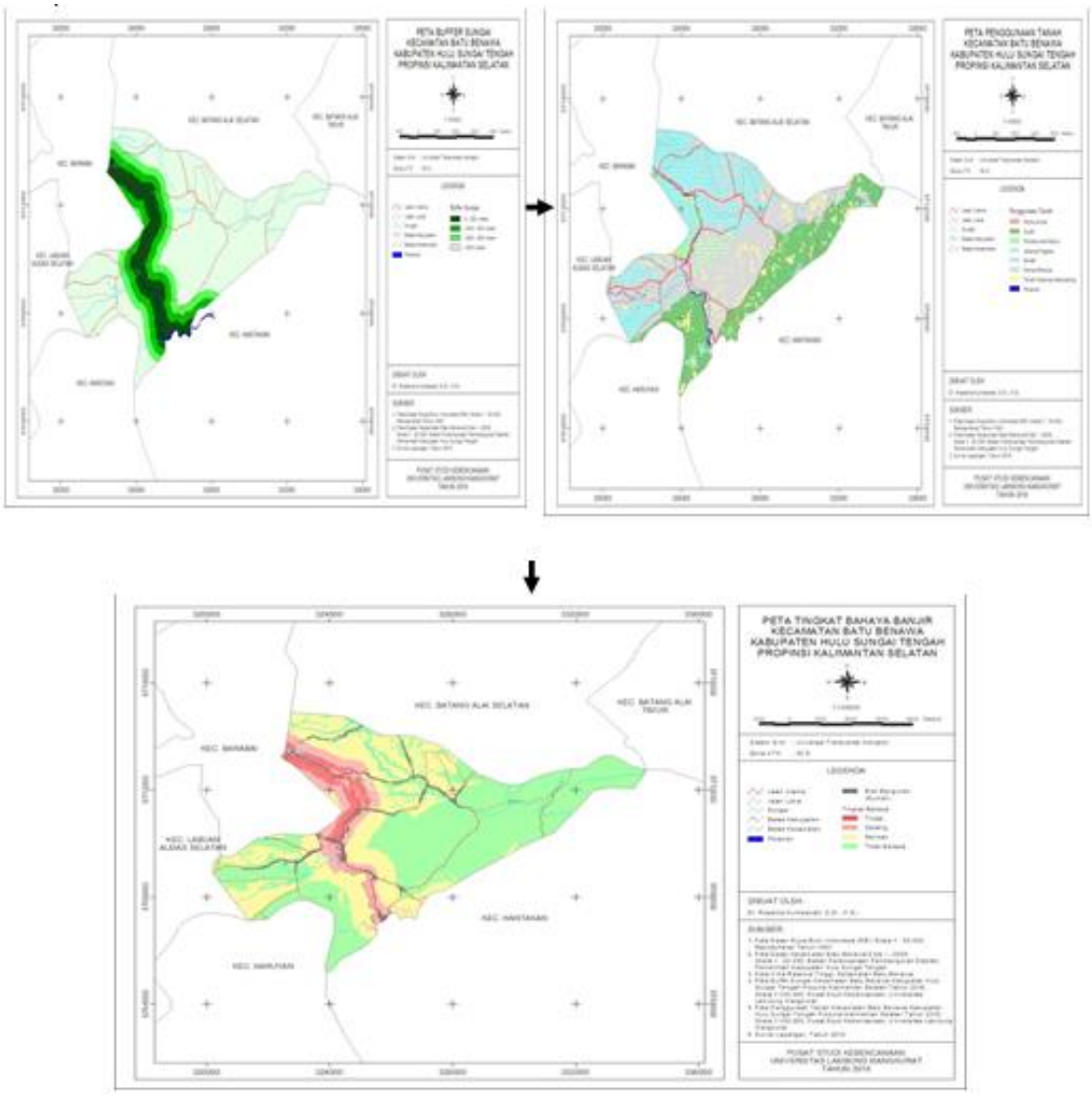

Figure 2. Building condition Along the River in the Regional Research

Table 5. Number of House on Every Level Regional Flood Hazard on Research Area

No.	Flood Hazard Level	Number of Houses	%
1	High	1482	39. 36
2	Moderate	369	9. 80
3	Low	1731	45. 98
4	No-hazard	183	4. 86
	Sum	3765	100

Source: Analysis and Processing House Map and Flood Hazard Level Map, 2016

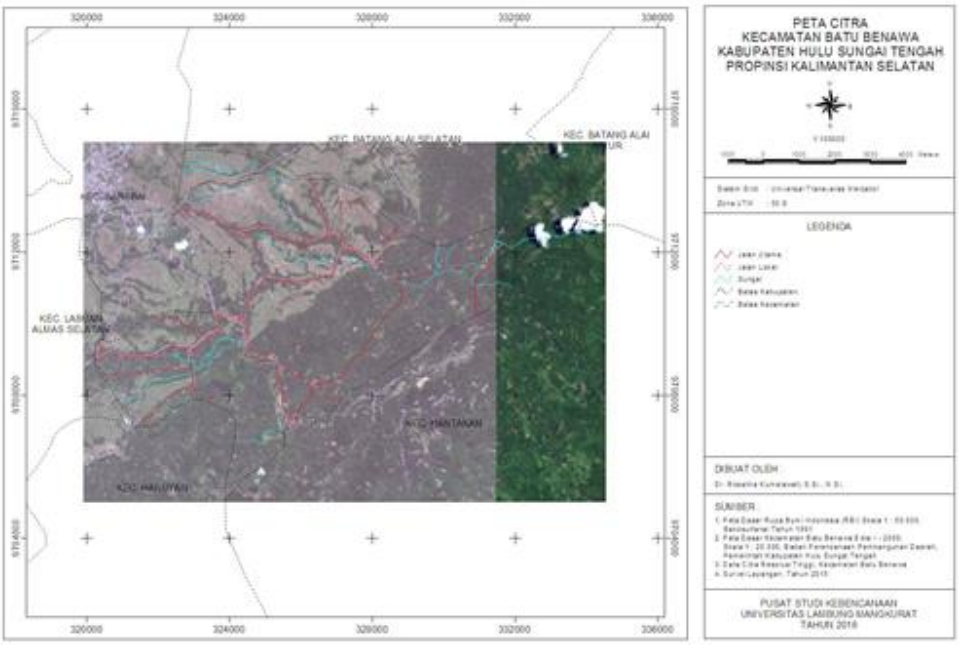

Figure 2. Building condition Along the River in the Regional Research

The Map of Altitude

Altitudere presents a specific geomorphology situation. Altitude between <12. 5 meters will be more vulnerable to flood flows. Flood flow will tend to overflow towards the lower regions. Floodflow have an energy force that is large enough, to damage houses in the vicinity. The flow of the floods that occurred in the study area had overflowed from the main river channels. The flood damaged and soaked residential buildings (houses) in its path. Most of the settlements in the area of research is in altitude <12. 5-25 meters (see Table 6 and Figure 3).

Table 6. The Altitude Map and Total Houses in Research Area

	Altitude	Total Houses	%
1	<12. 5 m	2396	63. 64
2	12. 5 - 25 m	1285	34. 13
3	25 - 50 m	64	1. 70
4	> 50 m	20	0. 53
	Sum	3765	100

Source: Analysis and Processing Map of Altitude and Total Building Blocks (House), 2016

Map Overlaying Using SIG andMap of SIG Process Results

Maps *overlaying* is one of the facilities of the GIS software which is to perform spatial analysis (Kumalawati, 2012, 2013). Overlaying process is a process of overlaying thematic maps which were then analyzed based on the weight of each theme. Based on the total weight of the final results of the process will be a map that contains mosaic maps that have weights. Weights are then combined and delineated based on a predetermined weight range. Thematic maps have been prepared in this study subsequently entered value of its weight and overlayed one by one.

Thematic maps that will be overlayed to be the map of the level of flood-prone area is 1) the map of the level of flood hazard represent patterns and distribution the element of hazard, 2) the map of the house represents the situation of the geographical element of hazard, and 3) The Map altitude represents a place or situation specific geomorphology. Once the whole process is carried out, the maps of flood prone area level will be obtained (see Table 7, Table 8, and Figure 4).

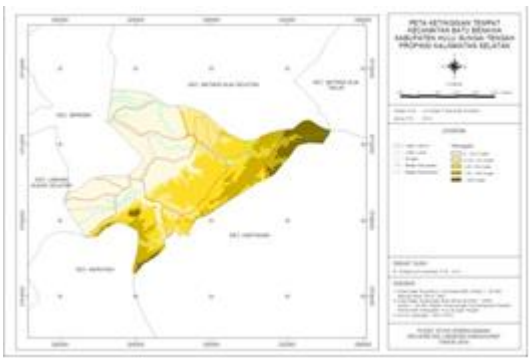

Figure 3. Altitude in Regional Research

Table 7. Flood Prone Area Level District Batu Benawa Regency Hulu Sungai Tengah

	Flood Prone Level	Area (Hectare)	%
1	High	660	12. 14
2	Moderate	1310	24. 09
3	Low	1456	26. 79
4	No-prone	2011	36. 98
	Jumlah	5437	100. 00

Source: Results of Field Measurement and Treatment, 2016

Table 8. Map of Houses in Every Level of Prone in the Research Area

	Flood Prone Level	Number of Houses	%
1	High	1776	47. 17
2	Moderate	1738	46. 16
3	Low	235	6. 24
4	No-prone	16	0. 42
	Jumlah	3765	100

Source: Results of Field Measurement and Treatment, 2016

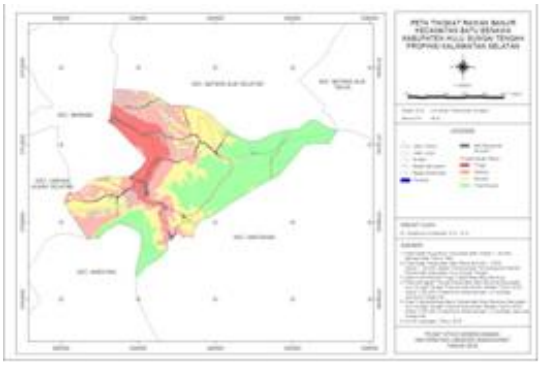

Figure 4. Map Flood Prone Area Levelin the Research Area

Big Flood occured in Regency Hulu Sungai Tengah. Hulu Sungai Tengah several times hit by the floods. It proves that the Regency Hulu Sungai Tengah is classified as flood-prone areas. Worst-affected region in Regency Hulu Sungai Tengah is in District Batu Benawa. All regions in District Batu Benawa prone to flood i. e. High-prone, Medium-prone, Low-prone and No-prone (see to Figure 4). The result of the research shows that most of the investigated flood prone areas (63. 02 %).

b. The Correlation Between Level of Education with Community Preparedness in Flood Prone Area

Correlation analysis of Product Moment technique was used to find the correlation of Variable X (Level of Education)and Variable Y (Community Preparedness). The value of Product Moment (r) correlation coefficient of Variable X (Level of Education)and Variable Y (Community Preparedness) is 0. 108 that was gathered from the result of analysis.

There is a significant correlation of Variable X (Level of Education)and Variable Y (Community Preparedness). It can be seen from the value of r-correlation is greater than r-table which is 0. 108> 0. 062. It means that the alternative hypothesis is accepted, while null hypothesis is rejected. Variable X (Level of Education)and Variable Y (Community Preparedness) have a 5% of level of significance and there is a significant positive correlation, although it is considered as very low correlation. It happened because there are other variables that has not been studied yet in which the variables might have a bigger correlation. It can be said that the community preparedness is high if the level of education also getting higher.

6. Conclusion

1. The result of the research shows that most of the investigated flood prone areas (63. 02 %),
2. There is a positive correlation between level of education with community preparedness in flood prone area.

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SYAILENDRA AND SANJAYA DYNASTY TRACES IN DEWATA CENGKAR TOURISM VILLAGE TERRITORY

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Abstract

This scientific article is motivated by rural tourism development masterplan Tlahab, Canggal, Kruwisan, Tarangan, Paponan Kledung subdistrict, Temanggung regency, Central Java Indonesia that will develop the Syailendra park with frame Rose Garden and Valley Bell. The purpose of this research was to prove the Syailendra dynasty in the region in view of the 8th century until the 10th century there were two ruling dynasties in Central Java, Syailendra and Sanjaya dynasty. This research approach is qualitative ethnographic method. Data collection techniques using the method of observation, interviews, documentation, and literature. The data analysis technique used descriptive qualitative. The data validity by triangulation. The results show that based on observations of historical relics in the area of the Dewata Cengkar artifacts in the form of a statue, temple, inscriptions that showed the traces of the Syailendra and Sanjaya.

Keyword: Temanggung, Syailendra, Sanjaya, Dewata Cengkar, Park

1. Introduction

In the 8th century until the 10th century that there was a large ancient Mataram kingdom ruled by two dynasties. The two dynasties are Sanjaya and Syailendra. Sanjaya dynasty embraced Hinduism, while the Syailendra dynasty embraced Mahayana Buddhist (Soekmono, 1973: 44). The ruling King in the Ancient Mataram kingdom rotating between Sanjaya dynasty and Syailendra dynasty. In the 9th century, Rakai Pikatan who was an ancestry of Sanjaya dynasty married Pramodawarddhani whom was an ancestry of Syailendra dynasty. The marriage could eventually unite the two different beliefs of the dynasties.

The villagers of Tlahab, Tindi, Kruis, Tarangan, Pilsach, Kledung (hereinafter referred to as Dewata Cengkar), who is in the district of Temanggung, Central Java, claiming that they are the ancestry of the Syailendra dynasty. Many of the relics found in the time of ancient Mataram kingdom in the form of Lingga and Yoni, Temple, sites and as well as some of the inscriptions. Relics proved that the area was formerly belonged to the ancient Mataram kingdom.

In addition, the relics in the area of the Dewata Cengkar have the potential to become a tourist village. The potentials in the village will be planned to be Syailendra Park, the garden contains rose garden and decorated with the bells around. The park is expected to be an icon for Temanggung district tourism.

The tourism in the district of Temanggung is still less than optimal. It was showed with the lack of tourist destinations in the area. But in reality there are many potential places to be a tourist destination. For example in the area of the Dewata Cengkar that has the potential to be developed becoming a tourist destination. One of them is the plan of making Syailendra Park.

The plan of making dynasty in Dewata Park Cengkar, expected to attract tourists both local and foreign tourists to come to the Temanggung district. Therefore, based on the background described above, this research purpose to discover traces of the existence of the Syailendra dynasty in the 8th century until the 10th century and its influence on social and cultural life in the community of Dewata Cengkar.

2. Method

The Research Paradigm is a phenomenological with a qualitative approach. The method that used was ethnography developed by Spradley (1997: 3) is a qualitative research strategy, which tried to understand the cultural phenomenon that reflects knowledge and systems of meaning to guide the life of cultural groups by combining field technique and observation in data collection.

This research is the kind of historical research. Whereas reviewed at the purpose, this

research is the kind of explanation research because it is explain the existence of the Syailendra dynasty in this area. The main data sources in this research are primary data and secondary data.

The primary data of observation of historical relics in both, the Cengkar Dewata and the surrounding area and the result of interviews and observations of the actions and customs of local communities. The interviews were also conducted by the experts from the Institute for Preservation of Cultural Heritage (BPCB) and the Department of Archaeology. Secondary data is data obtained from written documents that already exist. Moleong (2001.113) suggested that the source of research data can be from written source, which are source of books and journals, sources from archives, personal documents, and official documents.

Secondary data used in this research consists of documents such as books, photographs; maps related to Syailendra dynasty and the town of Temanggung, Dewata Cengkar in particular areas, either directly or indirectly. The tool used for recording includes photos, video, and audio. The Setting of this research is in the area of Village Tourism Tlahab, Canggal, Kruwisan, Petarangan, Paponan) Temanggung Central Java. The recording of main data sources through interviews or observations to find the evidence of the existence of the Syailendra dynasty in the area.

3. Result

The people in the area have a very strong culture. They still uphold the traditions and culture that existed long ago until now. The livelihood of a large part of society is as a farmer.

Sailendrawangsa term was found for the first time in inscriptions Kalasan year 700 Saka (778 AD). Later the term appears also in the inscriptions of the Village Kelurak year 704 Saka (782 AD), in the inscriptions Abhayagiriwihara of hills Ratu Baka year 714 Saka (792 AD), and in the inscriptions Kayumwungan year 746 Saka (824 AD). The term Sailendrawangsa also appeared outside Java, the inscription Ligor B, Nalanda, and Leiden (Pusponegoro, Notosusanto, 2010: 113).

The origins of the Sanjaya dynasty can be seen from the discovery of the inscription Canggal. Canggal inscription, which comes from a courtyard on the mountain Wukir enshrinement in District Salam, Magelang. This inscription lettered Pallawa and Sanskrit, and to the year 654 Saka (October 6, 732 AD). From the inscriptions it is known that in the year 732 AD King Sanjaya embraced Shiva (Hindu) has set up a phallus on the hill. It might be the phallus is the temple that until now still remains on Mount Wukir, given that inscriptions are derived from the enshrinement courtyard. In the inscription Canggal also told about the king Sanna, who ruled with gentle like a father caring for his son since childhood with great affection, and thus he became famous everywhere. Once he can conquer his enemies, he ruled for a long time to uphold justice. Three last verse of the inscription is addressed to the king that replace Sanna, the king Sanjaya, the son of Sannaha, sister of King Sanna. He was a valiant king, who had conquered kings around him, he was also honored by the poets because it is seen as the king who understand the contents of the sacred books (Pusponegoro, Notosusanto, 2010: 129). King Sanjaya is the successor to a king Sanna who is believed to be the founder of Sanjaya dynasty.

In the middle of the 9th century the dynasties were united by the marriage of Rakai Pikatan and Pramodawardhani, the daughter of King Samaratungga who comes from the Syailendra dynasty. In year 856 Rakai lure abdicate, after successfully removing the authority of the Syailendra dynasty in Java. (Soekmono, 1973: 44-47).

According Soekmono (1973), the temples of the 8th century and 9 in Central Java North is Hindu, while in south Central Java is Buddha, then the domain of Sanjaya is the northern part of Central Java and Syailendra is Southern Central Java. (Soekmono, 1973: 44) adds that it is also Kalasan located in the village Kalibening Tirtomartani Sleman Special Region of Yogyakarta to venerate the goddess Tara, according to the inscription of the year 778. It could be referred to the goddess Tara according Poesponegoro and Notosusanto (2010: 151) is the queen of the king Samaratungga, the mother of Balaputradewa. Unfortunately, the boundary of the Syailendra dynasty and Sanjaya is not known with certainty.

Reviewing from its location, it can be said Temanggung was in the border area between the northern part of Central Java, and the southern part of Central Java. It could be Temanggung the Syailendra dynasty territory, but can also be a part of the Sanjaya dynasty.

Temanggung history began to be recorded in the Central Wanua inscription III 908 AD was found by the villagers of Dunglo,Village District of Kaloran Temanggung in November 1983. The inscription describes the original form that Temanggung region with the great natural sources and also prosperity, one area that is Pikatan. Here Bihara Hinduism founded by his

brother the king of ancient Mataram Rahyangta I Hara, the king was Rahyangta Rimdang (King Sanjaya) who ascended the throne in 717 AD (mantyasih inscription). By the heir to the throne is Rake Panangkaran who ascended the throne on November 27, 746 AD, Bihara Pikatan obtained the arable land in Sawah Sima. (Http //: www.Temanggungkab.go.id). Based on the description it is clear that Temanggung is an area of the Sanjaya dynasty.

The results of observations on March 12 in the area near the temple ruins inscriptions found their Gondosuli phallus, the yoni, and the statues of Nandi indicating the influence of the Sanjaya dynasty. Based on the result above so that until the year 832, Temanggung area still controlled by the Sanjaya dynasty. Poesponegoro and Notosusanto (2010: 145) adduced that Karayan Dang Pu Palar is rakai Patapan. Gondosuli inscription was meant to commemorate the construction of sacred buildings Sang Hyang Haji in north prasada named Sang Hyang Wintang. It might be the remains of the temple of Shiva or Hindu as the background.

4. Discussion

The people of Dewata Cengkar, which is in the district of Temanggung, Central Java, admitted that they are ancestry of the Syailendra dynasty. Moreover, in Temanggung also will be built a park containing roses and decorated with the bell in every house. The park is planned to be named Taman Syailendra.

Reviewing from its location, it can be said Temanggung was in the border area between the northern part of Central Java, and the southern part of Central Java. It could be that Temanggung is the Syailendra dynasty territory, but can also be a part of the Sanjaya dynasty.

Based on the sites form of relics that the stone temple, stairs with staircase 99, Lingga, Yoni, a statue of Nandi, and the form of temples in the area of the Dewata Cengkar and surrounding areas are more numerous when compared with legacy dynasty, it can be said that the Sanjaya dynasty greater influence in the region Dewata Cengkar when compared Syailendra. Similarly, when viewed from the customs of the people around the Dewata Cengkar Hindu tradition is stronger than Buddha.

Also in the surrounding area of Dewata Cengkar Liangan recently discovered temple is very spacious called Temple Liangan. The temple is in the estimate was built in the 8th century until 9th century before the Borobudur was built. Surrounding communities believe that the temple is a temple patterned Buddhism because there is such a building shaped like stupas, but the results of the findings in the vicinity of the temple like a statue of Ganesha, Lingga and Yoni, and also a statue of Nandi, archaeologists and historians believe that Liangan temple is a relic temple of Hindu religion.

The results of the research as described above are relevant to the theory expressed by Soekmono. Soekmono in his book mentions that the Sanjaya dynasty's territory is the northern part of Central Java while Syailendra area is the southern part of Central Java.

5. Conclusion

Based on the results of the research the conclusion as follows:

a. Syailendra and Sanjaya dynasty led the central Java region alternated between 8-10 centuries.
b. Dewata Cengkar area in Temanggung district which is the border region of the Syailendra anf Sanjaya dynasty at the northern part and southern part of Central Java could have been influenced by two dynasties at once.
c. Based on these ancient sites that have been founded, it could be said that the Sanjaya dynasty is more influential than the Syailendra dynasty.

RECOMMENDATIONS

This research proposes recommendations that the name of Syailendra Park on tourism destinations that will be built in the area, it would be more appropriate with the name, Sanjaya Park.

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EVENT MARKETING AND BRAND EQUITY: THE MEDIATING ROLES OF EXPERIENCE AND ATTITUDE

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Abstract

The objective of the study was to test the relationship between events and brand equity, mediated by brand experience and brand attitude. The research was anchored on the mediation model of Baron and Kenny. The research connotes its limitations as it focuses on the highlight events of Panagbenga Festival. The residents and non-residents of Baguio, attending the annual Panagbenga Festival activities, comprised the 200 respondents. They were surveyed by the researchers and were selected by simple random sampling and purposive sampling.

The research findings provide that brand experience mediates on the relationship of brand equity in all types of events. Furthermore, it clearly specifies that event attendance creates positive influence on brand equity. The research results also reveal that dimensions of brand experience (sensory, affective, cognitive, and behavioral) do not have the same effects, thus creating different levels of impact to consumers. From this research, significance of brand attitude, brand experience and brand equity are discussed and given further emphasis. In general, the research shows the mediating relationship of brand equity, brand attitude and brand experience and how these interconnections are linked to how successful an event is and how these elements operate and contribute to level of effectiveness and perceptions of the consumers who are directly and indirectly exposed to the event. The paper attempts to develop a model for the effect of event marketing. Thus, this implies that sponsoring companies could further analyze and improve their event to better display programs that educate, entertain, inspire and persuade people.

Keywords: brand attitude, brand equity, brand experience, event marketing, mediation

1. Introduction

During the recent years, focus has been on the consumer as an emotionally acting consumer and with that, a drastic shift occurred in the marketing communications and media business. Marketers are faced with the problem that consumers are less and less responsive to traditional advertising [1] and therefore they are still looking for new marketing communication tools. This has led to event marketing as a fast emerging promotional catalyst vis-à-vis the traditional marketing tools [2]. Thus, pointing out that creating differential advantage through emotional benefits is one of the keys to market success [3]. These factors have led to a growth in valuable and emotional marketing communication tools, here among event marketing, which is an increasingly important element of the marketing communication mix that includes product launches, open days, conferences, product sampling, road shows, conferences, contests, exhibitions, corporate entertainment, trade shows and charity fundraisers [4]. This has led event marketing to be an increasingly interesting alternative communication platform and brand touch point for influencing consumer and enhancing brand impact. Indeed, the growth of unconventional advertising practices led to increase popularity of event marketing. However, there are companies that doubt its effectiveness but some has viewed it as a tool for brand awareness. To sum up all prior and subsequent researches, events allow for direct, highly interactive and local consumer-brand encounters where consumers can experience the brand in an immediate way.

Two mediating marketing constructs will be considered: Brand attitude and brand experience. Brand attitude has been established as a key factor contributing to the effectiveness of many different marketing and communications media. Brand equity is defined in terms of the marketing effects uniquely attributable to the brand. Brand experience in contrast, is the exposure of a customer to various specific brand-related stimuli [5]. Notably, brand experience can be in a form of sensation, affective, cognitive, and behavior. In sum, this paper addresses the following two questions: (1) Do event marketing have an impact on brand

equity? (2) What role do brand attitude and brand experience play in the process?

The research has generated the following hypothesis from the background study of overall brand equity, brand attitude, and brand experience:

H_1: The events of Panagbenga positively contribute to Overall Brand Equity.
H_{2a}: The events of Panagbenga have significant effect to Brand Experience
H_{2b}: Brand Experience has significant influence to Overall Brand equity
H_{2c}: Brand Experience mediates in relation between the Events of Panagbenga and Overall Brand Equity
H_{3a}: The events of Panagbenga have positive impact to Brand Attitude.
H_{3b}: Brand Attitude has significant influence to Overall Brand Equity
H_{3c}: Brand Attitude mediates in the relations between the event of Panagbenga and the Overall Brand Equity

2. Method

As part of study, the quantitative research techniques were used for this study because it was suitable to verify theories, identify significant of variables, and relate variables in hypotheses [6]. In this case, multiple linear regression analysis and mediation effect approaches were used. Survey was facilitated to test gather relevant information.

Research Design

Whereas, most research in the event marketing literature uses on-site surveys during events [7], the present study is based on surveys conducted after event attendance. Since this paper does not focus to on any specific type of consumer event, six different events occurred in Panagbenga, for generality, were included in the study, and including both sponsored events and unconventional events. Numerous precautions were taken in order to reduce the risk of impact of these preconceptions, because various different biases might be associated with this experimental design, given that it does not include a control group [8].

Instrumentation

The questionnaire was divided into four parts: Events, Overall Brand Equity, Brand Experience, and Brand Attitude. For the assessment of event participation, respondents are to rate the degree of attractiveness of the six events by 5-point Likert's scales of 'Very Attractive (5)' to 'Not Attractive at All (1)'.

After attending an event, each participant received one questionnaire, which includes a brand equity measure. Short scales had to be used, given that the field research nature of the study. For that reason, four-item overall brand equity (OBE) scale by reference [9] was used. Furthermore, as to have a better understanding on the effect of events on the overall brand equity rather than its single dimensions, the OBE scale seem like to be the best choice. OBE has a high correlation with multidimensional brand equity and can be considered a brief measure of brand equity in general, even though it is outcome focused [9].

In addition, the questionnaire contains a 12-item brand experience scale, by reference [10], with three items to measure for each experience dimension. The brand experience scale assesses how much each brand experience dimension (i.e., sensory, affective, intellectual, and behavioral) is stimulated by a given event. Likewise, by retaining those that have been used more often in the marketing literature, a short three-item brand attitude scale is included by [11].

Post-event OBE and brand experience were rated on 5-point Likert scales ranging from 1 = 'Strongly Disagree' to 5 = 'Strongly Agree'. Brand attitude items were rated on 5-point semantic differential [11].

Respondents

The Panagbenga Festival attracts a huge number of tourists yearly. In connection, 200 respondents were surveyed by the researchers and were selected by simple random sampling and purposive sampling. The respondents of this study are the residents and non-residents of Baguio, attending the annual Panagbenga Festival activities.

Reliability

Based on the result of reliability statistics, it shows that the alpha coefficient for 25 items, as the valid variable, is 0.933. Considering that Cronbach's Alpha value is more than 0.600, it indicates that the items have relatively high internal consistency. Table 1 presents the detailed reliability test.

Table 1. Reliability Constructs

Constructs	Number of items	Cronbach's Alpha
Events	6	.776
Brand Equity	4	.724
Brand Experience	12	.896
Brand Attitude	3	.787
Overall Reliability	25	.933

Data Analysis

This research uses descriptive statistics analysis, linear and multiple regression analysis, and Pearson correlation analysis.

The Baron Mediation Theory was used to test the hypothesis on mediation. Reference [12] proposed a four step method in which several regression analyses are conducted and significance of the coefficients is scrutinized at each step.

3. Results

The purpose of the study is to determine the impact of events to overall brand equity with the intermediating effect of brand experience and brand attitude. Respondents have a common familiarity on the events of Panagbenga with an average mean (μ) of 3.84 (p = .000). Respondents identified that the most visited event of the festival are the Grand Float Parade (μ = 4.14, p = .000), Session Road in Bloom (μ = 4.05, p = .000), and Grand Street Dancing Parade (μ = 3.95, p = .000).

Formally, event marketing has been defined as "the practice of promoting the interests of an organization and its brands by associating the organization with a specific activity" [13]. In terms of effectiveness of different events, the research on this topic is limited [2], considering that recent studies of Marketing Communications (MARCOM) scholars have started to examine event marketing in terms of the persuasion process and the ability to positively affect the brand [14][15].

In the brand management literature, event marketing is usually presented as a means for building brand equity [16][17]. Brand equity is "the 'added value' with which a given brand endows a product" [18]. Indeed, street events may be perceived as a type of brand community gathering, and pop-up shops as a type of (temporary) branded environment. Based on the events (brand-community gatherings), the marketing literature provides evidence about their role in fostering the relationships between consumers and the brand/company [19],[20].

The respondents manifest above average perception on the overall brand equity of the event (μ=3.8695, p=.000). Respondents pay attention to more festival features of the event (μ= 4.035, p=.000), and seeing different contingents from other regions (μ=3.875, p=.000), thus resulting to the choice of attending the Panagbenga event rather than other outside festivals (μ=3.775, p=.000), even if they are scheduled at the same period (μ=3.705, p=.000).

Reference [10] have defined brand experience as 'subjective, internal consumer responses (sensations, feelings and cognitions) as well as behavioral responses evoked by brand-related stimuli that are part of a brand's design and identity, packaging, communications and environments'. In point of fact, direct contact and interactions at a local event may result in memorable brand experiences, event practitioners have begun to refer to event marketing as 'experiential marketing' [21][22]. In sum, prior research suggests that participating in an event usually means being fully immersed in a physical space that stimulates all consumers' senses [23], encourages them to be active participants and to interact with the surrounding environment [24][25].

Table 2 shows the brand experience level of the respondents. They have exhibited an above average level of brand experience (μ=3.6025, p=.000), affected by sensory experience (μ=3.7815, p=.000), which has the highest impact, followed by behavioral experience (μ=3.559, p=.000), affective experience (μ=3.517, p=.000), and intellectual experience (μ=3.5165, p=.000), respectively.

In general, the respondents inclined to participate at the festival due to its interesting visual presentation (μ=3.92, p=.000) and strong visual impressions (μ=3.725, p=.000), considering also that it is an action-oriented activity (μ=3.74, p=.000). Likewise, the event generates a positive feelings and sentiments (μ=3.765, p=.000) resulting to appreciation. The event, presenting cultural dances with distinctions (μ=3.585, p=.000), stimulates curiosity (μ=3.535, p=.000) for the observers.

Table 2. Descriptive Statistics – Brand Experience

Brand Experience	3.6025	.66093	.000
Sensory Experience	3.7815	.72660	.000
Affective Experience	3.5170	.81291	.000
Intellectual Experience	3.5165	.82965	.000
Behavioral Experience	3.5590	.77798	.000

Brand attitude has been defined as a relative and enduring, unidimensional summary evaluation of the brand that presumably energizes behavior [26]. They represent the degree of likeability (or unlikeability) of a brand, as well as the extent to which a consumer has a favorable (or unfavorable) view of it [27]. Scholars have shown that event attendance can result in more favorable brand attitudes and that, in turn, brand attitudes determine stronger purchase intentions [14],[28].

The respondents have revealed that they find the event good (μ= 4.075, p=.000) and attractive (μ= 4.07, p=.000), which is the greatest point, and at the same time, pleasant (μ=3.95, p=.000), resulting to an above average level of brand attitude (μ= 4.0325, p=.000). The descriptive statistics of brand attitude was summarized in Table 3.

Table 3. Descriptive Statistics – Brand Attitude

Brand Attitude	**4.0325**	**.77063**	**.000**
Good	4.0750	.90191	.000
Pleasant	3.9500	.93373	.000
Attractive	4.0700	.91613	.000

As shown in Table 4, events have high positive relationship with overall brand equity. As we increase the participation of the respondents on the events, overall brand equity also increases (r = .581, significant at .01). Brand experience also increases the level of overall brand equity (r = .648, significant at .01), the same as with brand attitude (r = .522, significant at .01). On the other hand, involvement of the respondents to the events likewise further increases the levels of brand experience (r = .700, significant at .01) and brand attitude (r = .611, significant at .01).

Based on the results from the data (Table 4), the analysis indicated that events, brand experience and brand attitude, had a positive direct effect to overall brand equity. Predominantly, recording a higher level of brand experience and brand attitude are directed from higher levels of events and those with high level of brand experience and brand attitude developed better overall brand equity. Thus, the results support H_1, H_{2a}, H_{3a}, H_{2b} and H_{3b}.

In Reference [29] terms, the mediations of brand experience and brand attitude can be defined as 'complementary', because, in each case, 'mediated effect and direct effect both exist and point at the same direction'. Thus, the analysis gave the same results that brand experience was found to have a direct relationship with overall brand equity; those who have high satisfaction on their sensory experiences tended to have higher levels of overall brand equity. Brand attitude was also shown to have a positive direct effect on overall brand equity. This was interpreted by the higher the brand attitude level attained by a respondent, the higher the overall brand equity level is.

Legend:
E: Events
OBE_q: Overall Brand Equity
BSE_x: Brand - Sensory Experience
BAE_x: Brand - Affective Experience
BIE_x: Brand - Intellectual Experience
BBE_x: Brand - Behavioral Experience
BE_x: Brand Experience
BA: Brand Attitude

Table 4.Intercorrelations – Events, Overall Brand Equity, Brand Experience, and Brand Attitude

	E	**OBEq**	**BSEx**	**BAEx**	**BIEx**	**BBEx**	**BEx**	**BA**
E								
OBE_q	.581**							
BSE_x	.549**	.602**						
BAE_x	.619**	.518**	.612**					
BIE_x	.572**	.521**	.535**	.699**				
BBE_x	.598**	.527**	.482**	.608**	.632**			
BE_x	.700**	.648**	.773**	.876**	.866**	.818**		
BA	.611**	.522**	.557**	.532**	.564**	.588**	.670**	

Mediating Effects

Mediation occurs if the coefficient of the direct path between the independent variable and the dependent variable is reduced when the indirect path via the mediator is presented into the model. The direct path is measured without the mediator in the direct path from events to overall brand equity, and with the mediator in the direct path from events to overall brand equity, and an indirect path from events to brand

experience then brand experience to overall brand equity, similarly, an indirect path from events to brand attitude then brand attitude to overall brand equity.

Overall brand equity was regressed on events, brand experience, and brand attitude using the linear regression model in order to test H_1, H_{2a}, and H_{3a}. Table 5 and 6 shows the results

The regression results display all that events contributes positively to overall brand equity (β=.581), brand experience (β=.700), and brand attitude (β=.611). Furthermore, all of the dependent variables are significant ($p<.05$), as exhibited in the model, thus showing that the linear relationship is strong. Moreover, 33.7% of the total variation in overall brand equity, 49% of the total variation in brand experience, and 37.3% of the total variation in brand attitude are explained by the level of events. The path analysis result is shown at Fig.1.

Brand experience playing a mediation role between the relationship between events and overall brand equity is displayed in the second model.

The Sobel test was used to evaluate the significance of the mediation effect. The standardized regression coefficients were obtained through linear regression, and unstandardized coefficients were calculated by multiplying the standardized coefficient by the standard deviation of the dependent variable and dividing it by the standard deviation of the independent variable (see Table 5 and 6).

The beta between events and overall brand equity was .581, when the linkage was direct, and .250, after brand experience was integrated as a mediator. The indirect path of events to brand experience and from brand experience to overall brand equity was (.700 * .648) = 0.4536. The extent of the correlation between events and overall brand equity accounted for by the mediator was (.581–.250) = 0.331 that signifies 56.97 percent of the direct effect. Consequently, this indicates that brand experience fully intermediates on the relationship between events and overall brand equity. The empirical results propose that H_{2b} and H_{2c} are accepted.

Brand attitude exhibiting a mediation role between the relationship between events and overall brand equity was presented in the third model. The standardized beta between events and overall brand equity was .581, when the linkage was direct, and .418, after brand attitude was incorporated as a mediator. A difference of 0.163 represents the extent of the correlation between events and overall brand equity accounted for by the mediator. The indirect path of events to brand attitude and from brand to overall brand equity was .611 *.522 = 0.318942.

Subsequently, brand attitude likewise increases the coefficient of the direct path, thus, brand attitude could be concluded as a mediator. As cited previously, if the coefficient of the direct path between the independent variable and the dependent variable is reduced, when the indirect path via the mediator is presented into the model, mediation exists. Hence, this supports the mediation theory of Baron and Kenny, stating that the empirical results, H_{3b} and H_{3c}, are accepted.

The model illustrates brand experience and brand attitude displaying a mediation role between events and overall brand equity. As exhibited in Fig.1, it integrates the mediation relationships.

Table 5. Model of Test of Mediation – Brand Experience and Brand Attitude

Step	Path	Standardized Beta	Standard Deviation "Y"	Standard Deviation "X"	Unstandardized Beta	Standard Error
1	Events – Brand Equity	.581	.72626	.61839	.682	.068
2a	Events – Experience	.700	.66093	.61839	.748	.054
2b	Experience – Brand Equity	.648	.72626	.66903	.712	.059
3a	Events – Attitude	.611	.77063	.61839	.761	.070
3b	Attitude – Brand Equity	.522	.72626	.77063	.492	.057

Table 6. Regression Results – Events, Brand Experience, Brand Attitude, and Overall Brand Equity

Step	Path	Independent Variable	Dependent Variable	R^2	Adjusted R^2	F	Beta	*p*
1	E - OBE_q	Events	Overall Brand Equity	.337	.334	100.852	**.581**	.000
2a	E - BE_x	Events	Brand Experience	.490	.487	190.255	.700	.001
2b	BE_x - OBE_q	Brand Experience	Overall Brand Equity	.420	.417	143.141	.648	.000
2c	E - BE_x- OBE_q	Events and Brand Experience	Overall Brand Equity	.451	.446	81.067	**.250**	.000
3a	E - BA	Events	Brand Attitude	.373	.370	117.745	.611	.000
3b	BA - OBE_q	Brand Attitude	Overall Brand Equity	.272	.269	74.125	.522	.000
3c	E - BA - OBE_q	Events and Brand Attitude	Overall Brand Equity	.382	.376	60.892	**.418**	.000

**indirect effect (E - BE_x- OBE_q) = 0.4536 [.700 * .648], using the Sobel test for the significance of mediation*

**indirect effect (E - BA- OBE_q) = 0.318942 [.611 * .522], using the Sobel test for the significance of mediation*

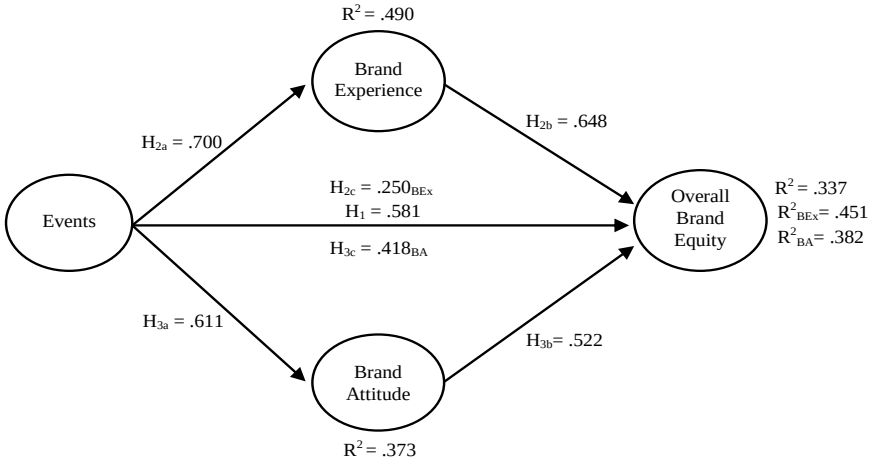

Figure 1. Betas for the Paths and R^2 for the Variables

4. Discussion

The main objective of this paper is to develop a clear understanding of the mediating effects of brand experience and brand attitude on events of Panagbenga and overall brand equity. Furthermore, the research aims to determine the impact of brand attitude and brand experience to the overall brand equity of the event. Recall that the research hypotheses lead to causal models that were conceived out of the constructs which were based on literature. The research was anchored on the mediation model of Baron and Kenny.

The results generated several significant points which are found in the interrelations between events to overall brand equity, brand experience and brand attitude and between overall brand equity to brand attitude and brand experience.

Primarily, the events indicated positive relationship to other variables. First, there is a positive relationship between events and the overall brand equity, as the events of Panagbenga positively contribute to the level of overall brand equity. Second, there is also a positive relationship between events and the brand experience whereas; events significantly contribute to the level of brand experience. Thirdly, there is positive relationship between events and brand attitude. It is interesting to know that the positive relationship between events and brand attitude will cause increased overall brand equity. Hence, the empirical results support the previously established hypothesis such as H_1, H_{2a} and H_{3a}.

Furthermore, events came up with a higher evaluation rate for overall brand equity. Then, the events came up with positive results as to brand experience and finally, higher brand attitude leads to the success of the events. Overall, brand experience and brand attitude have significant influence to overall brand equity. Therefore, the empirical results support the given hypothesis H_{2b} and H_{3b}.

Moreover, the objective of H_{2c} and H_{3c} was to empirically test a proposed mediation relationship between events of Panagbenga, and overall brand equity through brand experience and brand attitude. The amount of the relationship between events of Panagbenga and overall brand equity accounted for by the brand experience, as the mediator, was 0.331, obtained through *(.581–.250),* that represents 56.97 percent of the direct effect. On the other phase, the amount of relationship between events of Panagbenga and overall brand equity accounted for by the brand attitude, as the second mediator, was 0.163, obtained through *(.581– .418),* that represents 28.06 percent of the direct effect. In conclusion, both brand experience and brand attitude mediate on the relationship between events and the overall brand equity.

Another objective of this study is to determine which of the dimensions of brand experience has the most impact on the events. Based on the analysis, it is the sensory experience that has the greatest impact (μ=3.7815) compare to behavioral experience (μ=3.5590), affective experience (μ=3.5170) and to the least which is the intellectual experience (μ=3.5165). In conclusion, all dimensions of the brand experience have their different impact to brand equity while sensory experience takes the highest score.

The study suggests that not all brand experience dimensions have the same effect to consumers. It only means that not all brand experience dimensions are effective to promote brand relationship quality.

Like any other research, this study also has several limitations. First, the data for this study are obtained from single informants like those who have watched or witnessed a particular event, in this case, The Panagbenga Festival, which may result to biases. In addition, the findings of this study may only be generalized to the participants of Panagbenga. Another concern about limitation is that there is little research done on the relation of event marketing on brand equity. Moreover, this study may only be applicable with the events in Panagbenga and not to others.

Despite the limitations mentioned in the last paragraph, the findings of this study have formed useful implications for researchers, to an enterprise and to the public. For the researchers, this paper delivers the idea of mediation between events, brand experience, brand attitude and overall brand equity that has been analyzed in Figure 1. In particular, links between events, brand experience (and its dimensions), brand attitude and overall brand experience could be further examined to provide more specific guidelines and information for enterprises and for the public that will conduct event marketing to certain product or service.

For the enterprises and to the public, the implication is that, when they do event marketing it is not only the brand experience or brand attitude or overall brand equity that they should concentrate but also concentrating on how will they improve in all of them since there is a mediating relationship between the three variables; and to focus their attention not only in the context of brand experience but also to its dimensions – sensory, affective, cognitive and behavioral. An enterprise should work on how they will deliver to the audience of the event the total quality experience of it. Therefore, we can say that the mediations of between the variables indicate the enterprise and the public could consider that they are the major areas that may enhance a particular event. Moreover, the presence of the mediating capabilities provides additional insights into the ways of improvement of certain event to achieve maximum brand equity. The findings of this exploratory study especially the empirically tested framework can be used by consumers, non-government agencies or institutions, as guide to increase recognition to their advocacies.

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DEVELOPMENT MODEL OF WOMEN EMPOWERMENT THROUGH THE SNACK PRODUCTS ENTREPRENEURIAL FOR GROWING THE SPIRIT OF ENTERPRISE AT 'AISYIYAH MLATI, SLEMAN, YOGYAKARTA SPECIAL REGION

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Abstrak

The number of entrepreneurs in Indonesia is still low. It was suspected due to the lack of attention to education and community entrepreneurship education. Many educators are paying less attention to the growth of attitudes, interests, and entrepreneurial behavior of students, both in formal and non-formal education. In general, education is oriented towards preparing the workforce. Many women labor force remains unemployed or working just taking care of the household and are not independent economically. For that, need to find a solution, how education can play a role in change humans become entrepreneurs. This study aimed to: find a model of woman empowerment that it is practical and effective to growing an entrepreneurial spirit in the snack products at 'Aisyiyah Mlati, Sleman District, Yogyakarta Special Region Province. This study used a qualitative descriptive approach. Development of a model using the approach of Research and Development, or R & D of Sugiyono with ten stage.In this research, the quantitative data was analyzed by quantitative analysis. While the qualitative data were collected continuously and classified based on its aim. Then, the data were analyzed by naturalistic and analytic descriptive. Has produced a Model of Women Empowerment through The Snack Products Entrepreneurial for Growing The Entrepreneurial Spirit that has been declared effective and practical.

Keywords: women's empowerment, snack products, entrepreneurship, 'Aisyiyah.

1. Introduction

Community empowerment is an attempt to transform and shape people's lives are powerful. Empowerment will improve the ability of community members to manage their lives independently, including community who able to be entrepreneurs. The number of entrepreneurs in Indonesia is still low. For that, it is necessary to find the form of education that can contribute to transforming human beings entrepreneur human by giving provision to the students to be able to be influential entrepreneurs and ready to work, so that they can support themselves and their families.

The performance of the relationship between gender and entrepreneurial is exciting; it is partly because of the confronting perspectives on the subject. The 'constraint- driven gap' perspective with a dispute that there are significant gender-specific barriers to entrepreneurship that obstacle the performance of female entrepreneurs. These constraints relate to complications that women might meet in obtaining credit, in cultivating business networks, in compromising with government and other officials.

Hunter explored his study of the factor structure of a modified empowerment scale. This study explored with a cross-sectional sample of 296 women in recovery from substance use who lived in recovery homes located throughout the United States. Has been identified three factors of psychological empowerment that were closely related to previous conceptualizations of psychological empowerment: self-perception, resource knowledge, and participation [1].

One form of potential entrepreneurs is a business of food and drink including snack. Based on the Master of Acceleration and Expansion of Indonesian Economic Development 20011-2025, the food industry is a high contributor to the GDP of Indonesia. In 2008, the value of food and beverage production reached 20 billion and grew at about 16 percent per year.

Until now the culinary business is still primadonna to be developed, due to various

reasons such as the food is a basic human need. Culinary business can be grouped into; restaurant, food stalls, small industries of food, bakery pastry, catering, and canteen. Types of food can be grouped into; staple food, a bowl dish, snack, side dishes, and beverages.

Snacks are easily available everywhere to support the improvement of nutritional snacks are relatively cheap, so that it is reached by the grassroots. Snack businesses are informal factors that absorb a lot of work, and capital teenage does not need a large [2]. With regards to food is closely associated with the activities of women.

Women, both as citizens and as human resource development, have rights, obligations, and the same opportunities as men in development in all fields. Women are expected to take a role in social and economic issues aimed at equitable distribution of the result of development, the development of qualified human resources, and environmental preservation.

The women play an important role in the economic welfare of the family has been accepted very well. They felt that in traditional societies the role of women is just confined to the household management based on traditional values, attitudes, and customs. The culture of family in the context of which early socialization takes place is a very important factor which later on induces or prohibits women's participation in economic activities of the family. The economic role of women in the traditional society largely depends on two important factors, which are need for augmenting the family income and opportunities available for participation in such economic activities [3].

Based on the data from the Central Bureau of Statistics, 2009 [4] , there were 3.9 million women who become unemployed workforce and 30 million women who only take care of the household work and were not economically independent.

This is accordance with women members in the Working Woman's Forum (WWF), India, who worked as vendors and petty shopkeepers desired social mobility for their daughter. They were sure that this could be obtained not just by formal education but by skill or craft training to prepare them for productive employment. This contributed to a start of vocational training centers for adolescent girls in the urban area and other types of skill training such as lace-and rope-making in rural areas [5].

The issue of women's empowerment is always warm and interesting to talk about. The empowerment of women cannot be separated from the general concept of community empowerment. The issue of women is one of the keys to creating and building qualified human resources.

Women as people who have been accustomed to managing the family, both regarding financial arrangements and sources of income, people who are most understand at child development, tenacious worker but tend not productive because it still has limitations in a variety of access. Furthermore, women want a change in life through coaching and assistance. Therefore, empowerment efforts should always be done.

Based on this background, it is necessary efforts to empower women through the learning process that provides a stimulus in the form of a learning experience that can help learners develop her potential.

Therefore, it is required the development of learning activities that can instill strong and clear values as the foundation of character formation and development of people's lives, education which can give the meaningful something, both ideal and pragmatic, leads to productive activities through the development of the field of snack learning entrepreneurship courses, which applying knowledge, skills, attitude and employability, in accordance with the needs of women If the learning results is successfully, the effort also successfully in empower women and help the government in addressing the problem of unemployment and poverty.

Suharto [6] explains that empowerment (empowerment) is derived from the word 'power' (power or empowerment). Therefore, it can be said that empowerment is an attempt to increase the potential group of people so that they have the power from now on bargaining power in the scope of the wider society. Community empowerment can also be interpreted as a process in the community, especially those who lack access to development resources to be encouraged and prepared to increase self-sufficiency in developing their lives.

Meredith [7] stated that entrepreneurs were people who have the ability to saw and assessed the business opportunity and gather the resources needed to take advantage and take appropriate measures to ensure their success. The entrepreneur was calculated risk taker. They are passionate facing challenges. Entrepreneurial avoid low-risk situations because there is no challenge and avoid high-risk situations because they want to succeed. They love a challenge that can be achieved.

Meanwhile, according to Nasution [8], entrepreneurship is all things related to attitudes, actions undertaken by the entrepreneurs in

pioneering, run, and grow their businesses. While Sunyoto & Wahyuningsih [9] say that entrepreneurship is a mental and attitude and spirit that always actively try to improve their work in the sense of increase their income. Jonah Suryana & Kartib Bayu [10] explains that the entrepreneurial spirit, behavior and the ability to respond positively to the opportunity to earn a profit for herself / and or a better service to customers / community; by always try to find and serve subscriptions more and better, and create and provide more useful products and implement a more efficient way of working, through the courage to take risk, creativity, innovative and management capability. The decision to start a business is a complex process that incorporates one's person- ability and interests, upbringing and role models, skills and opportunities [11].

Entrepreneurs are not just born but can also be trained and developed. Entrepreneurial development programs will help the potential entrepreneur to establish his business enterprise appropriate to his abilities and liking. Entrepreneurship development is an organized and continuous process. Entrepreneurs can be improved through training, education, and development. Entrepreneurial improvement prefers to enhance the skill and knowledge of entrepreneur through training and improvement [12].

From the definition of entrepreneurship above it can be concluded that the spirit and entrepreneurial behavior is not only found in a business context, but also encountered in the field of life and professions such as education, health, research, law, architecture, engineering, and social work. Such things can be achieved through the process of entrepreneurship education.

Ciputra [13] sees entrepreneurship education from an economic aspect, that entrepreneurial learning will give us three significant benefits, namely: (1) will generate future human beings who can be not poor. (2) The growing entrepreneur is sources of state revenue that can be relied on; and (3) the entrepreneur will also open new jobs, helped build new cities, develope agriculture, excite products community needs and provide quality public services.

Of understanding can be obtained a description that entrepreneurship is the work done by those who dare to take risks and dare to stand alone for field employment or livelihood for his life and the lives of others who may hold.

Based on some opinions on the above it can be seen that entrepreneurship education is a great moment to overcome one of the problems in society which reduce the amount of poverty and unemployment. Also, entrepreneurship also educates people to prosperity, independence, which further improves the welfare of a nation.

Snack food group also called small meals, snacks or delicacies. Snacks are a group of very diverse snacks kind, can take the form of dry food, wet food, porridge or drinks. Snack food groups are growing traditionally, which in past sold in the traditional markets. Until now, the food groups seem to be able to maintain their existence as interesting food, meet the people's tastes, and even capable of standing with snacks from other countries. The state can be seen of its presence in department stores, the five-star hotel even for state occasions. Despite its status just a snack, but it can give you a direction that the snack food group has the potential to be developed. Although until now mostly still produced traditionally, but it been able to stand with other snacks produced with modern technology. The development effort is important, because, with technology in this open era, food can be a significant economic power.

Until now, excavation on the various aspects of snacks is still very rare, for example, its role in supporting the people's economy, its contribution to the development of new products and so on. Therefore, various activities, excavation, and development strategies are necessary, and continue to do so that a variety of snacks able to evolve and will not become extinct.

Snacks are made with a lot of the main components of carbohydrates. Alternative use of carbohydrates besides rice is very broad. Although, the carbohydrate to one another is different. However, it is possible to study the fundamental properties of carbohydrate from a variety of sources. For example, carbohydrates of various tubers are cassava, yam, arrowroot, Dioscorea esculent and the like. Besides tubers are also fruits that can be used as a source of carbohydrates, such as bananas, breadfruit, and pumpkin.

In the development of snacks, the west implement in earnest, supported by science and technology. As a result created a product that is attractive, because a neat appearance and packaging, nutritional value has been designed and is more hygienic. Thus creating a balance between the quality achieved by the producer and consumer preferences. A balance between quality and preferences regarding the criteria widely, such as appearance, flavor, texture, and security.

According to [14], materials for Indonesia cake can be grouped into basic materials, liquid

materials, ingredients to taste, color, and aroma as well as other materials. While the basic materials can be derived from; glutinous rice, flour leprosy, tubers, fruits, and starches. Indonesian has the food resources that can be developed into a wide variety of snack foods / snacks are interesting and made into food which has the advantage kompeteitif.

The Aisyiyah organization has multiple assemblies and institutions, one of them is the Council of Economic and Employment in charge of improving and empowering the local economy, either through the development of entrepreneurship and skills and business networking.

Economy and Employment Council in charge of building awareness and behavioral economics to improve the lives and welfare of the citizens, the people, and the community, among others develop efforts in improving the community, especially the poor and strengthen the position of small micro enterprises run by women in terms of access and control to economy resources.

In advancing the degree of women and encourage the involvement of women in the economic field, 'Aisyiyah has established 568 cooperatives for economic empowerment of women and families through 1029 Family Economics Business Development, founded Baitul Maal wa Tamwil, and coaching home industry.

This study intends to find patterns of the woman empowerment through entrepreneurship of snack on Aisyiyah residents in District Mlati Sleman.

Because of the extent of the problem aspects that can be researched and developed in the process of community empowerment, this study is limited to the model development process and the empowerment of women through entrepreneurship snack. The development of this model is expected to be used to improve the quality of the learning process and outcomes of education and training for women's entrepreneurship snack. With expectations of the participants are motivated to follow the learning and can have an entrepreneurial spirit to become more empowered.

Based on this background, the formulation of the problem of this research is to develop a model of empowerment of women through entrepreneurship snacks are practical and effective.

2. Method

This study used a qualitative descriptive approach. Development of a model using the approach of Research and Development or R & D of Sugiyono [15]. There are 10 steps to developing the model, namely: (1) see the problems and potential, (2) data collection, (3) design models, (4) model validation by experts, (5) the revision of the model, (6) the trial is limited, (7) the revision of the model, (8) extended trial, (9) the revision of the model, and (10) implementation. In this study, it was not until the revision step after extended testing.

3. Results

It has been developed The Guidance Book of book the conceptual model Women Empowerment through Snacks business with learning device. The model has been tested limited. With the results of each of the following stages.

The First Stage, identification of problems and potential. In this stage identified the problem as follows: there is many citizens' Aisyiyah productive age are unemployed (30%). A'isyiyah was already trying to reduce unemployment as making and detergent business in every branch but have not succeeded in reducing unemployment. At this stage, was collected information through the documentation, interviews, direct observation and Delphy. Training that has been conducted have limitations such, have not been arranged learning program well, for example, pay attention to interests of participants, there are no sustainability programs, practice materials dominate the learning program. Graduates just reached about 20% were able to entrepreneurship. This achievement is still lower than the standard of the Directorate of Non-Formal Education. Potential were identified, namely: the densest population, the presence of learning center, industrial, hotel, and residential.

The Second Stage, data collection to obtain the following results. In the Mlati District, there are three general markets, 175 shops, 1028 kiosk, 54 restaurants, eight hotels, three home stay, the other inn, three music houses, four cafes, 5 State Bank, 6 Private Banks 6, and 12 hospitals. Based on these data indicate that in the district has a potential to develop snack entrepreneurially because it has a high market potential.

The Third Stage, the design of the model. Specification model, the empowerment of women model are arranged is as a reference for non-formal education institutions, educational institutions and trainings such as: Courses and

Training Institute, Community Learning Center (CLC), women's organizations and other institutions that carry out programs of community Entrepreneurship of snack, which is specialized in carrying out community development efforts, especially residents' Aisyiyah.

The purpose of the model are to (1) improve the effectiveness of snack entrepreneurship education and training for women, (2) increase the motivation of learners to participate in training from planning, implementation, monitoring and evaluation, and (3) the most helpless women after training. Empowerment of women through entrepreneurship models developed with the basic philosophy snack Educations for all as well as the theory of andragogy or adult education humanist approach, and team teaching in learning. The structure of the model includes Introduction, Training Implementation, Monitoring, Evaluation, and Assistance, Archiving and training Reporting, and Indicators of Success Training. Requirements models are as follows. Learners: citizens' Aisyiyah productive age, interest, has had minimal effort snack beginner stage, can write, read, and speak Indonesian. Instructors: (1) master the material on entrepreneurship and snack products processing, (2) master the methods and techniques of adult learning, (3) Can communicate well to the trainees, (4) can act as a facilitator. Place of training: (1) the place and time of the training set based on the results of consultation and agreement between the organizers of the program and prospective students, (2) training conducted in 'Aisyiyah twigs, branches, or region, (3) training can also be carried out in collaboration with educational institutions such as; Muhammadiyah Vocational High School, or Muhammadiyah Polytechnic College, Courses and Training Institute (CGC). Equipment needed: (1) room and other equipment such as; whiteboard, stationery, eraser, and LCD, (2) a visit to the field with a fairly large group, (3) permitting, transportation, accommodation, and documentation. There is cooperation: domestic industry, large industries engaged in the snack, other institutions such as the Bank of Shari'ah and Cooperatives.

The Fourth Stage, expert validation of the product. The products consist of a guidebook, TRAINING program structure, and instruments to examine the effectiveness and practicality of the model using the Delphi technique. Guidebooks validated by expert lecturers and learning as well as by the CLC leadership, Chairman of Aisyiyah economy Provincial Economic Assembly of Yogyakarta Province and Branch Manager. As a validator curriculum or training program structure is an expert in entrepreneurship education is considered capable of providing input to the program that will be developed. Validators consist of a faculty of entrepreneurship, non-formal education practitioners that the CLC leadership, Chairman of Aisyiyah economy Provincial Economic Assembly of Yogyakarta Province and Branch Manager. Associated with the initial revision guide is there some input models, namely; manual models offered yet apparent target market for whom? There are steps that demonstrate learning model. It also is less elaborated about the syntax, the social system, the principle of reaction and support systems, so that the structure of learning programs and methods offered will become the clearer model.

Input on the curriculum. There is a resource person who suggested that instead of the term curriculum, but the structure of the training program. There is a suggestion that for community training the theoretical maximum is two times, or it could be one in the initial meeting. Then at the next meeting of the theory can be included in the introduction or the exploration stage of learning or the term cooperative learning model and the student center. In determining the number of meetings depends on the study material, then from a new study determined weight of the material, is then used to determine the time.

The Fifth Stage, the revision of the model. Based on the conceptual Model of Women Empowerment Through the Snack Products Entrepreneurial (MWETSPE) expert validation is done after the implementation of validation through Delphi. The target of communities in the guide book becomes more obvious, namely for the tutor of training program providers and entrepreneurship programs in the field of snack citizens' Aisyiyah. The steps of a model are described more detail such as syntax, social system, the principle of reaction and support systems so that the structure of learning programs and methods offered becomes clearer.

Straightening up of the curriculum includes straightening of the term into the structure of the training program. In one training package consists of learning the theory and practice. Learning theory present up to 2 times, or it could be the beginning of the meetings. Then at the next meeting of the theory can be included in the introduction or the exploration stage of learning or the term cooperative learning model and the student center. In determining the kinds of material practice conducted jointly between the tutor or program providers with participants, with

the restriction that had previously explained to participants.

The Sixth Stage, limited tryout. In limited try out directly involved training program organizers, instructors, assistant tutors, learners, and enumerators. The model limited try out is done to the public, namely mothers and citizens Aisyiyah at district Mlati Sleman Yogyakarta. Respondents were determined by making the stipulation of participant criteria, namely: women of childbearing age (between the ages of 18 and 45 years) who live in the Regional District of Mlati, who are interested or already have a snack and a pioneering effort but less capable. Twenty-two participants attended this limited trial. They were taken from each citizen Aisyiyah twigs or Level hamlet. CLC Sekar Melati Hamlet Popongan Sinduadi Mlati Sleman Yogyakarta used as a training place. Piloted for three sessions, at each meeting, material that covers the theory and practice.

At this stage of the implementation of learning at each meeting consisted of learning theory and practice, the initial assumption in the hope participants do not become bored when in one session there is always practice. However, after try out the learning perceived to be less effective. That is because the use of the learning space or after space is used for learning the theory used for practice learning. At the moment, there is a change of the situation is not conducive, much time is used to regulate the practice area, preparing the equipment and material practices. Supporting role of the instructor is not maximized, so that there is a miraculous interference when such learning takes place; participants were chatting with friends, take pictures, not all participants participate in practice. Enumerators have not mastered what to do, including how to act as enumerators were observed without disturbing the course of practice.

The Seventh Stage, the revised model after a limited tryout. Based on the input of limited tryout then in expanded tryout it needs a coordination of instructors, assistant instructors, and enumerator. Coordination with the tutor is essential submitted, since the purpose of the program is known, the cooperation between the organizer and tutor, as well as between the tutor with the tutor will help the implementation of the programs and the achievement of competence of learners.

Thus, each person involved knows the job description. An understanding of the model to the participants of training be delivered in early learning activities. With good coordination, tutors and learners are expected to know the program is being implemented, so that when the instrument should provide input in response to the learning model. Implementation of learning theory is not held together with instructional practices in the same day. Learning theory is given at the beginning of the training, then implemented the practice learning. To strengthen and to diversify of the training, the activities arranged to visit industrial and internships.

The eighth stage, the trial was expanded. At this stage, the trial was expanded in A'isyiyah Branch Mlati Sleman.

The Ninth Stage, revised models. The model was revised based on inputs from the pilot expanded.

The tenth stage, the implementation of the model. Implementation of the model implemented at the Institute of Training and Course (LPK) Saren, Sumberrahayu, Moyudan, Sleman.

4. Discussion

Has produced a model with a guide book learning tools for education and training entrepreneurial snack that has been implemented and found effective and practical. The response of participants and instructor are good or positive. The results of an assessment of the practicality of the Model of Women Empowerment Through The Snack Products Entrepreneurial for Growing The Entrepreneurial Spirit At 'Aisyiyah Mlati, Sleman District, Yogyakarta Special Region Province is practical and effective. The study provides some implications, among others: (1) the implications for planning and development of non-formal training curriculum. Planning and curriculum development should take into consideration the needs and interests of learners. (2) The implications for women's empowerment. Snack businesses closely related to the field of women, then this activity becomes important in the context of women's empowerment. (3) the implications for education and training program providers in the public areas of snacks, so that before implementing the program has been planned well which include: the target communities, the structure of training programs, instructors, practice of materials, a practice of, monitoring and mentoring, and sustainability of the program, (5) the implications of the conscious effort as the important role of education in formulating, developing and realizing entrepreneurial community, through Women Empowerment through The Snack Products Entrepreneurial for Growing The Entrepreneurial Spirit.

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MUSIC TEACHING MODEL IN THE NETHERLANDS

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Abstrak

This article deals with the descprition of the model of teaching music in Nederlands. It is aimed at descrcibing the teaching practice of music in Nederlands. Yo obtain the objective, this study employed documentation, study literature, interview, and observation. The documentation method is used for collecting data related to the concept and implementation of thematic learning for music both in Indonesia and in the Netherlands. Study literature is used to obtain a clear idea about the design of music teaching model applied in the Netherlands. Interviews conducted to the educational experts in the Netherlands, including the policy makers, principals, teachers, students, and stakeholders from Utrecht University, Iclon Leiden University, Konjlik, Conservatorium of Denhaag, and Akoesticum Edewageningen to find out the concept and implementation of learning for music in the Netherlands. Observations are made on the implementation of learning for music in the Netherlands . Observation was conduct on 23 teaching and learning in Hoogeschool Voor De Kunsten Utrecht, The Royal Conservatorium Den Haag, Cals College Nieuw Wegein, Montessory School Herman Jordan Lyceum Zeist, Kees Boeken School Bilthoven, and Akoesticum Ede Wageningen.

Interview showed that 50 years ago there was a revolution in teaching learning in the Netherlands. The result is felt at the moment. The process of learning what is important is to develop the attitude and thinking skills of students into adulthood in a good way.. Beside that, base on observation showed that music teaching in learning used various method. Some time teachers used a familiar method like Kodaly, and some time they developed newly method that create by teacher.

The result of the research in the first year is obtain information that: a) The teaching materials are develop based on a common ground; b) The the music lesson developed based on the students' needs; c) the sequence of the materials is based on the emergence of the students' understanding; d) the music theory and practice was taught integration, e) there was a reflection activity in which the students praised one another, gave suggestions and inputs to improve the students' skills which had been achieved, f) the teaching approach used the student-center and cooperative learning.

Keywords: Music, Thematic, Integration, Model, Learning

1. Introduce

1.1 Background of the Problems

In 2012 the Indonesian government feels the need for a fundamental curriculum change. The vice minister of Education, in his speech in the Education National convention in 2012, said that Indonesian students have lot of learning load. They have to learn a lot of materials and teachers do not take into account the students' psychological aspects in the teaching learning process. Although the students have already studied hard, their achievement is still far beyond the students' achievement in other countries. Suyanto (2013) says that based on *The Learning Curve Report*, Indonesia ranks 37.

The need for the curriculum change is based on objective conditions found in the 2006 curriculum. They are: 1) The content is still too much. This can be seen from the big number of the subjects that students must learn, the wide scope of the materials and the difficulty level of the materials which is beyond the students' developmental level; 2) the competence does not reflect the holistic cognitive, affective, and psychomotoric domains; 3) the curriculum is not sensitive and responsive to the social changes happening in the local, national, and global levels (Kemendikbud, 2012).

These reasons have stimulated the government to develop a new curriculum, known as the 2013 curriculum. Conceptually, the 2013 curriculum is not contradictory to the

previous curriculum. The paradigm, approach, and philosophical foundation are not conceptually different. The problem with the previous curriculum is that it could not implement educational concepts optimally. Therefore, a curriculum change is highly needed. In the new curriculum, there is an emphasis on the integrated thematic teaching.

In the previous curriculum, the subjects are taught separately. Although through such an approach the subject matter can be taught in depth, the students cannot relate them to other subjects. They also cannot solve real life problems because the materials taught are not down-to-earth. Through the 2013 curriculum, students are expected to be able to understand the problems comprehensively because the materials are taught through the thematic and integrated teaching. The problem is that not all teachers, including music teachers, understand the concept of the integrated thematic teaching.

There are three important things in the development of the integrated thematic teaching. *First*, there must be an integration of the subject matter and character education. *Second*, there must also be an integration of the theory and practice. And the *last*, the teaching process must be enjoyable. Considering that the integrated thematic teaching in music teaching has not been developed, this study is aimed to develop a model of the integrated thematic teaching in music teaching.

As mention that one of the characteristic of curriculum 2013 is to develop balancing between spiritual and social attitude, courisity, creativity, cooperation by intellectual and psychomotoric competency (Kemendikbud, 2013),furthermore developing thematic integrated teaching and learning is very important.

In Indonesia, especially in the teaching of music, the integrated thematic teaching has not been understood by teachers. However, such an approach to music teaching has been a common practice in the Netherlands. Astuti et al. (2012: 55) find that one of the characteristics of the teaching model in the Netherlands is that learning materials are taught thematically and integratedly. The students are given more opportunity for practice than for learning theories. So, the teaching learning process in the Netherlands can be used as a model as, according to *the Learning Curve Report* (Suyanto, 2013), the Netherlands ranks 7 while the USA ranks 17. This means that the Netherlands educational system can be used as a model.

Nevertheless, the Netherlands thematic teaching learning model have to be modification's, because the Netherlands different from Indonesia. The ideology is secular, and the lifestyle is Western. Meanwhile, Indonesia is non secular and have Pancasila Ideology.

In Indonesia, especially in the teaching of music, the integrated thematic teaching has not been understood by teachers. However, such an approach to music teaching has been a common practice in the Netherlands. Astuti et al. (2012: 55) find that one of the characteristics of the teaching model in the Netherlands is that learning materials are taught thematically and integrate. The students are given more opportunity for practice than for learning theories. So, the teaching learning process in the Netherlands can be used as a model as, according to *the Learning Curve Report* (Suyanto, 2013), the Netherlands ranks 7 while the USA ranks 17. This means that the Netherlands educational system can be used as a model.

1.2 Research Urgency

The development of the thematic teaching model can solve the problem faced by students. One of the problems is that students cannot relate the learning achievement and real life problems. Based on the thematic teaching, students will be able to solve problems based on comprehensive knowledge. In relation to music, thematic teaching enables students to master cognitive, psychomotoric, and affective domains. In addition, students are expected to be able place music as a subject which does not stand by itself, but it is related to other subjects. As stated in curriculum2013(Kemendikbud, 2013) that the curriculum integration competencies described in KI I-IV competence in which includes spiritual competence (KI), social competence (KI-2), cognitive competence (KI-3), and psychomotor competencies (KI-4).

1.3 The significance and rationale of the study

Thematic teaching is believed to be able to improve the educational quality because it can facilitate students to have a better insight with different levels of skills and knowledge (Trianto, 2012: v). By mastering better and more comprehensive knowledge, students are expected to be able to achieve authentic learning achievement. Mursell (2007) states that

authentic learning achievement is the achievement which can last long and be useful. Students will be able to use this in real life and this will influence their way of thinking and their behavior. Finally, this will also influence the students' personality. This means that through the authentic learning achievement, the quality of education in Indonesia will improve. This will improve the Indonesian competitiveness.

So far, in Indonesia, the school subjects have been taught through focusing on specific fields. Meanwhile, in the Netherlands thematic teaching has been a common practice. So, the Netherlands has better experience in implementing the thematic teaching. Therefore, to develop thematic teaching, especially in music teaching in Indonesia, it is better to learn from the implementation of the thematic teaching in advanced countries, one of them is the Netherlands.

1.4 Specific Research Objectives and Research Procedure to Solve the Problems

The specific objectives of the research are:

a. to obtain a clear idea about the design of music thematic teaching model applied in the Netherlands,
b. to describe the music thematic teaching model applied in the Netherlands,
c. to analyze the music thematic teaching model that could be used and adopted in Indonesia,

This research in the first year consists of 3 (three) stages. There are: 1) Data collection on the concept of thematic learning model is generally based on the study of literature in Indonesia; 2)Data collection on the concept of thematic learning for music in the Netherlands. The data about concept of thematic learning for music will cover the design, implementation and evaluation of learning. 3) Setting up the Model of Thematic Learning for Music;

2. Literatur Review

2.1 Teaching model

A teaching model is a design to achieve optimal learning achievement through organizing all the teaching components including the teacher, the students, materials, methods, media, evaluation, and feedback based on appropriate paradigm, approach, and theories.

Ellis (1979: 42) states that a teaching model is designed to achieve a specific purpose. She says:

"*Models of Teaching are designed for specific purposes-the teaching of information concepts,ways of thinking,the study of social values and so on by asking students to engage in particular cognitive and social tasks. Some models centre on delivery by the instructor while others develop as the learners respond to tasks and the student is regarded as a partner in the educational enterprise. However all mature Models emphasize how to help students learn to construct knowledge-learning……"*

Based on the explanation above, it can concluded that the purpose of the teaching model is flexible in response to the needs. In relation to the thematic teaching, the most appropriate teaching objective is to help students construct knowledge and skills. A teaching model has a wider sense than strategies, methods, or procedures (Trianto, 2011: 142). A teaching model refers to the basic concept, while to achieve the concept, strategies, methods, and procedures are required.

2.2 Music teaching model

A specific characteristic of music teaching in schools is the emphasis on the development of aesthetic experience. Therefore, the aspect emphasized in music is not the cognitive aspect, but the aesthetic feeling. Such feeling will develop if students are given opportunities to familiarize with music works. This will work if students experience playing music through direct contact with music, both through musical instruments and through vocal. Astuti et al. (2012: 59) states about music teaching model involve setting/context, design, implementation, product, and evaluation.

2.3 Thematic learning model

Trianto (2011:1) states that thematic teaching model is essentially an integrated teaching model, that is, a teaching approach which enables students either individually or in groups to actively look for and find concepts and principles holistically and authentically. The same thing is found in Astuti et al.'s research (2012: 57) which indicates that the thematic teaching model can improve students' ability real life problems holistically.

2.4 Basic principles of thematic teaching

Trianto (2011:154) proposes principles found in thematic teaching. They are: theme discovery principle, teaching management

principle, evaluation principle, and reaction principle. The chosen theme should not be too broad, meaningful and suitable to the students' psychological development. This principle is in accordance with the social facilitation theory which says that essentially through utililizing social momentums, teachers can stimulate the learning process to occur on its own. In addition, the social situation where the students study will also influence the learning quality. The best social situation in learning is the one which enables each individual to have his/her own responsibility, which also support the group achievement (Mursell, 2007).

The evaluation principle in the thematic teaching should give the opportunity to students to do their self-evaluation or self-assessment (Trianto, 2011: 156). This is in line with Astuti et al.'s (2010)idea that in music teaching, there should be self-evaluation or self-assessment.

Sometimes, teachers do not pay attention to an important nurturant effect while students' responses should be responded so that students get the appropriate feedback. Therefore, teachers should respond to students' response by directing them to meaningful aspects (Trianto, 2011: 136). According to Mursell (2007), that is called the focus principle, which states that the sequence of the materials should be interrelated as a meaningful unit.

2.5 Objectives of the music teaching

Pusat Kurikulum (2002:7) states that arts education aims at developing all activities concerning aesthetic zest which includes any activities in expressing, exploring, creating and appreciating arts in the form of visual, sound, movement, and character languages (Astuti dkk., 2012:10). Therefore, the objective of music teaching at schools is not that students will become artists, but to improve their aesthetic zest. However, when one day there are students who become artists, it is not something avoidable.

2.6 Music thematic teaching model

Based on the explanation above, the music thematic teaching model should meet the following principles:

a. Materials

The characteristics of the materials are the main aspect which needs to be taken into account in the thematic teaching because the essence of the thematic teaching is on the materials. The selection of the themes must be based on and in accordance to the meaningfulness, timeliness, interest, and students' development. In the higher grades of the elementary schools, the teaching materials can be focused on the understanding of concepts of basic music theories, such as rhythm. In the junior secondary level, the teaching materials can be such as musical scales. Students are given the opportunities to arrange new melodies using musical scales with rhythmical pattern varieties. In the senior secondary level, the teaching materials can be such as improvisation.

b. Methods

The methods used in the thematic teaching are eclectic methods, that is, using different teaching methods in accordance with the needs. Lecturing, discussion, assignment, drill, Suzuki, Khodaly, and other methods can be used in the thematic teaching as long as the methods support the students' holistic and comprehensive achievement.

c. Media and teaching aids

The most important thing is that the media facilite the presentation of the materials. The musical instruments which can be used are in the form of carl orff musical instruments, standard musical instruments and those made by the students themselves.

d. Facilities

Music thematic teaching is essentially close to natural situation. Therefore, the teaching learning process can be carried out both in or outside the classroom. The most important thing in relation to the facility is that the students can focus their attention to the teaching process. So, the available facilities should make students feel comfortable in their learning.

e. Evaluation

A good evaluation is through giving feedback to the students about their learning achievement so that they know what they have achieved and what they should achieve. Therefore, in thematic teaching self-evaluation is highly recommended so that students know their learning achievement.

f) Students

Essentially, each student can learn well using the thematic teaching. The most important thing is that the materials should be in accordance with students' developmental level, their cultural social background, and their ability. In thematic teaching, the students become the centre of the teaching so the objective of the teaching should be on improving the students' activities and learning achievement.

g) Teachers

In thematic teaching, the teacher plays the role of a facilitator. The teacher's responsibility

is to organize the teaching so that through their own self-awareness, students are actively involved in achieving their learning achievement .

3. Research Methodology

3.1 Research Design

The research method used in this study is Research and Development, in which there are experimental activities with pre-test/posttest control group design to test the effectiveness of the model. To determine the effectiveness the research use quantitative analysis. In the first year focus to develop the model. Experimental activities will be conduct in second year.

3.2 Research Procedure

In the previous studies, the researcher developed an model of learning evaluation for arts and culture (in 2008-2009). Those studies has produced an appropriate learning model to teach the music, fine arts, dance and theater in an integrated way. In 2010-2012 the researcher, in collaboration with a team of researchers from the Netherlands, developed a model of learning music. The study resulted in an appropriate model for learning music in public schools. The subsequent research is planned to be conducted in 2015-2016 in which the researcher is going to to develop a model of thematic learning for music.

3.3 Data Collection Method

The data collection method use the documentation, interviews, and observations as well as experiments. The documentation method is used for collecting data related to the concept and implementation of thematic learning for music both in Indonesia and in the Netherlands. Interviews conducted to the educational experts in the Netherlands, including the policy makers, principals, teachers, students, and stakeholders, to find out the concept and implementation of thematic learning for music in the Netherlands. Observations are made on the implementation of thematic learning for music in the Netherlands. While the experiments will be conducted to determine the effectiveness of thematic learning model .

3.4 Data Type

The type of data to be collected is, for the qualitative data, include concepts, materials, and lesson plans, as well as the forms of outcomes for the thematic learning of music. While the quantitative data to be collected are the achievement (scores) of learning music. In the first year of the research focuse on collectes qualitative data.

3.5 Research sites

This study conducted in Indonesia and in the Netherlands. In Indonesia, the study conducted at Yogyakarta State University, and SMP Negeri 2 (State Junior High School 2) in Temanggung. Whereas in the Netherlands this study will be conducted at Keesboeken School, Cals College Junior High School, Herman Jordan Lyceum Montessory School and Senior High School, and Hoogeschool voor de Kunsten, Utrecht. Those schools are selected based on the observations that have been made in the previous studies, which proved that the schools and colleges are very conducive in developing teaching-learning innovations.

3.6 Development of Research Instruments

The research instruments being developed are observation sheet, open questionnaire, and test. The observation sheet is used to collect data on the implementation of thematic learning for music, while the open questionnaire is used to know the concept of thematic learning for music, and test is used to evaluate the students' achievement of learning music.

3.7 Data Analysis

The qualitative data analyzed using descriptive analysis. It is intended to give a comprehensive explanation about the thematic learning for music, covering the materials, design, and implementation.

4. Result Of The Research

4.1 Research Result

a.The Concept of Thematic Teaching and Learning in Indonesia

As mention before, that thematic teaching model is essentially an integrated teaching model, therefore it's can be said that to discussion about thematic teaching must be talk about integration. Teaching must enables students either individually or in groups to actively look for and find concepts and principles holistically and authentically.

Every nation in the world is blessed with the natural potential and resources that are not always the same. Each has strengths and weaknesses depending on how far the nation develops its potential. It can be said that the

progress of a nation depends on how good it is able to develop its resources optimally.

The background of its history, geography, cultures makes Indonesia become a multicultural nation that respects differences with its motto "unity in diversity" which means there are differences but it remains as one nation. The basic concept of education in Indonesia was basically developed by Ki Hadjar Dewantara, an Indonesian educationist, in 1920s. He developed motto " *Ing Ngarso sung tulodho, Ing madya mangun karsa*, and *tutwuri handayani*". This motto means that if someone becomes a leader, he should give examples, among his people he should give motivation, and behind the scene he should give strength. This motto is ingrained in the concept of education in Indonesia.

Curriculum 2013 have purpose to integrated of moral education in the process of learning music in primary and secondary education level in Indonesia. Curriculum 2013 is the culmination of a process of developing curriculum that has been pioneered by Indonesian government since before independence around the 1920s, spearheaded by a prominent Indonesian educationist, Ki Hajar Dewantara. He used Javanese music to soften the manners of learners.

Therefore it can be said that the characteristic of integrated teaching in learning is to develop the competence of learners as a whole not only in term of intellectual but also in term of feeling.

4.2 Data collection on the concept and implementation of thematic learning for music in the Netherlands

The data collection in first year method use the documentation, interviews, and observations. The documentation method is used for collecting data related to the concept and implementation of thematic learning in the Netherlands.

Interviews was conducted to the educational experts in the Netherlands, including the policy makers, principals, teachers, students, and stakeholders, to find out the concept and implementation of thematic learning for music in the Netherlands.

Base on the observation and interview, in general the teaching and learning process begins with the perception by the lecturer by recalling previous learning. After that learners with the teachers practice the material of music. In the learning process there are students who are fluent and there is not. Then lecturer strengthen the ability of learners. After that is a reflection activities. This reflection on the activities of the learners discuss achievements and discuss difficulties encountered and ways to overcome the problems. The reflection on the activities of learners being open and respond positively any input. They assume that an error or imperfection is normally, the process towards perfection, so that the atmosphere of reflection is friendship.The collecting data by Documentation is to collect the material of lesson, take picture, and video of learning process. The material lesson documentation is books, CD, VCD, and paper. Teacher in the Netherlands always provide a very good systematical material of lesson, but using flexible method in class. That make lesson have high quality and exciting.

4.3 Discussion

a. The concept of integrated music teaching and learning in the Netherlands

Based on the best practice of music teaching in the Netherlands shows that learning music can be done by 1) integrating affective, cognitive and psychomotor in a music teaching materials; 2) integrate various musical elements in the learning material; 3) integrating theory and practice in the learning process. Theories concluded and simultaneously raised the practice of playing music activities, and 4) develop character education by integrating music with the field of language and morals.Integrating aspects of affective, cognitive and psychomotor learning music is done by giving experience to students about the mood of the song with variations such as modulation, dynamic change, and change gamut from major to minor. Changes modulation giving mood of the song to be more excited because generally modulation moves towards higher. Changes the dynamic of the piano to mezzo forte, forte kemodian to illustrate to students that life is full of changes. The interesting thing is the change of the ladder track major to minor scales. Such changes give learners experience that atmosphere of joy or vice versa can be done by changing the minor scales. When the minor scales even sing a song lyric contains an atmosphere of sadness.

One of the Dutch philosophy is the concept of a person lies not in knowledge, but on the behavior shown. They argue that it is a dangerous thing when a truth is only believed, but to do or implemented. Thus the Dutch always practiced everything he knows. The Dutch do not judge someone based on what was said by someone, but rather to trust the things that are done by someone. It was an impact on the learning process. Theory and practice always integrated in any learning process. Concepts, theories, and principles be concluded simultaneously with the

practice. The positive impact of the integration of theory and practice is very learners understand the subject matter music with a broader and deeper, and is more durable material embedded in the memory of the student.

The integration of music with language and morals generally occurs during the learning process of vocal or singing. Song lyrics can be used as learning the language. This was done both to students who were children or adults. Children ages 5-6 years learn vocabulary through songs lyric adults, while teachers and lecturers of language use songs to teach a foreign language. For example lecturers teach Indonesian Indonesian to Dutch people using the medium of popular songs Indonesia.

b. . The Finding of Research

The findings obtained in the study include 1) Learning music in the Netherlands more emphasis on the development of the ability to read musical notation. The method used, among others, learners mimic and or develop melody. 2) The material taught at the beginning of the semester in general is the shape of Canon. With such material learners can sing a melody or a simple song, but also can learn to concentrate, in addition to also learn harmony. 3) In the Netherlands, student center approach actually implemented, in any learning process there is always the presentation of material activities by learners, 2) in setaip learning process there is always a reflection of activities undertaken by learners. Learners commented on the strengths and success of the presentation of the results of their friends, and their input or exit when the other students are having difficulty, 3) In general, the Dutch are happy learners in the classroom.

5. Conclusion

Based on the best practice of music teaching in the Netherlands shows that learning music can be done by 1) integrating affective, cognitive and psychomotor in a music teaching materials; 2) integrate various musical elements in the learning material; 3) integrating theory and practice in the learning process. Theories concluded and simultaneously raised the practice of playing music activities, and 4) develop character education by integrating music with the field of language and morals.Integrating aspects of affective, cognitive and psychomotor learning music is done by giving experience to students about the mood of the song with variations such as modulation, dynamic change, and change from major to minor. Changes modulation giving mood of the song to be more excited because generally modulation moves towards higher. Changes the dynamic of the piano to mezzo forte, forte then to illustrate to students that life is full of changes. The interesting thing is the change of major to minor scales. Such changes give learners experience that atmosphere of joy or vice versa can be done by changing the minor scales. When the minor scales even sing a song lyric contains an atmosphere of sadness.

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MANAGEMENT CREATIVE MUSIC TRAINING MODEL TO INCREASE ARTS LEARNING COMPETENCE ON ELEMENTARY SCHOOL TEACHER

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Abstract

Creativity training of creative musical art that includes appreciation, creativity and expression to the Elementary School teacher has not been implemented so that there is no model and training manuals available. The general objective of this research is to gain development training model of creative musical art (appreciation, creation and expression) that can enhance art learning competencies of Elementary School teacher. The research objective of this development can be described as follows: (1) Analyze a management creative music arts training model that has been conducted on elementary school teachers, (2) Designing a conceptual model of creative music art training management that is valid for elementary school teachers, (3) Testing the effectiveness of creative musical art training model for elementary school teachers in developing the creative musical art competencies. This study uses a research design selected procedural model adapted from the model of research and development in education (educational research and development) from Borg and Gall (1983: 772) and the draft procedural model developed by McKenny (2001). Based on the ten steps by Sukmadinata, this research was modified into three steps of research and development, namely: (1) the preliminary study stage as needs and contents analysis, (2) the development stage as the design, development, and evaluation, (3) the testing stages of the effectiveness of the product as semi -sumative evaluation. (Sukmadinata, 2006: 176). Research shows that the most urgent component needed in the training of creative musical art (creative music and the appreciation and creation) is the goal of the training program, the relevance of training materials and media used in the training instructors, thus getting the appropriate training of teachers-expectations primary school teachers. There needs to be an improvement in the quality of training specifically in the form of training related to procedures and implementation of training, the clarity of the training program target so that training can reach these targets, and the media used in media training that really makes it easy for elementary school teachers to receive training results.

Key words: Management, Training, Creative Music Art, Elementary School

1. Introduction

Become a professional is an office, employment or profession requirement. The important thing from a profession is professional attitude and work quality. Become a professional means to be an expert in his field. A expert is certainly qualified in his/ her work (Suyanto and Djihad, 2012: 7). In the perspective of human resource development, being professional is a unity between the concept of personality and integrity, combined with his expertise. The teaching profession is very closely related to the integrity and personality. Likewise, the Elementary School Teachers need to have the qualified science integrity and personality.

In Law no 14 of 2005 on Teachers and Lecturers, Article (1) clause 1 states, "Teachers are professional educators with educating, teaching, guiding, directing, training, assessing and evaluating students in formal education, the primary and secondary education level as the primary task ". Thus, professional teachers will be reflected in the service duties which are characterized by the expertise in materials and methods (Suyanto & Djihad, 2012: 29). Expertise of professional teachers is the expertise gained through a processs of education and specifically programmed training. The membership received formal recognition expressed in the form of certification, accreditation, and licenses from authorities. With his/ her expertise, a teacher must be able to demonstrate its autonomy.

As a professional teacher, elementary school teacher and assistant teacher is expected

to not only have academic qualifications, but the kindergarten teacher should also have personal competence among them are sensitivity, act and behave in accordance with the norms of religion, culture and can develop the attitude of the students to respect the other religion and culture. Meanwhile in the professional competence, including kindergarten teachers are required to understand the physical, motor, and emotional students development aspects. As in the pedagogical competence, the kindergarten teacher can use the media in accordance with the activities and provide guidance in accordance with the children needs. Last competencies that must be owned by kindergarten teacher is social competence such as teachers accommodating to students, parents, colleagues from different cultural backgrounds and socio-economic.

The potential of the creative musical art consists of appreciation, creativity and expression potential. The potential is very supportive to the pedagogical competence for teachers. A potential can be explored through training appreciation, creativity and expression. Good creative is creative in which drain expressions, conscious creativity, the courage to take a step, a fertile imagination, emotional intelligence, willingness critical reflection, moral compass, and also freedom of thought and action (Rohidi, 2012: 114). Through appreciation, and creative, training teachers can develop their creativity. The properties are attached to the training of such creative imagination, sensitivity and expression into the creation of opportunities for creativity.

However, in general the reality conditions of the kindergarten teachers, is still lacking of the creativity in the art of creative music. The process of learning through training, for example, is still very limited. Creative musical art activities may be said is very rare. As a result, not surprisingly, kindergarten teachers feel less competent in developing instructional media or teaching materials that require skill and art of creative music creativity. As a result of the lack of appreciation activities, teachers have the weak ability to create and made a low creativity. This is an issue that cannot be ignored. This should receive the attention of various parties, and should be handled through creative musical art training. But in fact the creative musical art training that gives emphasis on creative abilities through the process of appreciation very rarely done by kindergarten teachers. Teachers that have already got creative musical art training material is still very small.

Based on data get through an interview on January 7th, 2015, from the head of the Indonesian Elementary School Teachers Association (IGTKI) Semarang, that Semarang has 2,300 kindergarten teachers. Kindergarten teachers attended the training of the new creative music arts about 600 teachers or only about 25%, it was just very limited kind of creative musical art. Total kindergarten teachers who receive training in the creative musical art in the last 3 only 600 teachers out of 2300 teachers. So there are still about 1700 teachers who have not attended creative musical art training. Lack of teacher attended creative musical art training will certainly have an impact on the learning of creative musical art in elementary school.

A professional teacher is needed in order to realize that. In conducting guidance towards professional, training is required. This training is intended to improve teacher competence. The training materials given, designed by the management principle involves planning, organizing, implementation, and evaluation. Training should be relevant and adjusted to the needs.

Creative musical art Training that includes appreciation, creativity and expression for elementary school teachers have not been implemented so that there is no model and training manuals available. Based on the background, it is necessary to develop a creative musical art training management model at the elementary school teachers in order to develop a sustainable profession.

Based on the background, research problem was formulated, namely: (1) How creative musical art management training factual model that has been implemented in elementary school teacher? (2) How does the design of the conceptual model of management training valid creative musical art in elementary school teacher? (3) How far the effectiveness of the training management model developed creative musical art to the improvement of teaching competency creative musical art elementary school teacher?

Effective training management implementation can be done through a systematic training process. The training process Implementation will lead to the process of achieving more certain goal. In the model of creative music training management will refer to the four functions of management, namely; (1) planning, (2) organizing, (3) actuating, and (4) controlling.

This planning creative musical art program training is essentially a process of training design and development, to prepare a variety of things about training programs. Planning is an activity to establish goals to be achieved along with set

of strategies to achieve these objectives, in other words, is a business planning concretization of the steps that must be taken that basics have been established in the organization's strategy (Siagian, 2007: 35).

Organizing is a process of grouping the whole, tools, tasks, as well as the authority and responsibility to move together to achieve the intended goals. In other words, the organization carried out to collect and organize all the necessary resources, so that the desired job successfully implemented. Handoko (2008: 167), explained that organizing is the process of preparing the organizational structure that is consistent with the objectives of the organization, the available resources, and the surrounding conditions. The same thing was raised by Terry and Rue (2010: 82), that organizing is a process of grouping activities to achieve the goals and assignments of each group by a manager who has power, who should oversee the group members.

Organizing function in the management of creative musical arts training is to learn organizing principles related to the significance, flexibility and dynamism of the organization / institution. As described by Sudjana (2007: 273), that organizing is effective if it has some criteria; (1) there are objectives and training program activities understanding; (2) there are development programs committee understanding; (3) the work tasks determination based on policies and regulations that have been established; (4) jobs sorting task followed by grouping tasks; (5) work tasks distribution with clear boundaries; (6) the work structuring and tasks distribution; (7) the regulations establishment about the implementation procedures of work tasks, coaching and the implementer performance assessment of the training program.

Implementation (actuating) is the main management functions. Actuating functions is more emphasizing on activities. Actuating is an attempt to move people with a well-planned so as to achieve the desired organizational objectives. In training, actuating is an attempt to realize the plan, through the activities in the form of a briefing, transfer of knowledge / skills and motivation so that each trainee can optimally carry out activities.

The approach used in the management of creative musical art training is andragogy approach, which is based on the assumption that; (1) The self-concept participants maturity move from dependent personality towards independent (standalone); (2) the participants readiness with regard to the task demands; and (3) the problem centered learning orientation.

Supervision is the process of observation of all activities of the organization in order to better ensure that all work is being done in accordance with a predetermined plan (Siagian, 2007: 125). Meanwhile, according to Handoko (2008: 360) Supervision can also mean setting the standard implementation of the objectives of planning, designing information feedback systems, comparing the real activities with the standards previously set, set and measure deviations, as well as taking required corrective action to ensure that all the company's resources are used in effective and efficient way for the company achievement. The same thing was raised by Terry and Rue (2010: 10) supervision is an activity to measure the implementation of the objectives of determining the causes of deviations and take corrective measures when necessary. From the opinions it can be concluded that the supervision is an act to control the compliance of the implementation and planning and take corrective action if necessary.

Creative musical arts education has a major contribution to the individual's development that helps mental, emotional, creativity, aesthetic, social and physical development. Musical art are part of creative play activities that occupy an important position in primary school education.

2. Research Methods

This study was conducted over two years from 2013 till 2014. Each year in this study was using selected procedural model research design adapted from the education research and development model Borg and Gall (1983: 772) and the draft procedural model developed by McKenny (2001), Based on the ten steps by Sukmadinata it modified into three steps of research and development that essentially the same as the research developed stage by McKenny (2001), namely: (1) the preliminary study stage as needs and contents analysis, (2) the development stage as the design, development , and evaluation, (3) product effectiveness testing stages as a semi-summative evaluation. (Sukmadinata, 2006: 176).

3. Research Result

Preliminary study was intended as a needs assessment which is to collect a variety of relevant information considered and support the creative musical training model design development on a kindergarten teacher in Semarang, such as (1) the teachers need in training, (2) the teachers experience in training,

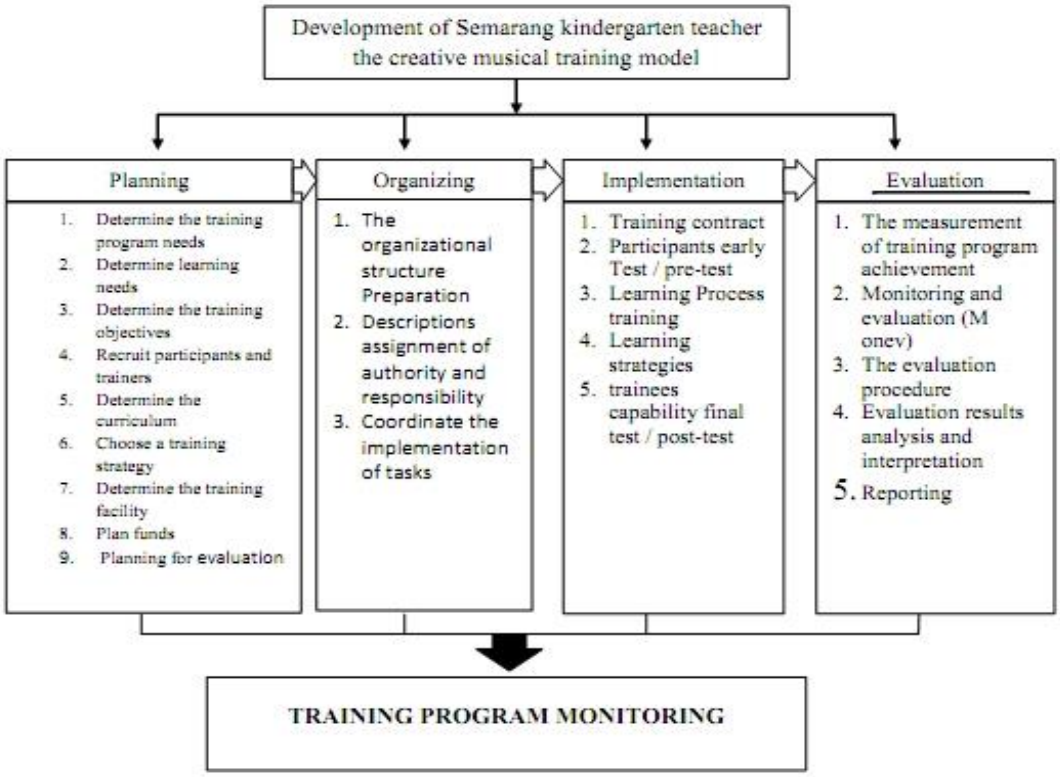
and (3) teacher competence implications that need to be developed.

After a preliminary study, literature study and field studies in principle outlines the findings of the preliminary study can be grouped into three types, (1) the form of training creative musical that has ever existed in Semarang, (2) the kindergarten teacher needs of creative musical training in Semarang, and (3) training model of creative music that will be used in training on a kindergarten teacher in Semarang.

Kindergarten teachers creative music training final model in accordance with the results of preliminary studies, designing the models and the determination of the final model, then formulated a model chart empirically compiled from planning, organizing, implementation and evaluation as shown in Figure 1 below.

The structure of creative music training management model development is structured as follows:

Figure 1. Model Final Creative Music Teachers Training kindergarten in Semarang.



The most urgent components needed in the creative music training is the training programs goal, the relevance of training materials and media that are used in training instructors, thus getting the appropriate training result as the early childhood teachers expectation.

There is training quality improvement especially improvement in the form of training related to procedures and implementation of training, the clarity of the training program target so that training can reach these targets, and the media used in media training that really makes it easy for the early childhood teachers to accept the training results.

4. Conclusions And Recommendations

Conclusion from the preliminary findings obtained following matters. Basically creative music training program is already urgently needed by the Early Childhood Education Teacher, so that they can develop and apply them in their education that hopefully can improve the development of early age children's creativity talent in her/his care. Meanwhile the quality of the implementation of creative musical training temporarily already running is still relatively needs to be improved.

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THE TEACHING AND LEARNING OF NUSANTARA ETHNIC MASK

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Abstract

Culture and craft education is the learning process aiming at giving the knowledge of appreciation and creation to students with regard to the traditional mask. More specifically, the focus is on providing them with the knowledge of appreciation to be applied in a real life setting. The problem found in some schools is that the lack of the relevance of the materials toward the students' needs. The materials have not given much attention to the effort of preserving and developing traditional masks. In other words, the teaching and learning process should facilitate the students to apply their understanding in appreciating traditional mask. To do so, teaching and learning activities can be done through selecting a particular traditional mask of its region to be modified into a new model developed based on the needs of students and societies. The three N model of learning (*Niteni, NirokakelanNambahi*) is then an ideal model to be implemented in the classroom. The teaching and learning process which is based on life skills is useful in order to facilitate the students to be able to solve real-life problems. Contextual culture and craft education is also aimed at providing the link between school and society condition. Learning traditional mask is done through new pattern, concept, and model which can develop students' aesthetic, appreciative, and creative through art education and local culture-based art education. The teaching and learning process is then developed based on the school and teacher's condition. The most important thing to be considered is that the way to develop teachers as a motivator and facilitator for students in order to improve their competence in doing art appreciation.

Key words : the teaching and learning of appreciation, mask

1. Introduction

Education on culture appreciation in the art and culture subject as the core of art education lead thesocial value, such as family and school have to be the centre of local cultural development and national. School as the developed cultural haven't take care deeply, but still in the surface. This problem is caused by the difficulties in collecting the source of local art and the limited preparation and competency of art teacher. The learning of traditional art in school haven't done well. It can be seen from specific lesson that have to be contained attitude and character fails to bring the mission of character building, so that recently the character building is defeated by the government through some aspects in the nation and state. The discomfort about character is discussed in the media and activities such as seminar and also in the education curriculum. Hopefully this is not coming late, so that the nation realize and arise for inspire the character of loving the traditional cultural as the identity of nation for example through education of art. One of the form of fine art is mask, and almost all of the ethnic group in Indonesia have it. The chance of mask from the fine art, the form of mask, and the mask art performance in some place be abandoned. For that reason, the mask art id needed to teach to the students in school.

The learning of art in school at least should adopt Ki HajarDewantoro's idea (2004: 324). He called education culture, which is education that enhance human value. Art education has to think about the preservation and development of traditional culture through learning in school. Indonesia in the view of the world is excellent in cultural traditional art, so that it should be preserved the existence through curriculum and the teaching and learningin school adequately. The development of cultural knowledge also includes creative industry development has to consider: first, identification and mapping the local wisdom to get the brief view about the riches cultural as the source of development in the future. Second, reconstruction the local wisdom it is expected to answer the globalization. Cultural development is needed re-inventarisation, reinterpretation, revitalisation, and re- actualisation to the cultural value. (Yuwono Sri Suwito, 2004)

Art teacher, artist, and another art worker do the educational process not only transform the cultural value, but also create, change, revise, and enrich the culture. Recently, the existence of the

culture is less respect from youth, they prefer pop from own culture and international. As stated by (Djuli, 2003) that modernism is given hegemonic through the rule of infrastructure and suprrastructurein international. One of the way that used to introduce modernism and the most effective is education. Art materials in our life such as mask, *ukiran*, batik which are full of symbol and spiritual value is the basic of cultural creature. This condition slowly will reduce our character. The fact that cannot be avoided, people that is learned our culture is foreign tourist through formal and non-formal education. Nowadays, our culture grows well in foreign countries. If there is a case such as Malaysia claimed our culture (dance, songs) as their culture, it is one of globalisation effect. Ironically, the owner do not aware to develop and conserve the culture, even they will angry if others did.

Cultural education in the learning art in the formal school has not place the students learn as they want. Through informal learning with artist (artist, crafter, *empu*) they will learn, and develop their passion well rather than learning art in the formal education. The development of art through learning by doing, the students involved in the learning process to fit their choice. In Indonesia, the tradition of learning art called "*nyantrik*" then become volunteer, field work, and industrial practicum that usually used by specific purposes formal education in Indonesia. In the art education, the content of culture as written in the *PeraturanPemerintahRepublik Indonesia Nomor 19 tahun2005*about Education Standard is not only in one subject because culture cover all of aspect in life. In the art cultural subject the aspect is discussed integrated. For that reason, culture art subject is art education which is based on culture, or learning art with culture approach.

Culture education as the develop concept (Djohar, 1999) requires the students have artistry, and the students who learned science are like scientist. It is only people had culture that able to create art, and only people who have culture of knowledge that able to develop knowledge. To create cultural art and cultural knowledge of the students, it is needed to combine with the process of art or science in the learning process. Cultivation art value through art learning assimilation has significance impact to the students. The students need to be involved in the cultural activity to experience cultural internalisation well. Learning senimask in school have to suit the learning context mask in the mask crafter process. What happened in the art learning in school similar what is happened in the crafter.

2. Appreciation Learning

Culture education and craft has the role to form the students harmonious and consider children phase in achieving multi intelligence such as intrapersonal, interpersonal, visual, musical, linguistics, logic mathematic, naturalist, adversity, creativity, and emotional intelligence. All of aspect of art, craft, music, dance, and theatre have specific characteristics related to scientific area itself. In the art education, cultural activity has to cover the characteristic of that can be seen from giving knowledge and experience of concept, appreciation, and creativity. All of those aspects is gained from the effort of element exploration, principle, process, technic in the context diversity society. In this competence shows that our education has introduce local culture, nusantara, and foreign culture. The core competence of art education had included local culture to build awareness of the graduate students to understand the multicultural Indonesia until foreign area to make the students appreciate with the cultural diversity.

In the learning process, the students have to study with some competencies, not with memorizing that do not change the attitude (creativity, appreciate, and productivity). The curriculum policy has concept art education become cultural education and craft is taught from the primary level until secondary level. The concept of art education in school is unique, meaningful, and useful for the student's development. The learning of art in school is formed as appreciation and creativity. It also prepares the students to learn aesthetic in the form of culture expression and appreciation learning activity, and learning to create a craft. Rohidi (2000:67) said that aesthetic education is an education that will bring the authority physically and spiritually. For that reason, art should become the core of education. Art education give knowledge about aesthetic so that the graduated students able to adapt with art job.

The learning of art that culminate in the appreciation of learning and creation is given to the students through "*belajardanseni*", "*belajarmelaluiseni*", and "*belajartentangseni*". The role of art education cannot be given by other subject. This statement should not only become proverb and not yet supported by some factors for example teacher competencies, supporting tools, and the context of teaching and learning local culture such as mask still far from it is expected. As the solution, the teacher start to

reformation their self and escape from stagnant and increasing competencies to develop art education in the better future. The characteristics of Indonesia is on the cultural wisdom has to be conserved and developed through education, so that traditional art in every place in Indonesia glorious in international.

Art education and craft in the content standard of KTSP in school has the characteristics multingual, multidimensional, and multicultural. Multingual is that art education can develop the ability of self-expressions creatively through some media. The actualisation can be visual that produce creative art work. Expression through sound create music and a beautiful sound. Through body language can be a beautiful dance. Expression through acting produce a professional actor. The students have creativity to create creative and innovative alternative art that have to be developed.

Art education is multidimensional, so it can be used to develop some students' competence which cover developing conception (knowledge, understanding, analysis, evaluation), it can be used to develop student's cognitive aspect through this principal. Art education develops appreciation and creation through integrating aesthetic, logic, kinaesthetic, and etic so that create a good work. Art education in the school end with appreciation, through reading, observing, create art work, and another activity which develop students to be more responsive, appreciate, and understand about art.

Art education tend to be multicultural means that it can elicit the awareness and appreciation ability through the diversity. This is the result of democratic attitude formation that make people live together politely, harmonically, and tolerant. This principal had and developed by the society since a long time ago. The concept of multicultural education should be able to forge unity, tolerant, and cultural appreciation, related to *Bhineka Tunggal Ika*. Art education and craft in the competence-based curriculum wants to take up mask art in the art education. The diversity in the art in every area should be introduced to the students through education.

Culture and craft education in the competence-based curriculum effort to lift up traditional mask in the culture education. The diversity of traditional craft need to introduce to students through culture teaching and learning in school.

Culture and craft education in the competence-based curriculum consist of creation and appreciation. Learning creation or culture creation aims to develop self-expression, create art of perform art. Creating art is done through skills learning which are exploration, observation, experiment toward some media and approach. Learning appreciation aims to develop awareness, experience, and appreciation through creating process and artwork result. This appreciation can be done through doing experience, discussions, and discussion the artwork result. Artwork and craft as an object appreciation activity can be in the students' work, art work by crafter, picture, image, recording, and artwork exhibition. Observing artwork aims to get aesthetic experience through applying intrinsic value on artwork composition to create students' conception. Discussion about artwork aims to get awareness and understanding about artwork, according to crafter, artist, background of the creation, the objective, and the artwork.

The learning mask appreciation can do by serving as artwork covers in the class activity and display in the class to perform, present, dialogue about mask from the shape and function. This activity can integrate with communicate the result of the observation in class and group discussion. Writing in the form of describing artwork Nusantara ethnic mask. Developing mask appreciation through observing mask festival in specific area and mass media that is prepared by the teacher in school. Learning appreciation can be used as learning critical art. Students are invited to understand the process or ethnic mask through describing mask critically. Students can analyse toward mask by analyse the composition, proportion, and character, and the beauty of cultural mask. Interpretation activity through giving the result of description and analysis that mask have value or not according to the result of objective analysis. In the end of the critical process is giving evaluation to decide that mask artwork is beautiful, valuable and giving recommendation to follow up to develop and revise the process and the result. Learning appreciation in school begins from artwork appreciation, other artwork both traditional and modern. Observing traditional artwork activity such as creating mask in Putat Bali, *ukir* in Jepara, puppet in Pucung, Yogyakarta from children until old people doing the activity as a culture in their daily live. In the process of culture transformation such as art learning naturally specify on skills according to the norm as the learning in the society. Family member have role as in each work in the society that related to culture in that community. Togetherness, help each other, tolerant, cooperation, and respect create art and culture collectively such as in the mask. The

appreciation is built together synergic as each subject.

Creative people have futuristic idea usually decide a good decision. People will develop everything in their subject has to be totalities and to develop their profession and competence. In the learning culture context in school used some approach that is developed by education in the school-based curriculum such as contextual learning, *pembelajaranpakem*, innovative learning, and learning concept by 3N Ki HajarDewantara, *Niteni, Nirokke, Nambahi*. The development of model learning models begins from experience based on text, context, and contextualisation in the learning will more meaningful than using this approach. The development of model learning that begins from the spirit of culture covers through multi-method, multimedia, multi models of cultural-based.

Informal learning process that good to learn culture, knowledge, and skills vocational to youth. Art learning here through culture and artwork professionally and done by artist actively and productively so that create culture and art competence in the *empu* and *cantrik's* live. If we look at the tradition on Hindu in Bali between praying and doing activity on culture, it is difficult to differentiate because both are done totality as a praying activity and performing to god. In the application learning they are invited to the museum, observing cultural art. They want to teach art through art exhibition, performing art observe directly then they will learn art related to their passion.

The shape and function of mask in Indonesia mask has been familiar from long time ago. Until modern, and postmodern. In the end of development the shape and function of mask developed in the shape and meaning. Mask with nice character symbolize a king or queen, selfish character for a masculine king, evil character symbolize as giant, funny character symbolize as supporting king, old character symbolize as God, etc. Javanese traditional mask is small and realistic. The function of mask in the pra-modern is to fulfil cultural ceremony. In the modern era mask has role as expression of art, it is not use religion unsure, such an effort to describe character(Sedyawati, 1991:6-7). In the modern era, nowadays, the role of mask have moved and developed of shape from colour, shape, size, and function. So that in the creationmask is not only in the form of traditional, but also the development in some shape in new creation.

The principle of creation use the principle from follow function art in every shape is created according to the function for practice and magic. In long time ago, the function of mask artlike what have said by (Dana, 2015) mask is used as media to call soul so that they enter in the mask when animistic ceremony is done. In the ceremony, such as the function of mask as the bridge between human and roh with the family of the owner ceremony. further is explained that the function of mask there are two functions, which are ritual and social function that both of them come and complete each other so that confirm the existence of mask as Indonesiancullture. Mask heritage nowadays can be seen as facial mask in littoral Irian Jaya, north wigioisland. Karimata beach, along TanjungBicari, that is used red, yellow, white, and black as a symbol (Gunadi, 1980:2).

Those maskdescribe the ancestor and for worship to the ancestor. Mask is used to funeral, fertility and function as grave keeper. Nowadays, mask can be used as a correspondence tool with soul of ancestor that has been died in the syamanism ceremony. Mask performance as form of art performance that has magical value. For example traditional ceremony in batak, Toraja, tiwah in East Kalimantan. Mask function as safety and power of a leader, mask decoration consider have power that give protection to people (Salmugiyanto, 1983: 52-53)

In Hindu and Budha era is the top of developing art include mask so that can be said as developing art has increased in that era. In the traditional era, creating mask is refined into classic form that still maintained until today and the shape are relative similar. In the classic era is marked with creating kala mask that is created above main gate of candi, both Hindu and Budha. The function of mask in that era use as protector from evil influence and has magical power (Hoop, 1949:178)

In the era when religion and Islamic culture begin in Javanese, Mask art has some modification in the shape, meaning, and function. If there is a ban in islam that show human being naturalistically, mask is modified into decorative shape. As well as the function of mask is sacred, symbolic, the function is changed as missionary endeavour medium, complement of dance costume, and as entertainment. Mask dance is one of Javanese cultural art that still use ancestor belief through worship to God. Mask performance is develop by SunanKalijaga toward decreasing the magic value, do not use shaman, because those are contradict with Islam belief. (Sularto, 1975: 7-8). Then, the shape of mask is made naturalistically by SunanKalijaga source from puppet gedog story. The nine of mask are: (1) panjiKestrian, (2) CondroKirono, (3) Gunungsari, (4) Andoko, (5) Raton, (6) Klono, (7) Danowo, (8)Benco/Tembem, (9)

Turas/Pentol. The creation of those mask with condrosengkala "AngestiSirnaYaksingBawana" that means to count Javanese calendar 1508 (Sularto, 1975:7-10).

The friction of mask value influence the imagination and technique of facial mask creation. The artistic value together with dramatic and spiritual value in the dance mask and theatre, finally are lost. Decorative value in the mask as interior element is very attractive but has lost the value of dance mask and theatre (Tusan, 1992:8). Creativity and imagination is deeded to create mask, aesthetic and decorative mask is good to decorate element visually, but not in the dance costume. Mask crafter in Putat, Pathuk and in Krebetbantul Yogyakarta 90 % of batik mask that is made to serve the interior and souvenir needed. Visually, the shape of ofmask is very attractive and aesthetic as an ornament. The result of interview with the crafter Sujiman (2005) that is called *empu*, he has principle to develop decorative mask. In the other hand he wants to conserve the culture of ethnic mask in Nusantara. Recently, there are so many people order traditional mask as dance property. It is not only used for dance but also used as traditional ornament because the shape that is beautiful and the philosophy. The friction of magic spiritual value to be aesthetic decorative value because the satisfaction of the owner.

Creativity is always needed and become an idea to find a new design. But, it is needed to be considered the creativity that is developed decrease the value and existence of mask. According to Tusan and Wiyoso, (1992) said that the quality of mask in the centre of mask Bali and Yogyakarta decrease because of commercialisation. Developing creativity should create a new design which are innovative, creative, and competitive. The researcher experience found that crafter in Yogyakarta compete to give cheap one and ignore the quality. This strategy is profitable for the crafter but the fact the strategy threaten them.

3. Conclusion

In the teaching and learning culture and craft in school conceptually is divided into two, those are appreciative and productive. Appreciative learning can be done through observing, experiencing, critic, and present the artwork to develop awareness and understanding about culture. Appreciation learning and creation can be done through developing the ethnic culture that relevant to the student's development. The skills learning can increase the student's skills to prepare their future. Culture and craft learning model can be developed using 3N Method (*niteni, Niroke, Nambahi)* so that students involve in the process. Besides, culture and craft learning has to suitable with the school competence, teacher competence, and society competence. The important thing that the teacher should do in the teaching and learning appreciation as a facilitator and motivator for the students so they can develop well.

Mask is nusantara culture in some ethnics need to be preserved toward teaching and learning so that the culture do not extinct. Introducing maskin the education should done well so that the students have background knowledge about appreciation and creation as well as the traditional ethnic. In some place, the existence of mask in this modern era there is no successor, it not like in Dayak ModangSamarinda, different from Bali where mask is developed well by the society.

Every learning model that is developed should give good experience for students, so the objective of culture and craft learning can be achieved. Developing a good and conducive situation for learning can motivate students to learn well. The good model of learning begins from the teacher, a good teacher is a teacher that receive suggestion and recommendation. The teaching and learning culture and craft should be able to develop and perceive traditional culture.

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THE INTEGRATION OF ENGLISH PRONUNCIATION IN THE SPEAKING SKILL-RELATED COURSES

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Abstract

This study aims to investigate the integration of English pronunciation teaching and learning in the speaking skill-related courses at English department of State University of Jakarta. This study applied a descriptive-qualitative research design which employed three data collection procedures: classroom observation, interview, and document analysis of academic guide book and course outline of speaking skill-related courses. This study also revealed three findings related to the research questions. First, all course descriptions of speaking skill-related courses as described in the academic guide book explicitly asserted to integrate English pronunciation. Second, all speaking skill-related courses integrated the English pronunciation into teaching and learning activities in which lecturers directly gave correction and feedback to students when the students mispronounced the word in their presentation and/or reading. And the last, the problems that lecturers encountered when integrating English pronunciation into teaching and learning activities were inappropriate learning materials and insufficient time of teaching.

Keywords: the Integration of English pronunciation, English pronunciation teaching and learning, Integrated Learning Model, Speaking skill-related courses.

1. Introduction

Language is a means of communication in everyday life (Zhang and Yin, 2009), in which the crucial aspect related to oral communication is pronunciation (Jianbin and Fang, 2013). As stated by Gilakjani (2012), since pronunciation directly affects learners' communicative competence, then it is an integral part of foreign language learning.

Riyani and Prayoga (2013) assert that different pronunciations will cause different meanings. Further, they add that speaking without considering the pronunciation will interfere and lead misunderstanding in the meaning of the words spoken. As highlighted by Kelly, G (2000), someone who consistently mispronounces a range of words can be extremely hard for another speaker from another language community to understand. Therefore, it is in line with Harmer (2011), what learners have to concern is sound or voice, and it is a part of pronunciation.

The importance of producing qualified English teachers is explicitly stated on the vision and mission of English department of State University of Jakarta. The learning outcomes at English department clearly asserted that students are able to communicate appropriately and intelligibly in English whether in spoken and/or written. Then, pronunciation is one of the qualifications that need to be mastered by learners. As supported by Stead (2012), having good pronunciation skills is an important part of every student's ability to communicate in English. Therefore, in order to achieve those goals, teaching pronunciation should be integrated in any English language courses. It is relevant with what have been stated by Levis and Grant (2003), pronunciation instruction can be sensibly integrated into many types of ESL/EFL classes.

In the past three years, much research focused on the integration of English pronunciation into EFL classes. In 2012, for example, Aiken and Pearce investigated the integration of pronunciation and the independent learning skills into oral communication outcomes. They integrated pronunciation into oral communication by introducing dictionary use as vocabulary sheet, and then students notice the phonetic symbols. Similarly, Da Silva (2012) researched the integrating pronunciation activities in Brazilian EFL classrooms. His work focused on how to work with pronunciation and rhythm with Brazilian students in which English as a foreign language learning integrated pronunciation activities with the usual contents of a lesson. He also tried out the effectiveness of

the integrative approach proposed by Chela-Flores (2001) into Brazilian EFL context.

Another related study conducted by Stead (2012), he examined about how best pronunciation can be integrated into existing curricula. In his research, he explored the ways in which pronunciation could be integrated better into current CET (Construction Engineering Technology) curricula, with a particular focus on Academic English/IELTS preparation courses. From his study, he suggested some substantial recommendations for the institution and teachers to allocate sufficient time to integrate English pronunciation into CET curricula in Sydney University. Lastly, the recent study in 2013 was conducted by Amanda Baker who focused on integrating fluent pronunciation use into content-based ESL instruction. Her research examined the teaching practices of two ESL teachers who integrated pronunciation instruction into intermediate level, content/task-based, oral communication courses in an Intensive English language programme.

As it has been concluded in research above, it is principal to integrate English pronunciation into other English language skill courses, specifically in speaking skill-related courses. As stated by Celce-Murcia et al. (2010: 289), pronunciation is integrated into speaking practice and is often manifested as feedback and correction exercises. In addition, the task of improving students' pronunciation is the responsibility of all teachers, not only teachers of phonetics (Ha, 2006).

However, one of courses of speaking skill-related courses at English department of State University of Jakarta, it was English for Social Communication. The researcher found that in the course outline of English for Social Communication there is no any learning materials, teaching activities, tasks, and/or exercises explicitly stated to integrate English pronunciation. Whereas, the course description as described in the academic guide book clearly stated that the objective of this course is to prepare the students to be able to communicate in English intelligibly and acceptably. Consequently, these ideas trigger the researcher to investigate the integration of English pronunciation teaching and learning in other English language courses, specifically in speaking skill-related courses.

Here, the integration refers to the existence of the integration of English pronunciation in the academic guide book and the course outline as well as in the teaching and learning activities of speaking skill-related courses at English department of State University of Jakarta.

Interestingly, as far as this present study was investigated, none of research specifically investigates the integration of English pronunciation into speaking skill-related courses in Indonesian EFL setting. The teachers' problems when integrating English pronunciation into teaching and learning activities of speaking skill-related courses will be also highlighted in this study. Then, this study is objected to investigate the integration of English pronunciation as described in the academic guide book and the course outlines of speaking skill-related courses as well as its teaching and learning activities at English department of State University of Jakarta.

2. Method

This study adopted a descriptive-qualitative design, specifically in the form of data analysis and interpretation (Gay, Mills, and Airasian, 2011: 465). Then, it involved multiple data gathering, including observations, interviews, and documents analysis. Multiple data gatherings aimed to enhance the construct validity of the study (Gay, Mills, and Airasian, 2011: 465). Subsequently, the data were interpreted and discussed in order to understand the whole phenomena occurred.

The data from interviews and document analysis were used to reveal the problem of this study about the integration of English pronunciation as described in the academic guide book and the course outlines of speaking skill-related courses.

In this study the researcher also did in-depth interview to get detailed information from participants' thoughts and behaviors (Boyce and Neale, 2006: 3), specifically in integrating English pronunciation in the teaching and learning activities and the problems that lecturers encountered when integrating English pronunciation into teaching and learning activities. Besides, the interviews were designed in the form of semi-structured interviews, in which may allow the researcher to re-order, add, or delete the questions during the interview (Berg, 2004: 79).

Then, in planning the interviews, as in many semi-structured interviews the researcher considered the open-ended questions that allowed obtaining a detailed response, information, and elaboration from both participant and researcher (Gay, Mills, and Airasian, 2011: 387). In collecting data from the interviews, the audiotape recorder was used to record the conversation. According to Gay, Mills, and Airasian (2011: 387), the tapes are

convenient and reliable, and they ensure that the original data are available at any time. In addition, the interview was conducted in Bahasa Indonesia as the first language of both researcher and participants to avoid misunderstanding and interpretation. As explained by Gay, Mills, and Airasian (2011: 387), the language of researcher and participant must be similar enough to make meaningful inferences about the topic under study.

In addition, the interview protocol was also designed by the researcher as the guidance which contained the instructions for the process of the interview, the questions to be asked, and space to take notes of responses from the interviewee (Creswell, 2012 :225).

Then, there were three steps in terms of analyzing the data from the interview, first, the recording was transcribed and typed into script; second, the script was analyzed carefully to find out how extent the English pronunciation is integrated in the teaching and learning activities of the speaking skill-related courses; and third, analyzing the problems that lecturer encountered when integrating the English pronunciation was used to answer the third research question.

In terms of document analysis, there were two documents used in this study; the academic guide book and the course outlines of speaking skill-related courses. Then, the finding of this analysis was used to reveal the integration of English pronunciation teaching and learning in the speaking skill-related courses as the main goal of the study. Besides, the data analysis procedure for document analysis consisted of three steps, there were reading/memoing, describing, and classifying (Gay, Mills, and Airasian, 2011: 468) and it was described in the following steps; first, the document used in this study was the course outlines. The document was read and noted to get the essential data from the document; second, the data was described to provide a narrative picture so that the researcher will have a clear understanding of the context as a whole; and third, the data was classified and categorized based on its learning topic and activities.

On the other hand, observation was used to disclose information about the integration of English pronunciation in the teaching and learning process of speaking skill-related courses at English department of State University of Jakarta. There were two courses (English for Interpersonal Communication and English in Social Discourse) observed in this study in academic year 2015-2016 during October to December 2015. The observation also involved 4 classes at English department (2 classes of English Language Education Study Programme and 2 classes of English Literature Study Programme) and 4 lecturers (2 lecturers of English Language Education Study Programme and 2 lecturers of English Literature Study Programme). In terms of a total of classroom observation, the researcher did 11 (eleven) classroom observations which consisted of 3 (three) classroom observations of English for Interpersonal Communication at English Language Education Study Programme, 3 (three) classroom observations of English for Interpersonal Communication at English Literature Study Programme, 1 (one) classroom observations of English in Social Discourse at English Language Education Study Programme, and 4 (four classroom observations of English in Social Discourse at English Literature Study Programme, in which lasted for about ninety minutes for each class. Then, in this classroom observation, the researcher acted as non-participant observer and recorded all the learning activities in the classroom by using videotape recorder (Creswell, 2012: 214-216).

Then, the classroom observation employed in this study involved 2 steps; first, the recording of teaching and learning activities in the classroom which involved opening, main, and closing activities was transcribed and typed into fieldnote; second, the fieldnotes were analyzed to investigate the way of lecturers integrated English pronunciation in their teaching and learning activities and it was proposed to answer the first research question.

3. Result

This study revealed three meaningful findings in related with the research questions.

3.1 The Integration of English Pronunciation as Described in the Academic Guide Book and the Course Outlines

In analyzing this integration, two documents, namely Academic Guide Book of Language and Arts Faculty and course outline of speaking skill-related courses were analyzed to unearth the integration of English pronunciation in the speaking skill-related courses based on its course descriptions and learning activities described in both documents. The complete finding of this analysis, then, was highlighted in the following discussion.

3.1.1. The Integration of English Pronunciation as Described in the

Academic Guide Book of Language and Arts Faculty

Five courses involved in this analysis and it was considered as the speaking skill-related courses, namely *English Phonetics and Phonology, Public Speaking, English for Interpersonal Communication, English for Social Communication,* and *English in Social Discourse.*

The integration of English Pronunciation as described in the Academic Guide Book of Language and Arts Faculty can be seen in the following table.

Table 1.1. The Integration of English Pronunciation as Described in the Academic Guide Book

No.	**Speaking Skill-Related Courses**	**The Integration of EP in the course description as described in the Academic Guide Book**
1.	English Phonetics and Phonology	√
2.	Public Speaking	√
3.	English for Interpersonal Communication	√
4.	English for Social Communication	√
5.	English in Social Discourse	√

3.1.2. The Integration of English Pronunciation as Described in the Course Outlines of Speaking Skill-Related Courses

The course outlines of speaking skill-related courses are also involved to notice the integration of English pronunciation in the learning materials as well as the learning activities.

Then, the following table explained the integration of English pronunciation as described in the course outline of speaking skill-related courses.

Table 1.2. The Integration of English Pronunciation as Described in the Course Outline of Speaking Skill-Related Course

No.	Speaking Skill-Related Courses	The Integration of EP	
		Learning Materials	Learning Activities
1.	English Phonetics and Phonology	√	√
2.	Public Speaking	–	√
3.	English for Interpersonal Communication	–	√
4.	English for Social Communication	–	–
5.	English in Social Discourse	–	–

3.1.3. The Integration of English Pronunciation Teaching and Learning in the Teaching and Learning Activities of Speaking Skill-Related Courses

In investigating this integration, the researcher conducted classroom observation from 2 courses of speaking skill-related courses (English for Interpersonal Communication and English in Social Discourse) which involved 4 classes, 4 lecturers.

Then, based on this classroom observation as well as the data from lecturers' interview, there were some valuable findings revealed. First, English pronunciation was integrated in the learning activities of English for Interpersonal Communication and English in Social Discourse. Second, learning activities of English for Interpersonal Communication did not only focus on students' pronunciation but also emphasized on suprasegmental aspects which paid attention to intonation, stress patterns, and expression. Third, other subjects namely English Phonetics and Phonology, Public Speaking, and English for Social Communication also integrated English pronunciation into teaching and learning activities. Fourth, the integration of English pronunciation teaching and learning happened in the learning activities when the students gave the presentation or read aloud the text. And the last, *the nested learning model* is considered as the best learning that should be implemented in the teaching and learning process.

3.2 The Problems Encountered by the Lecturers

Based on the information obtained from the interviews and class observations, it was clearly found that there were two major problems that lecturers encountered when integrating English pronunciation into teaching and learning process;

inappropriate learning materials and insufficient time of teaching.

3.3 Discussion

The discussion of the findings above will be elaborated in the following points.

3.3.1. The Integration of English Pronunciation as Described in the Academic Guide Book and the Course Outline of Speaking Skill-Related Courses

As shown in the course description described in the Academic Guide Book of Language and Arts Faculty, the learning objective of five speaking skill-related courses is to prepare the students to be able to communicate in English intelligibly and acceptably whether in written and/or spoken. This finding could mean that all lecturers are responsible to improve students' pronunciation (see Ha, 2006) and English pronunciation must be taught and integrated into learning materials and learning activities of speaking skill-related courses (see Levis and Grant, 2003; Scarcella and Oxford in Maniruzzaman, 2007; Celce-Murcia *et al.*, 2010; and Stead, 2012). And it is completely essential to be planned and conducted by lecturers because having good pronunciation skills is an essential aspect to be mastered by the students in order to be able to communicate well and intelligibly in English (see Celce-Murcia *et al.*, 1996; Stead, 2012). Once the students are not intelligible, they may become discourage to speak in any practical situation (see Gilbert, 2001).

However, the learning materials and activities as described in the course outline of speaking skill-related courses did not completely contribute to realize those objectives. From the course outline, the learning materials and activities of Public Speaking, English for Interpersonal Communication, English for Social Communication, and English in Social Discourse did not allow to integrate English pronunciation. As the information gained from the interview, this situation happened because each subject has its own learning objective aside from emphasizing on students' pronunciation. Then, this is contrary to the course description of speaking skill-related courses as described in the academic guide book. This situation was not appropriate with the principle proposed by Darcy, Ewert, and Lidster (2012), they argue that pronunciation instruction should be embedded within curriculum and within each lesson locally. Therefore, what described in the course outline should be in line and consistent with what described in the course description in academic guide book as well as in the learning process and assessment.

On the other hand, as already mentioned in the finding, some part of learning materials and activities of English for Social Communication and English in Social Discourse were likely overlapping. For example, the learning material of English for Social Communication highlighted about review text, then in the next semester the similar topic was re-discussed in English in Social Discourse. However, lecturers opined that in spite of the learning materials of these subjects likely seemed overlapping, in some cases it was helpful to discuss the same topic as the reinforcement for students because to make students realize about one topic, it sometimes takes more than one semester. But, some lecturers especially lecturers of English for Social Communication and English in Social Discourse recognized and suggested making revision and evaluation regarding the learning materials and activities of the subject, so that, it would be clearer to decide which part to discuss the core material of the subject and to integrate other language skills even pronunciation.

Another finding as stated in the earlier discussion revealed that one course in this study must be not considered as the speaking skill-related course because the course actually emphasized on productive skill which focused on writing skill not speaking skill and the course was English in Social Discourse. In this case, it happened by the reason of misprint in the course description presented in the academic guide book. The researcher considered this matter as a fateful error. Therefore, revision must be done as soon as possible to avoid another misconception.

3.3.2. The Integration of English Pronunciation Teaching and Learning in the Teaching and Learning Activities of Speaking Skill-Related Courses

As the data gathered from the classroom observation, it can be generally concluded that English pronunciation was integrated in the learning activities of two speaking skill-related courses (English for Interpersonal Communication and English in Social Discourse). In spite of the learning materials did not emphasize on pronunciation, the learning activities involved the English pronunciation teaching and learning. It was clearly evident that English pronunciation in both subjects was integrated in the learning activities when the students gave the presentation or read aloud the text. In this case, lecturer directly corrected the

students' pronunciation at the time when the students mispronounced the words (see Celce-Murcia *et al.*, 2010). The lecturer drilled the students and asked them to repeat the correct pronunciation for several times in order to make students create correct and accurate pronunciation (see Senel, 2006).

In addition, in the teaching and learning process of English for Interpersonal Communication, it was clear that lecturer did not only focus on students' pronunciation but also she taught and emphasized on suprasegmental aspects which paid attention to intonation and stress patterns, as well as expression. This aspect was important to be taught because it would help students to be able to understand the full intent of other people's speech (see Reed, 2012).

Another finding revealed that other subjects, namely English Phonetics and Phonology, Public Speaking, and English for Social Communication also integrated English pronunciation into teaching and learning activities. All lecturers integrated English pronunciation in a similar way which corrected the students' pronunciation at the time when students presented their work or read the text loudly. Then, one point should be highlighted that the integration could not occur in every meeting because this depends on the learning materials discussed at that time.

On the other hand, based on the data gained from the interview, two speaking skill-related courses, namely English for Social Communication and English in Social Discourse just integrated English pronunciation into learning process, meanwhile, this integration did not appear in form of assessment because of there is no specific portion to integrate pronunciation skill into teaching and learning activities. It is contrary with what explained by Darcy *et al.* (2012), they propose principles to integrate pronunciation into curriculum; one of principle is that pronunciation instruction should be embedded within curriculum, lesson, as well as evaluation.

Then, in terms of the type of integration, the best integration model should be implemented in the teaching and learning process is *the nested learning model* which focuses on various skill needed by the students, e.g. thinking skill, social skill, interpersonal skill, even speaking skill (see Trianto, 2012).

Finally, there were two factors that should be considered by lecturers in integrating English pronunciation specifically into speaking classes, those were the factor influencing the pronunciation of the learners and the principles guideline to integrate pronunciation into speaking classes.

The factor influencing the pronunciation of the learners were mother language; learner's age; learners' attitude and psychological; prior pronunciation instruction; and the insufficient language knowledge of English phonology and phonetics (see Zang and Yin, 2009). Then, the principles guideline to integrate pronunciation into speaking classes were focus on suprasegmental aspects; pronunciation instruction incorporates both production and perception; pronunciation instruction starts in the early levels; pronunciation instruction is embedded, both within the curriculum as a whole, and within each lesson locally; the curricular component is adaptive in which there are different selections and priorities for each level; and the implementation of pronunciation curricular component depends on ongoing teacher development (see Levis and Grant, 2013: 14).

By considering these factors, hopefully, the integration of English pronunciation into other EFL courses especially speaking classes will be more preferable and purposeful.

The Problems encountered by the Lecturers when Integrating English Pronunciation into Teaching and Learning Activities of Speaking Skill-Related Courses

Based on the interview, the first problem was related to the teaching and learning materials. This was considered as the most common issue faced by the lecturers when integrating English pronunciation teaching and learning. All participants agreed that English pronunciation is an important aspect in communication so that they integrated it especially into their learning activities. But, on the contrary, inappropriate topics or materials of teaching highly complicated the lecturers to create this integration. As explained in the previous discussion, the teaching and learning materials in the language skill-related courses particularly speaking skill-related courses did not involve appropriate topics and sub-topics based on its specific area. *English for Social Communication* and *English in Social Discourse*, from example, from their course descriptions elaborated in academic guide book of Language and Arts Faculty of State University of Jakarta, those courses explicitly objected to prepare the students to be able to communicate in English both written and/or spoken particularly in the social context. However, as seen in the course outline of those courses, most of learning materials specifically focused on writing skill.

Consequently, English pronunciation was difficult to be integrated in the learning process.

This situation was not consistent with the instruction of national curriculum, it explained that language skills such as reading, writing, listening, and speaking should be integrated in English courses. Then, in response to this problem, some participants highly recommended that this course should be revised in terms of learning materials. On the other hand, lecturers should initiate to create and elaborate another learning materials as well as learning activities which is mostly suitable to integrate pronunciation and/or even other language skills. In short, lecturers' creativity and experience in teaching are needed in order to overcome this problem. As related to this issue, the lecturers were still confused even the materials of learning involved the appropriate topics to integrate English pronunciation and/or other language skills. In this case, lecturers did not know and get a clear description about the portion for making this integration. In response to this problem, the intensive discussion among lecturers was highly recommended to be administered in order to create the similar perception among lecturers, e.g. lecturers should decide the specific portion for integrating English pronunciation or writing skill or other skills in the teaching and learning process, so that, the ultimate objective of learning for each subject can be achieved and there is no an overlapping materials or topics.

Finally, the second problem was insufficient time of teaching. As the finding obtained from the interview, four out of nine participants considered the insufficient time in teaching and learning process as the practical issue since the ultimate goal of learning did not achieve. This issue will seriously become a big barrier in case of the lecturers could not systematically organize and deliver the materials in their teaching and learning process. For example, lecturers likely take a note when the students give the presentation to note some incorrect pronunciation and/or spelling. Then, they mostly will give the feedback and correction at the end of the presentation. In this case, the overlapping discussion generally happened between giving the correction of pronunciation and discussing the content of the presentation. This situation would not happen if there was sufficient time to integrate English pronunciation as stated by Stead (2012), the stake holders (English department) and teachers should allocate sufficient time to integrate English pronunciation into teaching and learning process as well as curricula. Besides, teachers' insight and intuition played important role in deciding which part of discussion was important to be highlighted so that there was no an overlapping discussion.

4. Conclusion

The conclusion of this study is described based on the data presented and the research questions stated in the previous chapters. The research questions are the integration of English pronunciation as described in the academic guide book and the course outlines of speaking skill-related courses, the integration of English pronunciation teaching and learning in the learning materials and activities of speaking skill-related courses, and the problems that lecturers encountered when integrating English pronunciation into teaching and learning process of speaking skill-related courses.

First, concerning the integration of English pronunciation as described in the academic guide book and the course outlines of speaking skill-related courses, all course descriptions of speaking skill-related courses explicitly asserted to integrate English pronunciation since the learning objectives of the courses were to prepare the students to be able to communicate in English understandably and tolerably. However, one course (English in Social Discourse) was erratum its course description in the academic guide book, so that, this course was not more considered as the speaking skill-related course because the course was actually emphasized on writing skill specifically in the social context. In addition, based on the course outline which presented the learning materials and activities, it was evident that the integration of English pronunciation did not completely represent the material and activity related to English pronunciation except one subject (English Phonetics and Phonology). In other words, the course description as described in the academic guide book and the learning materials and activities as presented in the course outline were not appropriate and relevant with each other.

Second, regarding the integration of English pronunciation teaching and learning in the learning materials and activities of speaking skill-related courses, all speaking skill-related courses integrated English pronunciation into learning activities in which lecturers directly gave correction and feedback to students when they mispronounced the words in their presentation or reading (see Celci-Murcia et al., 2010). However, this integration did not appear in the form of assessment. Besides, this integration relied on the learning materials discussed at that moment. If the situation did not

likely enable to do this integration, then, this integration could not happen e.g. when the learning material was focused on writing skill. Having explained that, lecturer's creativity and experience is required in order to find meaningful learning activities, so that, teaching and learning process could integrate other language skills, even pronunciation.

Third, considering the problems faced by lecturers, there were two problems that lecturers encountered when integrating English pronunciation into learning materials and activities of speaking skill-related courses. First, inappropriate material of teaching made this integration was difficult to be employed because it could make an overlapping discussion. Second, insufficient time of teaching. The lecturers believed that it would be time-consuming for giving correction and feedback if there were a lot of students who had mispronunciation. Therefore, the institution (English department of State University of Jakarta) is suggested providing and allocating sufficient time to integrate English pronunciation into curriculum as well as teaching and learning process.

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EDUCATION AND LANGUAGE STYLE FOR BUILDING YOUNG GENERATION'S CHARACTER

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Abstract

Today many educators and learners use the different language in daily life and in the learning process which can affect their styles in communication. Therefore, the need for awareness and effort to learn the language properly is needed to build one's character. The purpose of this study is to find out the influence of education in building student's character and change of human mind set to face the real life and to find out the using of language as a result of education. The population of this research was the graduation students from faculty of teacher training, University Pasir Pengaraian. The sample was taken by random sampling technique. The result of observation and interview showed that education could change and improve the students' mind set as well as the politeness of using language in society. The important note should be underlined that most of the graduations still imitate what they got from the lecturers when they still learn at university level. The data also showed that language choices when the lecturers teach the students also influence the students' behavior or attitudes in daily life. The students always be given the polite asking and ordering by the lecturers has the different result toward their attitudes and the tough's way. In other words, a good language in teaching and learning process could build the good attitude in daily life. It proved that education and language were the basic point in build the young generation character.

Keywords: education, language, young generation, character.

1. Introduction

Many methods have given in learning and teaching process, one important tough was educators seen the institution's as the education process and achievement not the target. It is known that educators (teachers or lecturers) were the model in students' mind. Everything will be imitated by the students. In other words, learning process did not only discuss about the material but also perform language style. Class condition and teaching style of language performance gave the effect to the education quality and the students' attitude or behavior.

Preparing a good educator is one of the goals of Faculty of Teacher Training and Education at University of Pasir Pengaraian. To support the competence of graduation, this faculty leads the students not only learn several subjects theoretically but also practice them during PPL.

Basically, Education and language are the basic cycle to build the human character. But one question raises nowadays, why do we still found the failure of education in our society? One of the causes of the weakness of education was teachers or lecturers could not explore the potential of learners. Educators could not see the students' needs, interests and class condition. Education should pay attention to the needs of learners rather than imposing something that makes the learners less comfortable in their studies. The process of good education is to give learners the opportunity to be creative.

Promoted by Kamaruddin (2012), an outline of the character bulding design can be seen through process below:

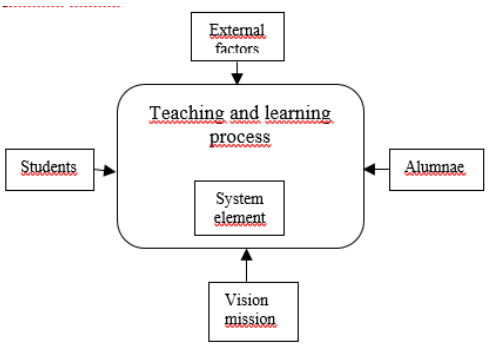

Figure I. Teaching and Learning

All parties agree that the fate of a community or a nation in the future is dependent on the contribution of education. It is no doubt that education is to contribute to the culture of tomorrow. In other words, education builds character. Characters will determine someone's

private thoughts and someone's actions done (Hill, 2002).

Today, this paper will investigated how education affected the graduations' characters and language used in Faculty of Teacher Training and Education at University Pasir Pengaraian.

2. Method

About 30 graduation students from four departments (English, Mathematics, Biology and Physics) of Faculty of Teacher Training and Education, university of Pasir Pengaraian was selected by random sampling (25%) to be observed and interviewed. A descriptive qualitative was conducted to analyze the data. Both instruments were used to describe how education affects the students' characters and language used.

3. Results

The study incorporated 5 graduation students from each participant's background to analyze their behavior and language used in teaching and learning process. This help was needed to analyze the data accurately (triangulation data). Then 4 questions were distributed in interview.

3.1 Politeness Attitudes

The process of politeness is related to participants' behavior in teaching process. The participants were observed twice. The results showed that (1) they imitated the favorite teacher/lecturer in explaining materials and delivering jokes and (2) they acted in a bad way as teachers/ lecturer uncosciously.

Related to issued character, four types of character were identical covered their activities (trustworthiness, fairness, caring and responsibility). These notes were found:

1. He explained lesson well when the students asked him even the subject is not learned yet.
2. He treated the students equally, no difference between higher and lower achievement students.
3. He evaluated his teaching by asking the students about teaching process.
4. When the students complained about his lower voice, he tried to loud his voice.
5. Sometimes he talked out of the topics.
6. He informs all things that can motivate students such as scholarships.
7. He accommodated students' compliment related to other teachers' performance. Then, he followed up by asking the students about its' progress in the next meeting.
8. When he cannot attend the class, he will inform to the students or find another time to replace the class.
9. When he instructed the students to do the task, he did and evaluated it.
10. He is able to explain the students' achievement patiently.
11. He comes on time.
12. He asked the absence students. If the student came late, he asked other students to tell him about lesson and task.
13. When a student got an accident, he showed his sympathy.
14. He keeps his promises. When he promised to give a quiz, he will do it at the time located.

3.2 Language Performances

In the process of education, language is an essential part that cannot be separated. One teaching approach cannot work for everyone in a class. Different teaching approaches may be integrated and different language perfomance may be done to produce better teaching results. The values can be found through interview session:

1. I combined one of my lecturer's language style and previous teacher (I explained summary first, gave a text then explained again)
2. I give a quiz in the beginning of study to attract students' attention as Buk Rina did when I was in Senior High School.
3. When I got bad mood, I distributed an assignment to the students.
4. In the end of meeting, I usually give test or quis with a little rewards such additional score.
5. I often imitate my lecturers word about certainty and future.
6. I called my students with "ananda" and omit adressee "kamu" as Buk Nel said.

7. I intend to used full name in checking attendance list and called her by nick name as her friends called. Sometimes I called her with the other name which is part of her full name.
8. Pak Basuki often shaked his head and hands. To avoid nervous, I shake my head and my hand. I ended my sentence with "yah... yah..."

3.3 Characters Building and mind set

The changing of character and mind set relatively concerns with individual learners. With different educational and cultural background, different personalities and different learning experince, a learner differs in his degrees of succes. The characteristics of the changing can be seen through the results of interview below:

1. I am more friendly than before (I greet those people I know)
2. When somebody else asked me, I am able to answer it.
3. I found something wrong or not suit with me, I will interupted and explain mine.
4. I treat others politely. When I meet old people, I respect them.
5. Education did not affect my marriage process. Previously, I thought that I might not continue my study because it will distract my future husband.
6. Smart is not a guarante to pass the education earlier than others. Sometimes, they are only good in cognitive but not in social aspect.
7. Rather than taking my vision, I tried to maximise my strengths to achieve a rational goal.

4. Discussion

In general, when given a specific instruction method, learners can learn more effectively than others due to their individual learning style. It has been pointed out that language learning success is associated with a range of factors including language learning styles (Sharp, 2004). Language learning styles can be categorized into three major types; cognitive, sensory and personality (Reid, 1995).

The findings showed that educational institutions associates with character building and encourages the formation of the culture development. Supported by Zuchdi (2008) the value of teaching leads to the formation of character (moral) which can be evaluated accurately with observation in the long period and continuosly.

It was found that alumnae imitated the way their previous techers/lecturers delivering the material to their students. The data also show that language choices when the lecturers teach the students also influence the students' behavior or attitudes in daily life. The students always be given the polite asking and ordering by the lecturers has the different result toward their attitudes and the tough's way. In other words, a good language in teaching and learning process could build the good attitude in daily life. It proved that education and language were the basic point in build the young generation character.

Schools are institutions of formal education in which teachers play a role of educating, guiding and shaping (building) the characters of the students. The character building of students become primary responsibility for teachers in the school because mostly students imitate the teacher's attitude as found through this research. That is why Brooks & Goble (1997) believe that the hearts of character education are the beliefs that responsible behaviour should be taught at school.

The data also reveal positive manner adopting by the alumnae. Educators supported the idea of promoting values and behaviour to the students. It leads us to Glanzer's finding in 2003 who identified a significance relationship between the character education in school and social and cultural morality.

There more possible ways the changing of character and mind set through education. Educators with understanding the issues and tensions inherent in their practice are allowed from making acomprehensive decision. This way of thinking will lead the students to think out of the box which can change the culture. The succesful of exploring moral education and its impact also raised from the degradation values from foreign cultures. Emerging character building provides students with opportunities to explore issues helps them gain a greater understanding.

Of course, it is an educator duty to develop and behave in appropriate manner in various social situations with the purpose of developing individuals to capable of understanding moral values and choose to do the right thing. As stated by McElmeel (2002), educators must find ways to infise the curriculum with character bulding.

Katilmis, Eksi, and Ozturk (2011) confirmed that character education programs had a positive effect not only on character development but also academic succes.

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6. Conclusion

The delopment of character building is in progress. School setting must be able to build the students' character as well as environment. Education and language style are two major parts which assist the development of character building. A set of subjects and materials are needed and required to assist students both in character building and academic succes.

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FUTURE LEADERS IN MAKING: SUPREME PUPIL GOVERNMENT AND ITS RELEVANCE TO LEADERSHIP SKILLS FORMATION

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Abstract

There is a certain point in life that every individual had dreamt of being the president of their own country. This dream paved way for the realization what motivated them to become leaders. Specifically, this research aimed to investigate on the following problems: 1. What affects the participant & aspiration to run for a position in a pupil government in terms of motivation, social influence, academic factors; 2. What are the trends or types of programs being proposed by the participants?; and How do they visualize the impact of the proposal they made? The study had the grade school students of Lorma Colleges as respondents who ran for a specific position in Supreme Pupil Government. These include interviews, observations, and readings. The researchers concluded that there are various intrinsic and extrinsic motivations affecting the grade school students in terms of developing their leadership skills. The Supreme Pupil Government has served its purpose by providing learning experiences among the students. As a recommendation, the researchers formulated an action plan in developing leadership skills not only in school setting but in their respective community as well. *[Times New Roman 10, justified]*

Keywords: leadership, student government, skills, grade school, academic

1. Introduction

The Supreme Pupil Government (SPG) in all elementary schools has been institutionalized in recognition of the need to organize a pupil governing body in the elementary school through Department of Education Order No. 45, s. 2007 entitled *Institutionalization of the Supreme Pupil Government in All Elementary Schools Nationwide*. The Student Government Program (SGP) is the Philippines' program for pupil governments in elementary schools of the Department of Education, under the Office of the Undersecretary for Regional Operations. It is the foremost co-curricular student organization authorized to implement pertinent programs, projects, and activities in Philippine schools as mandated by the Department of Education. Supreme Pupil Government lays the groundwork for good governance, volunteerism, unity and cooperation by providing the students various venues where they can improve their leadership knowledge, skills and attitudes. It trains students to become better members of society in accordance with ideals and principles of participatory democracy and good citizenship. More importantly, it helps the Department of Education (DepEd) achieve its thrusts as indicated in the Education for All (EFA) Goals, Millenium Development goals (MDGs) and the Basic Education Social Reform Agenda (BESRA). The Center for Students and Co-Curricular Affairs (CSCA) was established in 1996 in order to further facilitate co-curricular work of student councils in the country. In 2003, the National Federation of Supreme Student Governments was established with David Maulas as its first National Federation President. To date, Jan Marcus D. Magpantay is the National Federation President for the School Year 2013-2014 in the time of the first National Leadership Training for Student Government Officers (NLTSGO).

Student leadership is an integral part of student's success. It should consist of more than just a student representative sitting in a meeting where student voices hold a low priority and sometimes get lost in the "wisdom" of experience. It is the ability of the student body to influence major decisions about its quality of education and learning environment. Influencing major decisions requires a "listening" and a "valuing" and the incorporation of the ideas that students propose. Educators, families, and

communities often focus on new efforts at mutual collaboration, engagement and accountability.

2. Method

2.1 Research Design

This research made use of descriptive qualitative which highlights its purpose, methods and other facts regarding the study. The process of evaluating data using analytical and logical reasoning to examine each component of the data provided. This form of analysis is just one of the many steps that must be completed when conducting a research experiment. Data from various sources is gathered, reviewed, and then analyzed to form some sort of finding or conclusion.

Data analysis of the research started as soon as the researchers received the files needed.

2.2 Participants of the Study

The study had nine grade school students of Lorma Colleges who run for specific positions in Supreme Pupil Government. Students who ran for the Governor, Vice-Governor, and Secretary were given a chance to be interviewed about what affects the participant's aspiration to run for a position in a pupil government in terms of motivation, social influence and academic factors; the trends or types of programs being proposed by the participants and; how they visualize the impact of the proposal they made. This study was held in Lorma Colleges Special Science High School with the help of Lorma Colleges Grade School.

2.3 Research Instrument

This research study made use of Document Analysis in which documents are interpreted by the researchers to give voice and meaning around an assessment topic.

Data Gathering Procedure

1. The researchers sent a letter to the principal of the school for the approval of research
2. The researchers also sent a letter to the Student Personnel of the Grade School Department to conduct a study
3. The researchers get the speeches of the respondents they used
4. The researchers analyzed and interpreted the gathered data

3. Results

Leadership Styles

Authoritarian	Democratic	Laissez-faire

a. Authoritarian leadership. It focuses on instrumental concerns, takes personal charge of decision-making, and demands strict compliance from subordinates. The Authoritarian Personality is the relationship of the authoritarian structure of families at the core of authoritarian states that could turn prejudice into fascist action..

Sample Response:

"*I don't just say it, but I do it. That surely means "na hindi lang ako puro salita, ako rin ay gumagawa."(I am not just saying it, but I'm doing it.)"* –Student 5 running for a position of Vice-Governor.

Student 5 is an authoritarian leader for s/he acquires the conditions of being one. It shows an authoritative aura and shows that the students can depend on him/her. Student 5 states that s/he is in charge of the whole control over decision making. It reflects an autocratic leadership for this delivers the message to subordinates that this leader strict. Student 5 knew how things would go right in the future if s/he will lead the team.

b. Democratic leadership- It is a style found in human resources theory and participative management. Democratic leadership involves the retribution of power and authority between employees and managers to provide employee involvement in decision-making. It is a political relationship among leaders and followers for achieving democracy through sacrifice, courage, symbolism, participation, and vision. In accordance with Kurt Lewin, leaders are defined by collective decision-making, camaraderie, active member or follower involvement, fair praise, and restrained criticism; they facilitate collective decision-making.

Sample Response:

"There is no perfect student, neither am I, but when we work together as one, we can strive for this state, near to perfection as these great landmarks. Let this be our goal!" – Student 7 who ran for a position of Secretary

Sharing the responsibility is a characteristic of this method. The leader wants everyone to participate and gives them a chance to suggest or to give ideas freely. S/he conveys that the subordinates are part of his/her plans and

projects. This leader allows group members to work with their durability and grant consultation on how to distribute the task. Subordinates can decide on the finest course of movement in a work.

c. Laissez-faire leadership (a French phrase roughly meaning "to leave alone") It means leaders leave it up to their subordinates to complete responsibilities in a manner they choose, without requiring strict policies or procedures. They believe that people excel when they are left alone to respond to their responsibilities and obligation in their own ways. The functions of laissez-faire leadership include trusting their members or followers to make appropriate decisions and bringing in highly trained and reliable members into the group or organization.

Sample Response:

"I will propose to have additional benches so we could dine more comfortably and relax. Speaking of relax... why not have a CASUAL DAY for at least once a month!"-Student 1 who ran for a position of Governor

Student 1 belongs to this style because gives the subordinates an absolute freedom to make decisions concerning the tasks given by the leader. Student 1 allows them be on their own without a strict supervision and compliance. Student 1 allows followers a high degree of autonomy and self-rule. It has no clear goals and the leader doesn't have to help the subordinates when it comes to this type of programs.

Nature of Leadership in the Philippine Context

"Bayanihan" Politics	The leader's "pagkatao"	"Tinikling" Culture
"Carabao" Leadership	"Narra" Leaders	"Katapatang asal" Politics

2. "Bayanihan" Politics- The *Bayanihan* is a Filipino custom derived from a Filipino word "bayan", which means nation, town, or community. The term *Bayanihan* means "being in a *bayan*", which refers to the spirit of communal unity, work and cooperation to achieve a particular goal. The concept is the town's people lend a hand to a family that will move into a new place. A traditional Filipino house is made of indigenous materials such as bamboo and nipa/anahaw leaves. The *bayanihan* spirit shows Filipinos' concept of helping one another most especially in times of need without expecting anything in return. The nipa hut represents the responsibility, the volunteers represent the leaders, and the neighbors represent the subordinates. Like the people in a *bayan*, leaders would help their fellow in any possible way they can do to extend a helping hand. They volunteered to help the people with their compiled strengths. Leaders govern in such a way that they would not just work hard as an individual, but part of a whole as well.

Sample Response: *"Everyone is encouraged to help and everyone is more than welcome to join the outreach programs that will be sponsoring."*-Student 1 who ran for a position of Governor

A part of Student 1's speech belongs in this nature because she emboldens others to participate even harder. A team is working and a leader is part of it. In this sense, the researchers clarified it as a part of this nature for the reason of inspiring others to strive together as a team. Student 1 governs on the people's eye level. Subordinates are working with the leader but at the same time, the leader is able to do the tasks and plans. They see this leader as a versatile head of the student government. Everyone will go and help each other that manifest team building or *bayanihan.*

3. The leader's "pagkatao"- Filipinos do not look for individual traits but rather look at the person's entire *pagkatao* when choosing their leaders. A person's *pagkatao* is his nature and nurture. It is the sum total of a person's positive and negative traits, virtues and vices, his strengths and weaknesses combined. Voters are more interested in knowing a candidate's *pagkatao* rather than his or her platform of government.

Sample Response: "*I may have lost but it will not stop me from aiming that my time will come to serve you fellow Lormanians. It is therefore my intention to prove myself that I am worthy of that trust and confidence only if you can give me this chance to serve you."* –Student 9 who ran for a

position of Vice-Governor

Student 9 belongs to this nature of leadership for his "pagkatao" pleases the heart of the voters and makes the audience interested into him. S/he displays his/her passion and dedication to serve the people and that astonishes the viewers. This statement allows the researchers to interpret it as a member of this nature of leadership. Student 9 displays his/her passion and dedication to serve the people and that astonishes the viewers. More than that, this student leader has a heart and brain. Those are the qualifications of the subordinates to vote for him/her as their vice-governor.

4. "Tinikling" Culture- Tinikling is a traditional folk dance in the Philippines. The bamboo is used as a percussive instrument as it is banged against the ground and each other in a pattern and must be closed enough to make a sound, and the dancers must be quick enough to not get their foot or feet caught. Just like the tinikling dancers, leaders must need teamwork and cooperation to work and coordinate against the tempo. But mostly in the tinikling dance, there is main dancer that leads the whole group. Just like in this nature, there is a certain leader that governs a group of leaders.

   Sample response: *"So remember this. If I am voted as Governor, there will always be HOPE! Please Vote for me and my team!"*-Student 2 who ran for a position of Governor

   Student 2 fits in this nature for the reason of managing their team productively. This student leader's main role is to create a strong community within his/her team. This leader ensures the group that they have the capability to win. His/her role is to take the lead as a governor and the other officers are there for support. Student 2 resides in this nature of leadership for this leader has the capability to lead another group of leaders and has a massive determination and will to win.

5. "Carabao" Leadership- *Carabao* is the national animal of the Philippines. Filipinos see them as faithful partners in life. Aside from helping our farmers plow the fields; this animal is also a source of transportation. *Carabao* has been a great companion and it has taken a great role in shaping the country. The farmers would have to rely on the *carabao*'s hard work and patience to get the job done. The field, which serves as a political arena, is a place where they work rain or shine. These leaders have the strength and capability to finish everything well done.

   Sample response: *"My goal is to be one of the instruments for all our voices to be heard and to be a leader of good will not just by the position but also by practice."*-Student 7 who ran for a position of Secretary.

   Student 7 belongs in this Nature because the leader is not just an instrument for everybody but also a leader that can be trusted at any times. This is a definite quality of this style for the reason of being serving the people in such a way that this leader is there to work his/her duties responsible will be a great chief people can depend on anytime just like the very energetic *carabao.*

   e. "Narra" Leaders- the Philippine national tree is the sturdy and durable *narra,* which symbolizes the Filipino people's indomitable spirit and strength of character. The tree is capable of providing ample shade as a place of rest for farmers and agricultural workers in open fields or grazing lands. *Narra* tree is very productive, similar to a leader. In the leadership arena, it is one of the simplest yet one of the strongest for s/he is remembered for the things s/he has done to the community.

Sample response: *"A much better implementation of the no styro/no plastic campaign, we did stop bringing plastic and styro last year. But the canteen didn't, so I want to make sure they don't and use paper cups for beverages instead."*-Student 1who ran for a position in Governor

This part of speech coming from student 1 belongs in this kind of politics because proposed something that people are going to benefit from. Just like *Narra*, she has a determination and strong will to extend a helping hand to the society. This student leader will be remembered by the prosperity s/he provided like a *Narra*. If the program is successfully approved, the aid that she offers will dramatically increase.

f. "Katapatang Asal" Politics- Filipinos are courteous people. The children and young Filipinos will always use the words *"po"* and *"opo"* to show respect to someone who's older or who's in the higher position than them. Based on this nature, it is referring to a person that has respect to a person who was in a higher position and also this is also based on a person that he or she is.

Sample Response: *"I want to help more. That's why I aimed high and accepted the challenge to run for Vice-Governor. If elected, I promise to support the Governor however I can ensure that his or her term goes as planned. I will support governor's ideas and help in implementing."*-Student 4 who ran for Vice-Governor

The leader is very humble in nature and respects that there is someone higher than him. It proves that student 4 is down to earth for it shows that student 4 shares the responsibility with someone else higher than him/her. This leader knows where to stand recognizing who s/he is in view of others. Student 4 ensures a sincere investment to the people and recognizes his/her position in the political arena. Student 4 ensures a sincere investment to the people.

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THE IMPLEMENTATION OF CAKE CULINARY PRODUCTION PROCESS MOVIE AS ENTREPRENEURSHIP LEARNING MEDIA TO INCREASE COLLEGE STUDENTS CREATIVITY

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Abstract

Entrepreneurship learning activity at university level needs such media which close to reality and practically. The objective of this research is for implementing the culinary production process movie toEntrepreneurship learning in the class as learning media in increasing college students' creativity.

This research uses qualitative approach which is supported by quantitative data for describing the influence of eentrepreneurship learning by using culinary production process as learning media in the class. The measurement of creativity level is observed by respondent percentage level about the advantage of the media in learning process.

The result of the movie media implementation showed 80% respondent state that learning activity in the class is closer to reality in implementing their creativity, 60% respondent state that the movie gives inspiration in creating new creation. Over all, the implementation of culinary production process movie can give inspiration in creating new creativity of college student and learning activity in the class becomes more interesting.

Keywords: Creativity, entrepreneurship, movie, media, learning

1. Introduction

Cake culinary process movie is one of audiovisual entrepreneurship learning media which contains some information about the process of cake culinary production by using cassava as the staple which has low price. It is cookedin various kind of cookies by mixing it with others ingredients to increase its price. This movie as one of entrepreneurship learning media which can help lecturer in learning activity in the class facing to the entrepreneurship characteristic continues to the forming ofinnovation, creativity, and entrepreneurship skill at college students.The movie legalization has been registered for the copyright for about eight months, by its registration the copyright certificate number has been released: 071737/HKI.2-01-000001782 and has been published on youtube entitled The Way to Cook Traditional Cake in Indonesia by Dr. Ninik Sudarwati. Developing entrepreneurship education is quite important for growing entrepreneurship and starting to run business after graduating (Manuere, et al. 2013). The entrepreneurship skill at school is good for prompting young generation to run business. The learning media is useful for helping lecturer who has limitedness in several entrepreneurship skill for growing the entrepreneurship innovation of college students in producing new product. The entrepreneurship is intellectual necessary for activating economical development, knowledge management gives an additional value by changing human resources become organized intellectual assets (Sayadi, et al.2013) that knowledge management is the priority based on the fact for gaining competitive superiority and intellectual necessary is useful formanagement efficiency.

Generally, the entrepreneurship educational can create many new entrepreneurs. By its influence in performing both private and informal sector which can absorb employees and increase even distribution incoming. The educational activity can build creativity and being the key to rise **the compete power** for solving the economical problem (Shaheen, 2010).

In Indonesia, food and culinary business provide many job opportunities in informal private sector since the financial can be adjusted and culinary skill is quite easy to be acquired. The existing problem is, lack of competent employee who has culinary skill and skilfull employee in managing business. It means that the capital intellectual is crucial needed. Therefore, lack of skilfull employee will influence to the

less of innovative and compete power product.Entrepreneurship education has been included into curriculum for all department program at Univeristy in Indonesia. The purpose of its applying is to form college students to have high entrepreneurship principle at themselves, innovative, creative, and being independent personal in working. It is supported by Avvisati (et al. 2013) who stated that university institutions need to support their students for improving skill which concerning to the innovation. Entrepreneurship education at university and vocational high school has difference in implementing entrepreneurship learning strategy such as the difference in learning model, leaning method, media, and time allotment. The implementation of entrepreneurship learning strategy at university is concernedmore to create autonomous personality at college student who is skilfull and innovative.

The implementation of entrepreneurship learning at university in Indonesia mostly use entrepreneurial book as media which contains theoretically about which attitude should be trained to be an entrepreneur and the way for managing business. Applying of learning method by lecturing in explaining entrepreneurship theory is beingmaterial in applying entrepreneurship practice and applying practicing method is for increasing the entrepreneurship skill. The results from interviewing some entrepreneurship lecturer at some universities in Jombang regency East Java stated that learning potential by the lecturer ability aspect are: 1) 70% of lecturersdeliver learning material theoretically in the class including entrepreneurship characteristic material and managing business, 2) 20% of lecturers increase their business skill by practicingmethod in handicraft manufacturing both individual and group working and being apprentice in the nearby Micro business arround college, 3) 50% of lecturers implementing the entrepreneurship learning method in the class by various kind of methods such as lecturing for explaining theory, questioning to improve in mastering theory, group discussing method to build cooperation, role playing method to practice in marketing product, project method in arranging business plan,and presentingmethod for performing college students creativity. Potential of learning sources in entrepreneurship learning are: 1) 30% using entrepreneurial books as learning media in the class, power point, internet, mass media (newspaper and business magazine), 2) 70% using learning media which cooperates and supports each other with micro business arround college as entrepreneurship learning source for college students place being entrepreneur apprentice. Generally, media for entrepreneurship learning in the class usually uses power point, entrepreneurial module, entrepreneurial news from internet, and clipping from factual news about entrepreneurial case. Some problems which occured in entrepreneurship learning in the class are such as boring learning activity, less attractive learning, lack of ICT media which has factual effect and three dimension, need ICT media which is easy to be accessed for increasing college students ability in entrepreneurship practicing and also factual movie facing to the entrepreneurship as learning media in the class is quite needed.

This research provides the implementation of culinary process movie as media in entrepreneurship learning in the class as learning tool to increase college students ability in entrepreneurship practice in learning activity in the class which more attractive and fun.

2. Method

This research used qualitative approach by describing the research result (Cresswell: 2013) and supported by quantitative data to describe the influence of entrepreneurship learning activity by using culinary production process movie as learning media in the class. Measuring the creativity level was observed by respondent percentage level facing to the advantage of the media in entrepreneurship learning in the class.

The research was administered on March-May2015 to the students of STKIP PGRI Jombang especially Economical Department which contains of 45 students. The sources and types of data are included: 1). Qualitative data: description about the use of media in entrepreneurship learning, description about the suggestion and revision for next developing; 2). Quantitative data: the assessement percentage of the influence after learning by using the movie as media.

The research procedure are as following: preparing the entrepreneurship material, preparing the college students to accept material in entrepereneurship learning, the process of learning implementation, collecting data, questioning after learning process.

First procedure was preparing the entrepreneurship material which including: idea of new product and managing business, time was allocated 105 minutes for each meeting, arranging a set of lecturing schedule for one meeting, the use of lecturing learning method, discussing, questioning, preparing power point media, and culinary process movie.

Second procedure was preparing for about 45 college students who are taking entrepreneurship subject as the criterionfor testing the implementation of entrepreneurship learning by using movie media.

Third procedure was the researcher as the lecturer model. The lecturer taught by implementing lecturing method, discussing, and questioning. The time allotment was allocated 2 meetings and consisted of 105 minutes for each meeting. Lecturing was administered to the college students of STKIP PGRI Jombang especially for Economical Department. The lecturer took the role in giving some beginning information as warming up, the lecturer taught about the idea of new product and managing business, the assessement of students working on their study was asserted by using movie media. Generally, the objective of this research in implementing culinary process movie as learning media is to gain information about the college students improvement in creating innovation and creativity for entrepreneurship.

The procedures of collecting data which used by the researcher are: 1) the researcher took the role as lecturer and did observation directly which concerned to the college students attitude during the class, 2) the researcher distributed questionaire to the respondent to collect the data in the form of comments which facing to learning by using movie as the media**;**3) the researcher doing direct interview to the college students which concerned to the atmosphere during entrepreneurship learnig by using culinary process movie as media.

Thus are the process of research methodology in implementing culinary process movie as entrepreneurship learning media at univesity level for growing college students creativity.

3. Results

The entrepreneurship learning implementation process to 45 college students by implementing cake culinary movie as the entrepreneurship learning media in the class. The researcher took a role as lecturer model who taught the idea of new product and managing bussiness by using culinary production process movie as media. The learning implementation was included several meeting, the first meeting was the lecturer explained learning objective and media which was used, the lecturer explained about the idea of new product and managing business by lecturing method, then the lecture gave questioning session concerned to the material that has been given. Continued by giving group assignment to create new product creation which accordance with Slavin (2009) statementthat is implementing learning together model by using group discussion method and group project. This model has some characteristics: interaction between teacher and students, positive interdepension, individual responsibility, interspersonal ability and small group.

The lecturer plays the film of culinary production process of cassava as basic materials assorted to several cookies shapes and tastes. The film is to give examples of new product ideas with simple ingredients. Students in a group were drafting to create a free product independently and the lecturer guided and directed the activities of the group. The second meeting, the lecturer expressed the purpose of learning to know the creativity of students in new product innovations. The lecturer gave an opportunity to each group to present the creation of new products. The lecturer gave students of other groups to provide comments and suggestions on the creativity of the product that the group presented. The lecturer and students identified all the creativity of each group new ideas. Finally, the lecturer suggested to student creativity and concluded kinds of business and forms of innovation and product creation. This learning process implemented a practical method applied with learning model of "direct instruction". "Direct instruction" is a teaching model with operational activities such as a lecturer explanation of the concept or new skills to all students, and ask students to test students comprehension by practicing and the lecturer observes it (controlled practice), and encouraging the students to continue practicing directed by the lecturer (guided practice) (Joyce et al, 2009). And it also explained that the application of learning model "direct instruction" consists of five (5) stages, 1) the orientation (the lecturer activities are defining materials, reviewing the lessons, forming the objectives, determining the procedure of teaching); 2) the presentation (the lecturer explains a concept or a new skill, presents a visual representation and give a task to ensure the comprehension of material); 3) structured practices (the lecturer guides groups of students with practical examples, questioning between students and lecturers, corrects and reinforces proper practices); 4) observed practices (students are practicing semi-independently, the teacher observes the practice of each student, the lecturer gives students feedback); 5) independent practice (students

practice independent and continuously by adjusting the time).

After the teaching learning process, students have an opportunity to provide comments and suggestions on the benefits of the film of cooking cakes process as media. these comments of students in terms of the film design, the film image is quite interesting in some scenes of cooking process, the explanation of the production process is quite clear, the 15-minute duration of the film is not boring. Students' comments about the activities of entrepreneurial learning using the film of cooking cakes process as learning media, learning in the classroom becomes fun, the availability of cooperation between students in groups to create new products ideas, each student is free to play back the film of cooking process for inspiration of new product ideas. The followings are the results of the observation of researchers to the creativity of the students after learning by using the film of cooking cakes process, it showed 80% students stated that learning process in the classroom is closer to the reality in the example of creativity , 60% of the students stated that the film has additional information to create, innovate to create new products with easy accessible and inexpensive materials and can enhance products value. The work of each group showed 80% of their new innovations and new modification of the old products. The 90% students' expression and attitude during the learning process shows that students' motivation to join the teaching learning process and actively contribute new ideas to the group. In general, the application of the film of cooking cakes process can give inspiration to create new creativity in students and teaching learning process in the classroom is more fun.

Thus the implementation of entrepreneurial learning by showing films of cooking cakes process as a learning media and it was proved useful additional information to create, innovate to create new products with easy accessible and inexpensive materials, and can enhance products value.

4. Discussion

The problems in the classroom of entrepreneurial learning is less attractive because of not-varied method used, lack of entrepreneurship media, the media used is less innovative, less foster the spirit of entrepreneurship, the less motivation of students marked bored easily, difficult to concentrate, and the low score on entrepreneurship subject. The essence of entrepreneurship is the imagination, creativity, the best novelty. They are needed to develop new products (Buchholz, et al. 2015).

The success of entrepreneurial learning in higher education is influenced by external factors (the basic skills of teaching, the quantity of materials and complete subjects provided in the class, various teaching methods of entrepreneurial learning, instruction al media, technology, classroom management, setting support to the school system in supporting the formation of attitudes and entrepreneurial skills) and internal factors (students' motivation to enhance the entrepreneurial skills, innovative and creative students), it agrees well with the results of research conducted by Zebua, et al (2015) that found there are two factors influencing the effectiveness of the process of learning entrepreneurship. External factors are covering lecturer ability in the teaching learning process, materials, patterns of interaction, media, technology, learning situation, and system. The internal factor is covering the students' motivation).

The findings of various students' responses after applying entrepreneurial learning by media of cooking cakes movie are students become a passion to work and innovate something new, the class becomes alive, students cooperate among others, and the final result is the group task, students make new full innovative creative products. It was proved that the movie of the cooking process as a media of entrepreneurship learning can give impact to cultivate the spirit of work and innovate something new, audio-visual media in accordance with the opinion of Meenakshi (2013) that the uses of information Communication Technology (ICT) in education are: to increase the range of educational services and learning methods, to convey information, introduce technology, develop the use of educational media openly, to improve teaching learning skills to be more effective. In general, the effectiveness of learning entrepreneurship is determined by external and internal factors. The use of instructional media and instructional media technology is one of external factors that determines the success of studying entrepreneurship more tangible in the classroom.

Other findings, the audio-visual media is useful to help lecturers to: 1) provide a solution to the limited ability of entrepreneurial skills possessed by lecturers, 2) help to improve the mastery of the entrepreneurship theory by giving more tangible examples, and 3) be useful as one of knowledge skill information

to prepare student learning activities practice of entrepreneurship in the field. Thus, the audio visual media used in learning is based on the research by Ashaver , et al (2013) the use of proper audio-visual materials are required by lecturers and students in learning and it needs to be provided on the college in terms of quantity and quality of the media. Availability of audio-visual media is very useful for lecturers and students in learning.

In general, the film-shaped media of culinary production process is one of theentrepreneurial learning media based on information Communication Technology (ICT) which is practical, real, simple, in accordance with the demands of learning technology, and useful in entrepreneurial learning in the classroom to improve student motivation to create a new creativity.

5. Conclusion

The application of the film of cooking process is one of the audio-visual media to assist lecturers in learning entrepreneurship in the classroom. Some of the findings during the implementation of entrepreneurial learning were found more active learning atmosphere, more communicative learning, not boring, more varied in a learning situation. The Film of cooking process as the audio-visual media for entrepreneurial learning can form students to foster entrepreneurial skills by manifesting the students' works with the new ideas work and capable of creating old works modified with new creations. Another finding, the film helps lecturers in the delivery of materials of various works of innovation product as a solution to the limitations on the ability of entrepreneurship lecturers about entrepreneurial skills.

Thus students and lecturers really need more entrepreneurial learning real media, the production process media, simple media, short media, not boring media, practical media in teaching learning process in the classroom, so these can form a not boring and useful learning environment to cultivate students' creativity to look for various new innovation products.

6. Suggestion for Researchers

The results of gaining information to students about the problems of entrepreneurial learning to the use of the film of the process of making cakes as an entrepreneurship learning media ICT based. It was obtained information that students need a wide range of media entrepreneurship- ICT based more varied, 3D, and practical. It is suggested for further researches to conduct researches of developing other ICT which is complementary among others. Those are the film of craft production process, the film of cooking food process that is needed by the consumers, the film of brief entrepreneurship theory and others that aim as varied audio-visual media to foster creativity and innovation of new products. Audio-visual media forms should also be adapted to the needs of social and cultural students' environment so that the benefits of media are more maximal. Thus the audio-visual media in learning is very necessary as one solution to complement the limitations in learning.

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ENHANCING THE COMPETITIVENESS OF INDONESIAN MANPOWER THROUGH THE IMPLEMENTATION OF "RECOGNITION OF WORK EXPERIENCE AND LEARNING OUTCOME (ReWELO)" THROUGH COMPETENCY TESTS

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Abstract

This paper aims to: 1) Find out whether the ReWELO (Recognition Of Work Experience And Learning Outcome) model can be used as a effective tool to recognize work experience and prior learning outcomes; 2) Assess the effectiveness of the implementation of the ReWELO model through competency tests; 3) Find out whether the ReWELO model able to improve the competitiveness of Indonesian Manpower. The ReWELO model can be implemented via two methods, competency tests and portfolio assessment. This paper only discuss the implementation of the ReWELO model through competency tests. The subject of the trial implementation of the ReWELO model through competency tests is 18 students with Electrical Engineering area of expertise from 18 Public and Private Vocational High School in Yogyakarta. Instruments used in this trial are questionnaires, observation sheets, and documentation. The validity of the instrument was tested through expert judgment and reliability was tested through Cronbach's Alpha. The collected data were analyzed descriptively. Results from the trial are: 1) Implementation of the "ReWELO" model through competency tests can be used effectively to provide recognition of work experience and prior learning outcomes; 2) Of the 18 participants, participants of trial implementation who passed and received a certificate of competency were 12 participants (67%); 3) The ReWELO model can be used to improve the competitiveness of Indonesian Manpower.

Keywords: work experience, prior learning outcomes, ReWELO, competitiveness, Indonesian Manpower

1. Introduction

Recognition of Prior Learning (RPL) is the actual issues in the global world. This is demonstrated by the agreement of the countries which are members of the Organization for Economic Co-operation and Development (OECD) to ratify the RPL [13]. Each country may use different terminology, but actually refer to the same thing. In Malaysia, RPL is called Accreditation of Prior Experiential Learning (APEL). In the United States, RPL is called Prior Learning Assessment (PLA). In England, Scotland and Ireland, RPL is called Accreditation of Prior Learning (APL). In Canada, the terminology Prior Learning Assessment and Recognition (PLAR) is used. While in Indonesia RPL is referred to as Recognition of Work Experience and Learning Outcome (ReWELO) or in the Indonesian Language "Pengakuan Pengalaman Kerja dan Hasil Belajar (PPKHB)". In Indonesia, ReWELO is a process of recognition of work experience and learning outcomes of a person either gained through experience in the workplace or gained through formal, informal or non-formal education.

As part of the international community, Indonesia has ratified several conventions related to RPL, i.e. GATS (General Agreement on Trade and Services) on April 5, 1994, the WTO (World Trade Organization) on January 1, 1995, AFTA (Asean Free Trade Area) in 1992, and the Recognition of Studies, Diplomas and Degrees in Higher Education in Asia and the Pacific on January 30, 2008. Indonesia also became a member of APEC (Asia Pacific Economic Community), which one of its agreements is the liberalization of trade and investment by 2010 for developed countries and by 2020 for developing countries. In addition, Indonesia has also ratified AFLA (Asian Free Labor Agreement) and AEC (ASEAN Economic Community) which provides opportunities for flow in and out of manpower from one member country to others member countries

Ratification has been done by Indonesia at various conventions clearly puts Indonesia as a country that is more open and easily accessible

by workers or human resources from other countries. Ratification is also slowly but surely would shift the regulatory protection for Indonesian manpowers. That is, Indonesia can't prohibit foreign workers who already have a certain competency certificates to work in Indonesia. On the contrary, Indonesian workers won't be able to work abroad or even in their own country if they do not have the required competence and qualifications of the labor market. A worker can no longer rely solely on a diploma without having a specific competence to get a job.

Examined from educational background, Indonesian workers who work abroad dominated by graduates of elementary and secondary schools, the percentage of primary school graduates is 31.36%, while the percentage of junior high school graduates is 37.4%, a total of almost 70% of Indonesian workers who work abroad have only primary education. These conditions will cause many problems, i.e. in the eyes of the international employer, Indonesian worker are considered to have a low quality. This assumption also caused many cases where Indonesian workers were treated unfairly due to their low bargaining position. Meanwhile, there are Indonesian workers with educational background above primary education and have a good competence, but their competence is not recognized by the destination country because they do not have a certificate of competence which is recognized internationally, and have no adequate foreign language skills to explain their competence. The implementation of ReWELO Model as one way to recognize work experience and prior learning outcomes is expected to be able to increase the competitiveness of Indonesian workers in labor competition arena. This paper will examine the implementation of Model ReWELO through competency test to achieve the above goal.

2. Method

Phases of the implementation of ReWELO model through competency tests are shown in Figure 1. As shown in the figure, firstly the candidate signed up for a competency test, in this case to Profession Certification Institute "Gema PDKB". If all requirements are met, then the candidate took a competency test includes a written test, a practice test, and a affective test. Once the interview is finished, then assessors conducted deliberations on the results of the competency test. Candidates who can reach the total grade (theory, practical and affective test results) of 70 or better, passed the competency test and entitled to a certificate of competency. Candidates who have not achieved a score of 70, was declared not competent, but they are given the opportunity to take a competency test again.

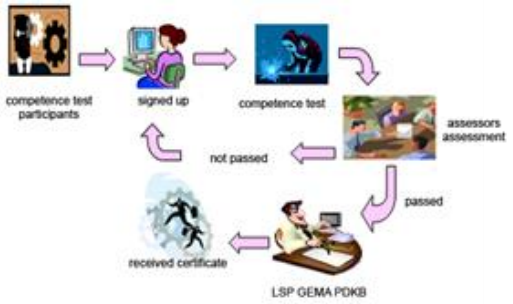

Figure 1. Implementation of ReWELO model through competence test

On the trial implementation, competence test assessors consisted of three people from LSP Gema PDKB, colleges, and instructors from the Training Center of Technical Education (BLPT) Yogyakarta. The subjects of the trial or the candidates were 18 students from public and private vocational school in Yogyakarta.

Instruments used in this trial are a test and a observation sheet. Based on expert judgment, it was concluded that the Competency Test Methods Completion instrument is valid. Instrument reliability test was performed using a Intraclass Correlation Coefficient (ICC) test. The data then was calculated by using SPSS, the results can be seen in Table 1and Table 2

Intraclass Correlation Coefficient test results.

	Intraclass Correlation	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.835	.704	.931	31.458	14	70	.000
Average Measures	.968	.935	.988	31.458	14	70	.000

Reliability of the Competency Test Methods Completion instrument

Case Processing Summary				**Reliability Statistics**	
		N	%	Cronbach's Alpha	.968
Cases	Valid	15	100.0	N of Items	6
	Excluded[a]	0	.0		
	Total	15	100.0		

Table 2 shows that the reliability value obtained using Cronbach Alpha formula was 0.968, which means that the instrument has a very high reliability. Furthermore, the value of inter-rater ICC was also satisfactory with the calculation result of 0.835 means that inter-rater assessment of six assessors have a high consistency.

3. Results

The trial implementation results showed how many candidates were able to pass or declared competent in the competency test. Candidates passed the competency test if it reaches a minimum grade of 70. Table 3 shows the achievement of the candidates in participating the ReWELO model implementation through competency test.

Competence test results

Candidates No	NP	NA	NK	Competence test grade	Final Result
1	89	80	74	82.7	C
2	38	80	38	46.4	NC
3	83	80	67	77.6	C
4	61	80	61	64.8	NC
5	83	80	68	77.9	C
6	86	86	66	80	C
7	95	95	75	89	C
8	72	83	72	74.2	C
9	86	85	57	77.1	C
10	52	80	52	57.6	NC
11	94	94	74	88	C
12	60	80	60	64	NC
13	65	80	65	68	NC
14	89	89	60	80.3	C
15	92	92	72	86	C
16	47	80	47	53.6	NC
17	74	80	74	75.2	C
18	71	80	71	72.8	C

Based on the results of the competency test above, of the 18 candidates, there were 12 (67%) candidates whose grades above 70, so they were declared COMPETENT (C) and entitled to a certificate of competency from LSP PDKB Region IX Yogyakarta. While 6 (33%) candidates whose grades below 70 were stated NOT COMPETENT (NC) and not entitled to a certificate of competency. Figure 2 illustrates the percentage of candidates achievement in competency test.

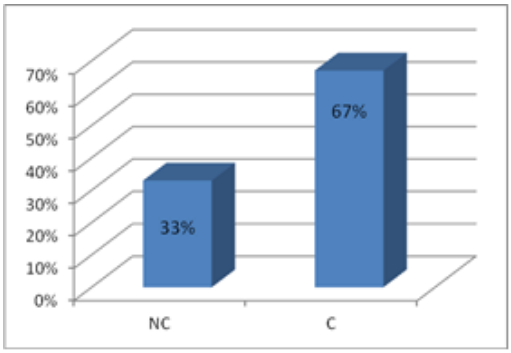

Figure 2. The percentage of candidates achievement

4. Discussion

Competency tests conducted on this trial implementation covers three areas, namely the assessments of cognitive abilities implemented through theory tests, affective assessment through work attitude assessments, and psychomotor assessments carried out through practical tests. The results of these competency tests are displayed on histograms below.

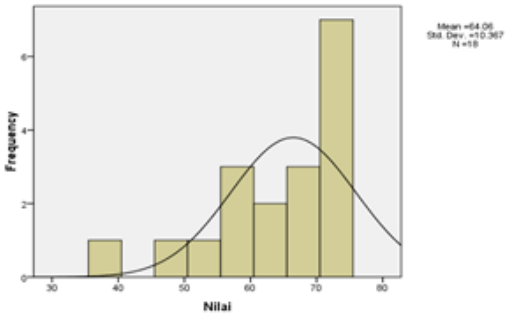

Figure 3. The results of theory tests

Figure 3 shows that the theory test results tend to skew to the left. This means that theory test results from most candidates are below the threshold for competent criteria of 70. This was confirmed by the test results average of 64.06 which is also below the threshold of competent criteria. Based on theory test results, only 7 of 18 participants are qualified for competent category (grades 70 or better), while test results of 11 participants are less than 70.

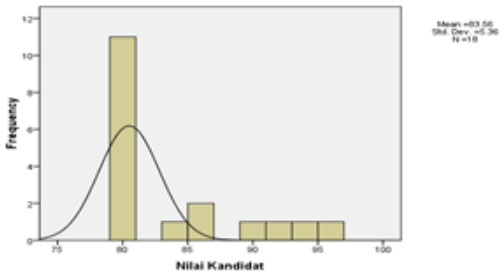

Figure 4. The results of work attitude assessments

Figure 4 shows that the work attitude assessments results tends to skew to the right. This means that the test results from most of the candidates are above the threshold for competent criteria of 70. It is supported by the fact that the test results average of 83.56 which is also above the threshold. Based on the results of the work attitude assessments, it can be stated that all 18 candidates are competent. This is logical because all participants of the competency test is the best students in their respective schools, so it is natural that their attitudes and behavior are polite, disciplined, and meet the requirements of K3 (Keselamatan dan Kesehatan Kerja or Occupational Health and Safety)

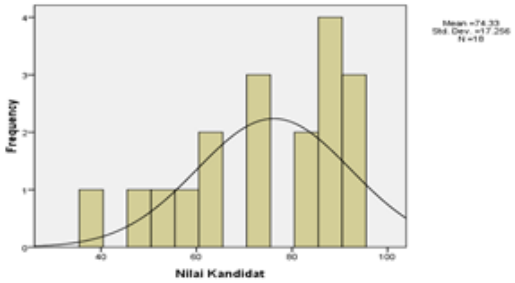

Figure 5. The results of practical tests

Figure 5 shows that the results of the practical tests tended to have normal distribution. This means that there are several candidates who scored high, some scored mediocre, and some scored low. Psychomotor assessment results obtained from practical tests show that the test results average is 74.33 which is above the threshold for competent criteria of 70. This means that most of the candidates are declared competent. Of the 18 candidates, 12 candidates (67%) are declared competent in psychomotor aspect, while 6 candidates (33%) are declared not competent.

5. Summary

Based on the results of the competency test above, of the 18 candidates, there were 12 (67%) candidates whose grades above 70, so they were declared COMPETENT (C) and entitled to a certificate of competency from LSP PDKB Region IX Yogyakarta. While 6 (33%) candidates whose grades below 70 were stated NOT COMPETENT (NC) and not entitled to a certificate of competency

The above results indicate ReWELO model implementation through competence tests can be considered effective in which more than 50% of candidates passed the competency test and entitled to a certificate of competency of Gema PDKB LSP. Certificates of competence is expected to improve the competitiveness of Indonesian workers, especially in the Electrical Engineering area of expertise.

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SOCIAL CAPITAL AND SCHOOL ACCOUNTABILITY

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Abstract

This paper aims to address two main issues: 1) why school accountability must be owned; 2) the role of social capital in establishing school accountability. The study was conducted in SMP Negeri Pakem Sleman DIY Indonesia with teachers and students as research subjects. Data mining is done with a qualitative approach, while data analysis is done with research data categorization, reduction, and interpretation to provide meaning. The research concluded that: 1) the schools accountability is needed to improve the quality of schools, among others: successful student; school improvement cycle; school operation; school report; school review; 2) Schools accountability will be easier to hold if the school has a social capital of trust, cooperation, social norms.

Keywords: social capital, school accountability

1. Introduction

The issue of accountability began to grow as people begin to question the quality of education, equity in education, and the efficiency in the education management. In this case, the school is responsible as formal education institutions due to the less optimal in producing excellent graduates in terms quality and quantity. In terms of quantity, it is evident that the numbers of qualified educational opportunities at all levels of education have not been evenly distributed; even the gap in education continues to be a social phenomenon. In terms of quality, there were questionable issues associated with the management system and the output of education systems. In social reality, it is shown that there is a tendency of ineffective school management due to the low school accountability. In fact, the school as a base management is required to be able to realize the school accountability to the public. A failure to build school accountability due to personal problems that occurred where the individual has not been able to behave is motived by strong accountability. As a result, there is a tendency that low accountability in complexity in education inherent to the education management, and also it has not been the focus of study in the school. In accordance with school accountability, it will be easier in the school improvement process.

School accountability will be easily realized if the school has a social capital. Social capital is expected to build a social positive energy in building a culture of accountability in the school environment. It is expected to create an academic culture that is needed to improve the quality of schools. Social capital needs to be explored and developed as working capital which initiated a process of quality improvement for school to be trusted by the community. In accordance with social capital, the school will be faster to build a school performance. This paper will explain the basic concepts of social capital and school accountability, accountability and the quality of education, the role of social capital in building the school accountability, especially in the SMP N Pakem Depok Sleman, Yogyakarta Special Region, DIY

2. Method

The research is carried out in State Junior High Schools in the regency of Sleman, namely 4 State Junior High School Pakem, Sleman DIY , located in sub-urban area with the status International Standardized School (SBI), is the school with outstanding achievement in National Exam. The average score of each subject tested in National Exam is 9. This school ranked the second best for its academic achievement of all schools in the Province of Yogjakarta in 2006. The approach used in this study is qualitative research combined with grounded research using case study on those three schools. The methodology of this research varies from in-depth interview, observation, FDG, participation, questionnaire, and documentation. The key people involved are teachers, headmasters, students, parents, and school committee. The analysis is carried out using some activities such as data reduction, data display, and conclusion/verification.

3. Results

3.1 Social Capital and Basic Concepts of Accountability

Social capital (Bourdieu 1986: 248) defined group of sources of actual or potential which associated with ownership of a network that survived from relationships more or less institutionalized while knowing or appreciating each other. While Coleman (in Suharjo, 2014: 73) interpreted the social capital as:

> *Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristic in common. They all consist of some aspect of social structure and, they facilitate certain action of individuals who are within the structure. Like other form of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence".*

Another opinion is Putnam (2000: 19), which explains "social capital refers to connections among individuals-social networks and norms of reciprocity and trustworthiness that arise from them. In that sense social capital is closely related to what some have called civic virtue". While Fukuyuma (1995: 10) explains that social capital is the ability of people to work together for common purposes in groups or organizations. It can be defined as a state of a set of values or certain informal norms which is mutually used among members of the group that makes cooperation between them. In line with Fukuyama, Woolcock (1998: 153) defines social capital as "the information, trust, and norms of reciprocity inherent in one's social work" (Suharjo, 2014: 73-74).

Social capital is required in applying the principle of accountability. Accountability is an ethical concept that is close to the government public administration, synonymous with the concepts that can be accounted for responsibility that can be questioned (answerability), which can be blamed (blameworthiness) and having a lack of freedom (liability). Accountability related to governance is actually a bit too broad to be defined, but can be described as the relationship between concerning present or future, between the individual and the group as a liability interests, an obligation to inform and explain each actions and decisions to be approved, rejected or punished if there were abuse of authority.

Headington (2008) argues that "Accountability has moral, legal and financial dimensions and operates at all levels of the education system." These three dimensions are contained in accountability, i.e. moral, legal, and financial demands of the school's responsibility to make it happen, not only to the public but must be initiated by the school citizen itself. According to Headington (2000: 83), "Teacher has a moral and legal responsibility to provide appropriate educational experiences for pupils and to report to parents and other professionals". Headington emphasizes the accountability of teachers, in which the teacher has the responsibility for both students and parents of students to achieve good learning process both morally and formally. Not only teachers but also the agencies related to education, as stated by Headington (2000: 83), "The head teacher and governing body have a legal responsibility to ensure the finances of the school are used effectively to benefit pupils' education" (in Kande, 2008 by Dwiningrum 2015).

According to Zamroni (2008: 12) who defines accountability as "the degree to which local governments have to explain or justify what they have done or failed to do." Further said that "accountability can be seen as validation of participation, in that the test of whether attempts to increase participation prove successful is the extent to which people can use participation to hold a local government responsible for its action". While Sjahruddin Rasul defined accountability as the ability to give an answer to a higher authority for the actions of "person" or "group of people" against society or organization. In the context of government institutions, the leader of government agencies which is responsible as recipient of a mandate, should give an account of the implementation of the mandate to the community or the public. Ghartey defines accountability intended to seek answers to questions related to stewardship that is what, why, who, where, which, and how an accountability should be implemented. While Ledvina V. Carino defines accountability as an evolution of the activities carried out by an officer whether they are on track or was out of the responsibility and authority. Everyone should realize that every action not only will have no effect on them alone but also have impact on others. Dimensions of accountability can be distinguished from the vertical and the horizontal dimension. The difference between these two dimensions can be described as follows (Dwiningrum, 2012,2015) :

Vertical	Horizontal
Concerning the relationship between the school management, communities, schools and parents and between schools and institutions above it (Department of Education).	Concerning the relationship among the school community; between the principal and the committee, and between principals and teachers.

Examined from the dimensions, it concluded that accountability is determined by a process of social interaction that occurs between individuals that has different character and personality; so that the social effects, as result of the process of social interaction, have tendency to be different. In addition, there is a tendency in the social context, in which accountability is also associated with organizational aspects emphasizing on vertical relationships both within the institutional structure and between the institutions.

The differences in the process of social interaction, as the basic form of the establishment of social activity, will have an impact on the building process of accountability in both personal and institutional. Schools as formal educational institutions can be analyzed its accountability, either horizontally or vertically. Both forms of these relationships are crucial in establishing the dynamics of school accountability to improve quality of schools.

3.2 Accountability and Quality of Education

Study of accountability in educational institutions is more complex as they relate to the needs of the community. In practice, accountability requires a curriculum relevant to the society needs and management capabilities supported by a strong commitment in realizing the school excellence. In the process, accountability in education requires clear rules and applied consistently by educational institutions. Accountability in educational institutions should be able to maintain the quality in accordance with the demands of society. The quality of education related to the school responsibility to provide best service for the students. The efforts to improve the quality of education by using the approach adopted by the theories of business organization, emphasizes the importance of individual productivity and quality control to produce goods or services in accordance with customer expectations. Arcaro, using various arguments of experts, said that the basic mission of improving the quality of a school is to develop programs and services that meet the users' needs, such as students and community (1998: 8). In addition, educational institutions with accountability must be able to process and responsible for financial management to the public. In this case, accountability in education is not only measured by the quality of its graduates, but also its financial management in which should be done professionally in accordance with the purpose of educational institutions. It means that accountability in education can be analyzed in the macro and micro level. Analysis Macro analysis is related to the managerial aspects, while in the context of micro analysis is related to the teaching and learning process (Dwiningrum, 2015).

Improving the quality of school is a process to improve the quality of teaching and learning process and the factors associated with it both systematically and continuously, in order to achieve school targets more effectively and efficiently. There are two aspects that need attention; the quality of results and the process achieving such results. One theory emphasizes on improving the quality of school culture within the framework of the model of Total Quality Management (TQM). This theory explains that the quality of schools includes three abilities, which are the ability of academic, social, and moral. Further explanation according to the theory of TQM, the quality of schools is determined by three variables; the school culture, teaching and learning, and the school reality. The first variable, school culture is the values, customs, rituals, slogans, and behaviors that have long been established in the school and passed on from one generation to the next generation, either consciously or unconsciously. It is believed to affect the behavior of all components of the school, the teachers, principals, administrative staff, students, and parents. The school culture is influenced by two variables; external influences and school reality. The first variable, external influence, which is educational policy, can be issued by the government, the development of mass media, and so on. The second variable, the reality of the school is a factual conditions that exist within the schools, such as good physical condition; class roof was leaking, the shower did not have enough water, noisy classroom and others; as well as non-physical conditions, such as the relationship between teachers who are not in harmony, and the rigid school rules. The third variable, the quality of the curriculum and the learning process is a variable that is closest in the determination of the quality of graduates because

it is influenced by internal factors and has a reciprocal relationship with school reality. The internal factor is the institutional aspects of the school, such as how is the organizational structure of the school, how the school principal election is held, how the appointment of teachers is assigned, and so on (Dwiningrum 2012, 2015).

The second theory is a theory that improving the quality of school is influenced by what is called the theory Organizing Business for Excellent developed by Andrew Farmer (2004), which explains that the school improvement begins and starts from the formulation of the school vision. In the school vision statement is contained quality of school to be expected in the future. Vision as a picture of the desired future can be translated into more concrete form as missions, which are statements of what will be done in order to realize the desired future into reality. The concept of the school mission contains two aspects; abstract and the concrete. Leadership and school culture is the abstract concept of the mission, in which the nature and the shape school culture, is strongly influenced by the leadership while school need a living leadership to result in the school culture. On the other hand, the mission contains something that is concrete, i.e., strategies and programs that can be formulated in the written draft. Strategies and programs closely related to school infrastructure, such as the need of presence of the vice principal, homeroom teacher, school committees, libraries, laboratories, and so on. Teaching and learning process as the basis of the quality of schools is determined by school culture and infrastructure. The quality of interaction between teachers and students as a form of teaching process is influenced by the availability of facilities and school infrastructure. Furthermore the quality of the interaction is determined by the school culture. Both have an impact on teaching and learning processes simultaneously, so that it cannot be reduced or sorted out (Dwiningrum 2012, 2015).

A third theory is the "Model for Quality Improvement Factor Four" which explains that the quality of schools is the result of direct influence of teaching and learning process. The quality of the school came from the school vision, which is then translated into the school mission. According to the theory of excellence, the mission contains two aspects, abstract and concrete. The abstract aspect contains the values, such as upholding honesty, hard work, and togetherness. Furthermore, the values will affect the school culture. On the other hand, the concrete aspects contains in the form of strategies and programs, which require the presence of infrastructure. Another variable are leadership and managerial in determining the quality of teaching and learning process. Related to the leadership variable, there are two aspects, which are the leadership with the ability to move, embed, and affect abstract aspect evoking the spirit of learning among students, instilling a vision on the school community, and so on; and also managerial with the ability in organizing, executing, monitoring, and controlling in concrete. Thus, within the "model for factor four", the quality of teaching and learning process is determined by culture, school, leadership, managerial, and infrastructure (Zamroni, 2011: 6-12 cited by Dwiningrum 2012, 2015).

Quality improvement strategies are related to how to do something to achieve certain goals. Strategy is the art to manage existing resources in order to achieve the intended objectives effectively and efficiently. It determine a long-term goal of an institution and activities that must be done in order to realize these objectives, with the allocation of existing resources so that the objectives can be realized effectively and efficiently. There are three strategic planning related to improve the quality of schools, which is a strategy that emphasizes results (The Output Oriented Strategy), a strategy that emphasizes the process (The Process Oriented Strategy), and The Comprehensive Strategy (Zamroni, 2005: 2 -12 cited by Dwiningrum 2012, 2015).

Based on the theory above, it can be concluded that developing a quality improvement strategy takes a comprehensive approach by considering many factors associated with the elements of education. It requires the synergy of all of components role that involved in the quality of schools improvement process. Improving the quality of schools is determined by the quality management. Based on observations in some schools, there is the tendency that the quality management of education has not been optimal. Even school-based management which was chosen as a model in the management of education has not yet succeeded in generating process that accountable in producing qualified graduates.

The success of school-based management is inseparably linked with the school conditions factors including the ability of the school, principals, community revenue, community participation, school budget and school infrastructure. School-based management emphasizes two important aspects, which are school autonomy and participatory decision that actually pursued by each school to be a school with independence and effective school. Schools

that have the ability to establish a wider network in general, have the faster ability to perform in school improvement. Existence of schools with school-based management is inseparably linked with social capital. The ability of schools in using social capital, i.e. trust, excellence, the potential of the school, is used to develop the quality and competitiveness within the community. The ability of the principal to cooperate with the central government, particularly in accessing information related to the cost of quality improvement, provides an opportunity for schools to get a chance to get these funds compared with schools that are just waiting for information from local authorities about the enhancements of the quality improvement programs.

Social capital owned by the school is a major asset to improve the quality of schools. This is in line with the opinion of James Coleman whereas social capital as the ability of people to work together to achieve common goals in a diverse group of organizations, while Fukuyama defined social capital as a set of values or informal norms that allow the establishment of cooperation between them. As described by Coleman, the ability to associate is a very important asset not only for economic life, but also for any human social existence. However, this ability is very dependent on the conditions in which the community was willing to share to reach the meeting point of the norms and values altogether. If the normative ethical common ground is found, then the individual interests will be subject to community group interests, and shared values will rise up to the so-called trust (Fukuyama, 2002: 12-14).

Trust is the initial capital for the schools to be assessed and selected by the community to send in their children. In this case, the community "trust" to the school is the first step for the school to receive the quality of student input at the time of admission of new students as the "intent" of school every year. This study proved that there is tendency that the schools input average tend to stagnate between schools. It means schools still show the position that has not changed significantly in the last five years in the position of schools with "excellence" or "superior" rate in the community and vice versa.

In the perspective of social capital, it can be assumed that participatory decision made by the principal as well as the trust owned by the school and the community around the school to send their children, is part of the social capital; as there is high demand of public schools that are geographically distant from the access to the city but believed to be a quality school. In this case, the trust built by schools as a social capital is an important value in establishing school accountability because strong social capital actually making schools more accountable rated by the community.

However, school-based management which is rated as one model of management accountable to improve the quality of schools have not yet applied optimally, so the result was also not optimally achieved. In fact, there is a tendency of teachers still do not yet support the implementation of school-based management optimally as explained by the principal that not all teachers fully support school-based management effectively. As portrayed in addressing curriculum change, not all teachers are able to change the habits of working and teaching and improve it to become more independent, creative, proactive, coordinated, integrated, synchronized, cooperative and professional (Dwiningrum, 2015) .

In the author's observation in multiple classes, there is still a tendency of teachers who teach uncreatively, annoyingly, boringly, and still use teacher-centered teaching method. In this case, the school is gradually trying to provide training and opportunities for teachers to work in a team for teachers who still considered "stagnant" to change. Explained further, at each school on average, there are about 5-15% of the total number of teachers in schools that tends to be difficult to change proactively and innovatively. The problem caused by psychological obstacles, as the inability to respond to the nature of the new programs for intensive socialization yet. That condition is one indicator that the accountability of teachers has not yet been effective.

The complexity of the problems in the implementation of school-based management comes from human resources, both in terms of inputs and processes that were very influential on the output. In terms of input, the main problems experienced by schools were:

1. strong differences in ability among students in the classroom and among one school and another;
2. low commitment among teachers in the classroom and among schools in their profession;
3. low ability of personal leadership and managerial principals.

In the framework Wayne, if elements within the school move systemically in the educational unit, then the condition of the input is guaranteed to be influential in the process. According to the issue of school-based management in the teacher's perspective is

associated with (Dwiningrum, 2012): low motivation of students; low motivation of teachers; unvaried and boring learning methods; teacher competence has not been accompanied by professional ability; weak principal managerial system; weak ongoing evaluation and controls; sustainable programs have not been effectively and independently implemented.

The strategic measures implemented by each school are different, but the SMP N Pakem Sleman DIY programs in changing behavior in schools were as follows:

1. organize the discipline system gradually;
2. arrange the school infrastructure;
3. designing a flagship program
4. fix the value of the final exam;
5. improve the school's image.

Several attempts to increase accountability in school-based management as described by Slamet (2006 cited by Dwiningrum 2015), were by doing some initial steps as follows: a) to develop guidelines for behavior and performance monitoring system of the school organizers and supervision with clear sanctions and firm; b) to make a development plan and communicate it to the public/stakeholders at the beginning of each fiscal year; c) to develop clear indicators of school performance measurement and communicate it to stakeholders; d) to measure the achievement of educational service performance and deliver the results to the public/stakeholders at the end of the year; e) to respond to public inquiries and complaints, f) to provide information of school activities that will receive educational services to the public, and g) to update plans of new performance as a new commitment agreement.

3.3 The Role of Social Capital in the Development of the School Accountability

Building schools accountability is not easy, because it takes a holistic and comprehensive preparation. There are some things that need to be prepared and considered carefully in developing a "School Accountability", as described by Fred Newmam, M.Bruce King and Mark Rigdon (1997), that in discussing about the "School Accountability", the most fundamental thing is how to fix student achievement as the end result. The issue of achievement can be assessed both academic and non-academic. However, in improving school accountability, there are many aspects to consider. As explained in the concept of "School Improvement and Accountability Framework" (2012), there are five components that need to be considered in developing the school accountability: 1). Successful student; 2). School improvement cycle; 3) School operation; 4) School report; 5) School review. The model in the development of "School Accountability" can be described as follows:

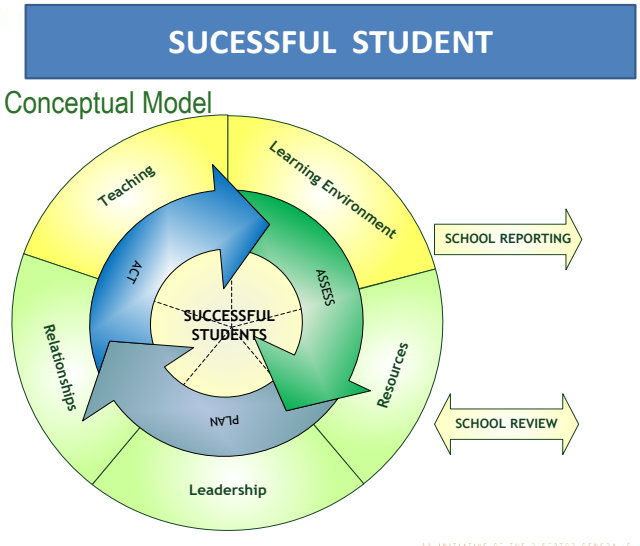

Figure 1.2. Schools Accountability Model Development

Based on figure 1.2 above, it can be concluded that to be successful students in the study determined by the dynamics of the various aspects of dimensions; first level are planning, access, action, and at the second level are leadership, teaching, relationship, resources, and learning environment. In more detail the aspects related to the components in the development of

school accountability developed in "Evaluation and Accountability" broadly based on school data can be described as follows (Dwiningrum, 2012, 2015):

Table 1. Social Capital in Building School Accountability

Component	Element	School program	Social capital aspect
Succesfull student	Academic student achievement Non-academic achievement Value-adding	Diagnostic student abilities tests. Extracurricular flagship program.	Social norms that regulate clearly to determine the diagnostic students' abilities.
School improvement cycle	Asses data and other evidence related to student achievement and school operations' Plan to improve the standard of student achievement; and Act to implement planned strategies	Determination of the standard of excellence by the school. School strategy of improvement in national test scores. Additional lessons program Cooperation for student talent development.	Cooperation needed to carry the success of the quality improvement of schools and school programs.
School operation	Teaching Learning environment Leadership Resources Relationship	The school environment that conducive for learning. Teacher training in accordance with the field of study. The learning culture among peers. Build partner with various parties. The success team for the success of the program.	Cooperation and social norms required for the smooth running of school with its step-by-step program.
School report	Information about school performance Written with a clear sense of communicating with the local community Identified schools whose performance raises concern Validation reviewer of the standard review process School with identified area of exemplary practice, and Review of schools at the direction of the Minister or Director General.	The school makes flagship program and annual program that exposed in social media which sought to up-date every year. Schools create a profile in leaflets or website.	Building a sustainable trust that needed to sustain the existence of the school
School review	The school's assessment School planning The annual School Report Principal line and performance management Meeting legislative and policy compliance requirements including audit Reporting requirement of school and compliance surveys	School reports and annual program delivered in the school committee forum. The school makes flagship program offered at the school committee forum.	The program is accountable to maintain public trust.

From the description above, it can be concluded that in order to develop the school, the school accountability should be developed in a holistic manner to achieve maximum results. Based on data from this study, it concluded that the dynamics in the process depends on the dynamics of the role of all stakeholders associated with the school, such as school principals, teachers, students, educators, and school committees; with the principal as the key role. Further, based on school data, it can be concluded that the policy of the school principal is still considered to have a very strong role in establishing school accountability. Based on some interviews and observations of the principal profiles, it can be concluded that to establish the school accountability, then (Dwiningrum, 2015):

1. The school principal is responsible to the department for the performance of their schools and teachers accountable to principals on student progress.
2. The school principal, along with the school staff to undergo self-assessment process that produces an assessment of achievement standards and school effectiveness in the process of maximizing student achievement.
3. The school principal, along with school staff through the process of school planning, including school improvement plan, operational planning and classroom planning.
4. The school principal, along with school staff annually publishes school report describing the schools performance and

reports of committees special policy and program requirements.

5. The school principal, along with school staff participate in and actively respond to the school assessment process, including standard assessment and, according to the needs, an assessment carried out by the expert assessors.

The schools which have implemented some of the steps above, results to have sociologically improved quality over a period of five years. Based on data from of school, the school success is inseparably linked with the existence of social capital. Because of the success in establishing school accountability is in need of school public confidence, will encourage schools to be able to improve the delivery of education optimally. In addition, success is determined by the ability of the school accountability in increasing the intensity of school activities appropriate to the purpose the school culture. Indicators of successful school accountability are: 1) The increasing in students who have academic and non-academic achievement recognized in the national and international levels of the various fields of science; 2) The increasing recognition of the stakeholders of the flagship program featured that valued to be meaningful to students life and community; 3). The increasing of schools ability to develop and to co-operate trust capital in improving the quality of school; 4) The increasing of students admittance and acceptance ratio; 5) The increasing achievements of teachers in a variety of academic achievement.

4. Conclusion

Some interesting conclusions to be discussed included the school accountability which is still need to be socialized to the development of education, particularly as an effort to improve the quality of education. School accountability is the result of work between individual and institutional aspects in synergy which has a strong motivation to be responsible for the school performance towards public in terms of the management of education to produce qualified students who excel and have character. The school accountability can be built through: successful student; school improvement cycle; school operation; school report; and school review.

School accountability in the process requires a social capital that is moving all the school elements to improve the quality of schools. The development of school accountability must be systemic and not partial so the results are optimal. Therefore, the components associated with social capital as well: trust, cooperation and social norms; that required in the process of developing school accountability must be met in accordance with the school dynamics.

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INTRODUCING LESSON STUDY IN SMK NEGERI 9 MALANG

Tri Endarwati

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Abstract

As long as teaching and learning process it will appear learning problem. A teacher is always required developing teaching and learning process. The development includes lesson plan and learning tools. The teaching and learning process has been implemented should be analyzed. The problems in the classroom should be resolved. Lesson study is seen as one of alternatives to solve problems in the classroom. It is not a method or strategy in teaching and learning. It is an effort to improve a process and result of teaching and learning in a classroom and can be done collaboratively and sustained by a group of teachers. Teachers of various subjects could join the lesson study as an observers. One of the aim of lesson study is to get a better understanding how student learn and how teacher teach. Some of benefits in implementing lesson study, we know student and teacher's progress in teaching and learning. Observations made by observers are helpful for model's teacher to acquire data of the progress of observed students. Every observer observed a certain student intensively and reported the student progress to model's teacher. Lesson study is done by cyclic steps : plan-do-see and reflection-follow up.

SMK Negeri 9 Malang is a vocational school at Malang established in school year 2006/2007. It has four (4) programs, are Motorcycle Engineering, Sofware Design, Networking and Communication Technology, and Animation. Lesson Study is introduced in this semester (semester II academic year 2015/2016) and in progress now. It applied in Mathematic, Indonesian and in Motocycle Engineering Program. Background of students in this program is a kinesthetic and talkactive in majority. They are less concentration and much talking and speaking. Lesson study in vocational school used to build and strenghthen a framework of thinking. One of the reasons about applying lesson study in Mathematic and Indonesian is to develop academic and critical skills. The two skills are expected to improve the student's life skill. Students in Mathematic class is divided into several groups consist of 4-5 students in a group. In every group, there must be a someone whose capable of being a tutor for others during teaching and learning process. By student's worksheet they learned cooperation to complete the task. Model's teacher came to every group and guide students to overcome their problems. Every observer, some of them are non mathematic teachers , observed one group of students and followed their progress in teaching and learning. It doesn't matter the teacher do not understand the content of worksheet. They just concentrated to the progress of every students in the group during the class. After the class, model's teacher and observers having a review for their activity. Every teacher reflected what they felt and expressed what is the valuable experience they got. Model's teacher identified the student's problem. They discuss how to overcome the problem. The model's teacher arranges a new lesson plan with a new strategy to solve student's problem in next meeting.

Keywords : *lesson study*

1. Introduction

The 21st century is identified by a rapid economic change, easiness in getting information, a fast technology progress and a rapid demand to have a new competencies, so that it is required a new teaching and learning process. Teaching and learning in the 21st century should more than explain what is a knowledge, but it should more than how to explain what is teacher thinking by teacher's modelling process of teaching and learning. So, students in the classroom are observing and learning the process of problem solving and skill of thinking.

A good teaching and learning process in the 21st century is able to explain how student should be studying and thinking. Education should be able to describe and design an environment and a process of teaching and learning as well. So, how student learns and understand is implemented in students' activity, colaboratively, self-directed and responsibly. The role of teacher is very important in guiding capacity of students thinking. By the role of the teacher, students may recognize and building the process of thinking. It may increase the ability in actual problem solving in daily life. Teacher has to be able to observe the process of students

thinking. This ability is trained and developed in lesson study.

As long as teaching and learning process it will appear learning problem. A teacher is always required developing teaching and learning process. The development includes lesson plan and learning tools. The teaching and learning process has been implemented should be analyzed. The problems in the classroom should be resolved. Lesson study is seen as one of alternatives to solve problems in the classroom. It is not a method or strategy in teaching and learning. It is an effort to improve a process and result of teaching and learning in a classroom and can be done collaborative and sustained by a group of teachers. Teachers of various subjects could join the lesson study as an observers.

As a biology teacher, presenter has recognized and implemented lesson study three years ago at previous vocational school, SMK 13 Malang. The implementation of lesson study at the school was on scheduled. But, presenter should moved to SMK Negeri 9 Malang in the middle of January 2016, as a principal. Many experiences in implementing lesson study changes mindset in teaching, teacher learning and student learning. Presenter learned lesson study to many teachers and opportunities at school, workshops and guided trainee teachers. By that moments, presenter got many criticism and advices. All of that criticism and advices make presenter improved the process of teaching. As a biology teacher, presenter learned how to made lesson plan, how to preparing the teaching materials and how to made students enjoyed the process of teaching and learning. The more criticism the higher motivations to teach better in the next teaching and learning process. The more ideas to encourage students involve in teaching and learning process.

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Majority the process of teaching and learning at SMK Negeri 9 Malang is conventional. Teachers used method of teaching and learning such as explanation, giving an individual task, no worksheet and there is no chance to think-pair-share idea to solve problems in teaching and learning process. It called teacher-centered.

Based on the explanation above the problem is how to introduce and implement lesson study at SMK Negeri 9 Malang?

2. Discussion

Model's teacher teached at class X – TSM 1 (Motor Cycle Engineering). In the past, he teached mathematic by explaining teaching material to the class and giving individual task. He asked one student to write down the answer of the task on the blackboard and other students wrote the right answer. There is only two direction of teaching and learning process between teacher and student. No direction between student to student. No colaborative works among teachers.

Lesson study was introduced to teachers at SMK Negeri 9 Malang after joining Lesson Study Club conducted by Mr. Ryo Suzuki at Purwodadi I Elementary School, Insan Amanah Elementary School and Anak Saleh Elementary School. The implementartion of lesson study begins to Mathematic subject. One teacher, Khoirul Muqaddas, as a model's teacher and 2 (two) teachers as observers. First step, model's teacher joined in Lesson Study Club at the 3 (three) elementary schools. He learned how to prepare a lesson plan, how to observe students activity in the classroom and how to run refection after the class. After joining for 2 periods of steps of lesson study (plan-do-see) the model's teacher went back to school. The model try to apply knowledge of lesson study to Mathematic at class X – TSM 1 (motor cycle engineering class). The model made lesson plan about topic : Translation by mind mapping, prepared tool for teaching and learning (Plan step), teached the subject based on lesson plan (Do step). After teaching the subject, the model and observers reflected all activities in the class (See and reflection step)

Topic Translation needs three times meeting in the classroom. At the first meeting, model gives individual worksheet (Think phase). Then each two students discuss the answer of worksheet (Pair phase). Model gives another question in worksheet to discuss in a group. Each group consists of 4-5 students. This is the first time for students work in a group to do worksheet. Model comes to each group to observe the discussion. Each observer identified the activity of each student in a group. In review step of this first meeting, observer found that almost all students in each group (Share phase) try to finish the worksheet. There are several students do not understand yet about the topic.

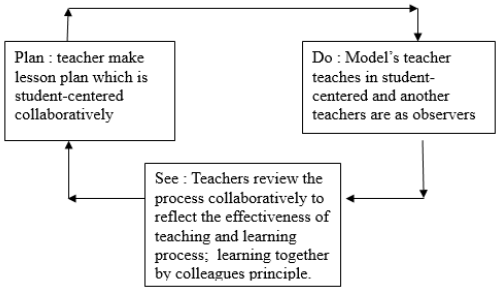
Model and observers discuss some problems they met in the classroom in Reflection step. Model express the worth lesson today. Many students who have low academic competence are able to cooperate in a group to solve the questions in worksheet. Some students whose lazy in the begining of the lesson, begin involved to work in a group after a moment. According to observer, by this lesson study, students more active, easy to understand the lesson and almost all students involve in the lesson. The usage of teaching tool is helpful for students to understand the lesson. But, some students still confuse about (1) mathematic term , absys and ordinat, and (2) the differences between drawing line and moving line.

In the second meeting, observers evaluate that observed groups have better cooperation among member of group, some of them less confidence to their right answer.. They finished worksheet faster than the first meeting. The valuable lesson for model is he is capable to guiding each group to makes student easier to understand the lesson.

In the third meeting, observers evaluate that each member in a group more active, easier to understand the lesson and member in a group become care of each other to overcome problems in the lesson. The valuable lesson for model is there are more chances for students to solve problems that can increase their capability.

According to student, by lesson study. he felt easier to study. Using teaching tool makes students easier to understand the lesson. According to observer it is effective for student to understand the lesson and to solve the problem in the classroom. The valuable lesson for model is, students attitude are better than before. They are more adaptive, easier to follow rhytm of teaching and learning process. They are become symphatic and responsible.

Lesson study is defined as a model of guiding for professional educators to evaluate teaching and learning process collaboratively and sustainable. In the introduction by Saito (an expert of lesson study), implementation of lesson study is focused to three steps, which is Plan (a planning of teaching and learning program), Do (doing lesson in the classroom) and See (observing the lesson and followed by reflecting the result of observation in the classroom) (Sutopo and Ibrohim, 2006). Plan step is to produce teaching and learning design in order to make student learn and study effectively. It is also to build student's participation in teaching and learning porcess. This step is done by several teachers in a group, collaboratively. One teacher from the group become a model's teacher (model) and the model arrange a lesson plan. Do step is to apply lesson plan. One teacher is as a model and the others as an observers. Observation is focused to student learning that is agreed in tne Plan step, not to observe how teacher teaching. During the teaching and learning process, observers do not allow to disturb the process. The main purpose of observers come into the classroom are learning about the process of teaching and learning. See step is to find out a stenght and weaknesses of teaching and learning process. Model starts discussion by expressing what is the impression of the lesson. Second chance is given to observers to find what is the lesson learned. Criticism and advice are given wisely. All of them are purposed to make a better teaching and learning in the next meeting.



Picture : Cycle of Teaching and Learning Process in Lesson Study in Indonesia (Susilo,2010)

The professionalism of the teacher can't be separated from the ability on maintaining teaching and learning. In the process of teaching and learning, the most important thing is maintain of habitual and self-regulated of the student itself. On the process, teacher have to give a model , building a self-interest , and expand the creativity of the student. The implication of this process will be a shift of education paradigm. From teaching paradigm to learning paradigm. Learning is an interaction process between student and teacher and education resources on an education environment. This learning process should be planned, doing, rated, and supervised so this process will run well effectively and efficiently (Permendiknas Nomor 41, 2007)

On the learning process, teacher should doing it interactively, inspirely, fun, challenging,

and motivate student to being an active-participator and giving a chance to implement their ideas, creativity, and independently as well as their talent, interest, and physical development and the psychological of the student itself (Chotimah,2012).

Lesson Study is also introduced and implemented in Bahasa Indonesia. Yuliyati is as a model's teacher and three (3) teachers are as observers. Topic of the lesson is Exposition Text. There are two (2) meeting in the classroom. At the first time, in Plan step, model's teacher makes lesson plan collaboratively. In Do step, model explain the topic for a half of meeting time in teacher-centered situation and want to give much informations to students. She is fear of students loose information There were many students unfocused to the explanation. Then, model asked students in pair to read a text, and asked to explain content of the text. In See step, model need much time to reach the goal of lesson at the meeting. According to observers. model should make the goal of lesson can be reach easily. They suggested to make simple texts but concern to the goal of lesson. Giving many chances

In the second meeting, in Plan step, model prepared the lesson plan better. In Do step, model reviewed last meeting, explained the component of exposition text. Students in pair asked to read a text and guess content of the text. Then model divided class into 7 group. Each group concist of 4 to 5 students. They discuss about the text and make a conclusion about the text. Model asked one member of a group to report the works in front of the class. In See step, model felt the more she gave a chance to express the idea, the students easier to understand and make cooperation. Model felt have much time to serve students in each group better. The valuable lesson today is model should search new knowledge; understand character of every student. She know how to manage a class in order to get an ideal teaching and learning process. According to observers, by giving more activities in the classroom, it is suitable to student's character in class Motor Cycle Engineering. They have kinesthetic type, so that model should chooce anykind of learning activity which deliver an kinesthetic activities and multi direction in teaching and learning process. According to students, they are enjoyed the lesson because model gave them a chance to express their opinian and idea, it makes students easier to understand the lesson.

3. Conclusion

Lesson study can be introduced and implemented in Mathematic and Bahasa Indonesia in SMK Negeri 9 Malang and it has influenced students to be active in the classroom, express their idea, easier to understand the lesson; it makes model recognize students' character and understood about the best interactive in teaching and learning process.

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CULTURAL VALUES ORIENTATION AND POLITICAL INTOLERANCE OF UNIVERSITY STUDENTS

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Abstract

University student as part of middle class plays an important role in society, economically and politically, in developed countries. It can be argued that capable middle class is requested to creating a real democratic and at the same time eliminating the intolerance which is widely known as a clog in the wheel of democratic government. Till date, still, not much is known about the political intolerance in Indonesia in the midst of democratization. Most studies of political tolerance focus on relatively abstract and context-free attitudes. Conversely, it is regarded that real civil liberties controversies may well be more contextualized than suggested by the relatively abstract measures typically employed by researchers. The purpose of this research is therefore to investigate the influence of cultural values orientation as context is inevitably multidimensional and offer clearer explanation on variation of intolerance among university students. Quantitative method is employed which involved students from Jakarta and Yogyakarta completed psychological scale and demographic questions. Data analysis reveals that: 1) Level of students' political intolerance is moderate; 2) Amongst cultural values orientation, only power distance and long-term orientation predict for political intolerance; 3) There is no participants' demographic characteristic plays significant role in political intolerance differences. The findings and limitations of this study are discussed in terms of both theoretical implication in order to follow up the research and also practical implication to reduce intolerance as prerequisite of democratic process in pluralistic society, particularly among university students

Keywords: Political intolerance, Contextual factors, Cultural values orientation, Students

1. Introduction

Unlike authoritarian regime, democracies are preferred by most of countries in the world, even in lesser developed ones [1]. Despite this, tolerance is the serious dilemma of democracy in a pluralistic society and maintain that the challenge of sustaining a politically tolerant society is enduring [2]. Gibson stated that even in the stable democratic regimes, nondemocratic legislation and discriminatory policies open. Moreover, intolerance towards minority group is one of the clearest expressions of this problematic attitude [3].

Political tolerance is most often understood as a willingness to permit the expression of ideas or interests one opposes [4] as opposed to political intolerance-the support or willingness to denounce the basic political rights of individuals who belong to a defined outgroup in a particular society [3] and, surely, it contradicts basic democratic values of equal rights and political opportunity. In this paper, we focus on political intolerance as McClosky and Brill suggest that political intolerance may be more "natural" than tolerance [2] and may be cognitively easier for people than tolerance. [2]

Indonesia, today, stands for the world's fourth largest country and third largest democracy but at the same time also still faces intolerance as paradox and dilemma of democracy [5], many challenges such as violence and discrimination against minorities grows [6] [7] [8]. That is why study on democracy and tolerance are very relevant

Current researches that focus on political intolerance seek for explanation and prediction which examine socio-psychological and demographic determinants. For instance, Hazama (2010), stated that intolerance determinants in level of individual, amongst others, are authoritarianism, education, contact, and perceived threat [9]. These factors generally play significant role in individual level but not a group level variable. [10] [11] [12] [13]. In other words, it is important to seeking for contextual variables that account for similarities and differences results in intergroup level.

According to Gibson dan Gouws, most studies of political tolerance, researchers focus on relatively abstract and context-free attitudes and suggest the importance role of contextual factors in shaping intolerance [14]. Braithwaite

found that security, safety, and harmony related to collectivism in Hofstede's cultural values [15].

Allik and Realo analyzed the relations of individualism-collectivism with social capital and suggested that civic engagement in political activity was found to be more individualistic [16]. According to Skitka, the tolerance level is assumed to be higher in countries that hold strong values in liberalism and multiculturalism because the orientation value is not dedicated to those that hold strong values in masculinity, but instead tend to embrace some feminism values [13]. In this regard, shorter power distance and high level of independence tend to appreciate each and everyone personal rights, in contrast to the society which has high dominance in cultural values, such as higher power distance and higher collectivity level, in which distinctive potential of in-group and out-group is much stronger in comparison to the previous ones

Furthermore, they are also strengthened by social and cultural identity as a part of identification. For instance, Janmaat found that the role of class diversity towards participation tendency in politics is proven to be strongly correlated in Sweden. [10]. This is supported by Drechsler, that Western society, which values democracy highly, places high level on individual's personal rights, thus at the same created dissonance and gap between individual and society, that causes less chance and support for the respective society. [16]. In this case, individualism indirectly influences the act of intolerance toward the intolerant society.

However, Yoon found that individualism promotes the willing to trust, tolerant and in turn politic participation. On the contrary, collectivism does not strengthen the willingness to appreciate each and everybody personal rights even though it does strengthen each and everybody's pride of their own nation. [17] Meanwhile, Crawford and Pilanski mentioned that individual conservative individuals tend to be intolerant towards those that embraced left-wing political alliance, while liberal individuals act intolerant towards those in right-wing political alliance [18].

Based on this fact, it is safe to say that, in general, individuals that embrace conservative ideology are found in the society that have cultural values orientation of masculinity and higher power distance, while liberal individuals are found in a society that has low regards of masculinity and short power distance.

Tajfel and Tufner pondered whether morale beliefs and principality shows one's own stance in individualism and collectivism depends on the context that create each and every individual's personal and social identity. In this regards, whether one tend to be more collective or individual. In a society that embrace morale collectivity, it is more likely that individual's personal ego and individual values of defining morale by one ownself tend to be weaker, thus individual's stance in embracing morale values tend to be influenced by the society. [19] Thus, it is very logical that the act of intolerance is stronger in collectivistic rather than individualistic society, since one's own personal stance is deemed as individual difference, and not group differences, which is a rebel toward society. These kind of heretics, which is based on judgment and collective identity tend to direct individual's perspective of seeing the world and the fact that strongly define the differences between "we" and "them", which in turn might and will strengthen the act of bias and prejudice, discrimination, and hatred toward other groups [20]. In conclusion, those kinds of act, which originally rooted from collectivity, strengthens intolerance in comparison to the ones that hold individual's values.

Therefore, we decided to propose cultural values orientation through social psychology perspective as a framework to identify cross-cultural similarities and differences in relation to political tolerance. Cultural values orientation, as a contextual or situation factor, is deemed to have some plays in individual's political tolerance and intolerance. The five dimensions that will determine this study are power distance, avoidance of uncertainty, individualism-collectivism, masculinity, and long-term orientation.

2. Method

This study is an explorative research with quantitative approach. The participants of this are 197 college students in Jakarta and Yogyakarta. The instruments used to collect data are the questionnaire of 'liked the least content controlled pluralistic intolerance' [2], Cultural Values Orientation [21] and personal data questions that include relevant personal information, such as age, sex, educational background, social-economic status, and ethnic background. The data collected is analyzed through descriptive statistics, correlation and regression.

3. Results

Based on descriptive statistics, it shows that participants have variation in values for each orientation, which is high for uncertainty avoidance and long-term orientation; average

value for collectivism and masculinity, low value for power distance, and average level on political intolerance.

Table 1. Descriptive statistic

Cultural values	M	SD	Min	Max
Power distance	2.338	.646	1.00	4.20
Uncertainty avoidance	3.944	.469	1.80	5.00
Collectivism	3.449	.569	1,00	4.83
Long-term orientation	4.192	.427	2.67	5.00
Masculinity	3.319	.756	1.00	5.00
Political intolerance	2.302	.717	1.14	5.00

According to the Table 1, the participants in this study, in general, are threatened by the uncertainty and ambiguity, while trying to avoid a few situations that may cause conflicts and disturbances, and thinking thoroughly about the future problems, thus they place themselves in a balanced position of prioritizing their own individuality and group confirmity, while taking lightly the importance of power and authority in a society. Participants do not mind if the factions they do not like state their own opinion in the society and does not regard it as a problem if those factions work in government office and do not mind if those factions do their own protests, such as demonstration. However, the participants do not want if the person of such faction is chosen as a regent, governer, even worse as a head of government, in this case President and Vice-President. Despite that, in general the political intolerance of these participants are grounded to be average in value.

Table 2 shows matrix intercorrelations indicate that cultural values orientation relate to political intolerance are power distance and long-term orientation.

Table 2. Matrix for intercorrelations

No		1	2	3	4	5	6
1	Power distance	1					
2	Uncertainty avoidance	.078	1				
3	Collectivism	.275**	.115	1			
4	Long-term Orientation	.131	.416**	.115	1		
5	Masculinity	.401**	.309**	.105	.165	1	
6	Political Intolerance	.317**	.049	.133	-.221*	.005	1

*p<.05, **p<.01

From Table 2, we can see that power distance is significantly positive correlated with political intolerance. It shows that individual that acknowledge the existence of consequence of unbalanced power and authority in society tend to be more intolerant in political terms with the parties and factions that society dislikes, while long-term orientation is significantly negative correlated towards political intolerance, which means there are efforts, to some extent, to avoid unfavorable situations based on uncertainties in the future along with the participants intolerance with the parties they dislike.

Moreover, statistical analysis with multiple regression technique shows that both factors are predictors toward political intolerance that contribute as many as 17.1% and power distance is the sole predictor in this study. Meanwhile, additonal data analysis using T-test toward demographic characteristic shows that there is no significant differences in political intolerance in regards to sex, occupation, organizational background, ethnic background, marital status, educational background and religion. In this case, the act of tolerance and intolerance toward the participants are not related to their personal characteristics.

Tabel 3. Multiple Regression Analysis Result

	B	β	R^2	ΔR^2	F
Power distance	.391	.352	.171**	.157**	.101
Long-term orientation	-.448	-.267			

*p<.05, **p<.01

4. Discussion

Based on the result, the only contextual factors in cultural values orientation that deem to have influence towards political intolerance in this study are long-term orientation and power distance. In fact, this is different with Allik and Realo [16] study that mentioned that trusted persons often found in a person that has high value in individualism. It also means that we have to consider other factors that may contribute to political intolerance but they have not explore in this study yet. Contextual factor that is deemed to be highly correlated with political intolerance are weak government law, uncertainty society, roles of nation leaders, and deliberation [14]; spouse, family, and tolerant community [22].

A few demographic characteristics in this study does not influence toward political intolerance. On the contrary, Kim and Zhong [23] mentioned that age, gender, and income take

significant roles towards intolerance. The older people with low income has less tolerance aside from the fact that females tend to be more tolerante than males. However, this study is not supported with Marquart-Pyatt and Paxton [11] study that mentioned that there is no difference in tolerance toward cohort age in United States and West Europe, while Harell [12] mentioned that gender, minority status, location, parents educational background and religion do not influence towards the intolerance distinctions in Canadian students.

The result of this study encourages the future research based on psychological factor and non-psychological factor toward political intolerance, such as differences in economic status [24]; the usage of religion and sect symbols conspicuosly (veil and hijab, cross and crescent necklace, etc) as a manifestation of being a part of certain religion influences toward intolerance. Furthermore, anxiety takes on mediator roles in an individual that wears those religion attributes toward the individual's tolerance level. The resistance against secularism strengthen the roles of religion symbols toward intolerance level, and *vice-versa* [25]; conservative and liberal political ideology [26]; conservative and liberal political ideology, the knowledge of politics and democratic principals [18]; the exposure of inclusive religion, various social strata, and obedience and compliance towards authority [27]; negative emotions (hatred, fear, and anger), political sophistication and existential insecurity [3]; composition and variation in social networks [12]; act of religious that is unraveled through etno-religious model (affiliation and religious beliefs) and culture-war model [23]; activity level in politics, political knowledge and involvement in organization [12].

There are some considerable limitations in this study. Firstly, this study uses convenience sampling technique with small numbers in comparison with the teenagers in Indonesia. In other words, this study does not fully represent the said population. Therefore, this study cannot be generalized for each and every region in Indonesia, instead limited to the local teenagers that become the participants of this study. Secondly, the majority of the particiapnts are high-school students and college students, while this study does not take into account of other demographic characteristics which may become the traits and characteristics teenagers. Therefore, this study cannot be generalized with other teenagers that come from different backgrounds. Finally, this study does not consider personal and non-personal factors that can be relevant related to political intolerance as mentioned above. Thus, this study encourage an extended study that should consider personal and non-personal factors, be it internal or external that is relevant, especially from demographic data.

Other limitation in this study is the term exchange of social tolerance and political tolerance. Therefore, there is a necessity to differ from eac other since even now those differences are still confusing to define the differences between one from the other.

The predictors that involved in this study are not widely used and researched in Indonesia, thus this study is more suited to be a pilot study. Thus, this study should be extended into extended research since the corpus regarding political intolerance in Indonesia is still too few to become references, especially on teenagers and middle social class. Despite all of the limitations, this research has contributed toward the understanding of political intolerance towards perspective of cultural values orientation, especially in democratic process, which is hopefully have some uses in theory and practice usage, including extended research.

The future researches should apply alternative approach that is proposed by Petersen, Slothuus, Stubager, and Togeby which incites possibility of evaluation focusing on tolerance and not only 'least-liked' group approach that see tolerance from negative perspective. [28]

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REVISITING THE HUMANE DIMENSION OF *ADAB* IN ISLAMIC SCHOLARSHIP; A REFLECTION ON CONTEMPORARY PRACTICES

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Abstract

Empire's embedded intellectuals is a term introduced by Prof. Hatem Bazian of University of California to describe intellectuals who are hard at work and engaged in research activities to serve what is good for the establishment's imperialism rather than humanity. A good number of American academic institutions and intellectuals, he argued, are committed in military projects to advance war efforts. A study by the University of Oxford in 2007 reported that in the Muslim world, the share of Muslims with higher education involved in world terror appears to be impressive: 60.1%. The study also underlines that graduates from the subject of engineering, medicine and Islamic studies are strongly overrepresented in the radical movements. Jihad in particular has been used as a justification to cross the ethical boundaries within Islamic scholarship. This alarming fact led to a question whether ethical principle has been completely forgotten from the scholastic philosophy in the modern world. Humanistic concern in classical Islamic education has been profoundly characterized by the Arabic term *Adab*. While it is loosely translated to the English word "ethics", it conveyed a wider meaning, particularly during the Abbāsid period, of the ethical, social, and intellectual message of humanity. This paper explores the concept of *Adab* derived from Islamic tradition and philosophy, and further debates its potential contribution in developing Muslim scholars' humane character and academic integrity.

Keywords: *Adab*, Islamic Ethic, Humane Character, Academic Integrity.

1. Issues in Ethical Use of Knowledge: A Global Concern.

In 2005 Muslim scholar Hatem Bazian delivered a critical speech reproving American Psychological Association (APA) for supporting Bush administrations' torture policy by advocating legal and ethical justification for the torture of prisoners in the post 9/11 war on terror [1]. The policy was widely reported to be authorized by the presidential executive order and legal memos of John Yoo, a professor of law at the University of California who is also the then deputy undersecretary for the Department of Justice.

In the speech, the term "empire's embedded intellectual" is introduced to explain intellectuals who are hard at work and engaged in (mostly academic institution based) research activities to serve what is good for the establishment's imperialism rather than humanity [2]. An embedded intellectual will operate within a defined governmental radius and research questions are almost impossible to be real or independent since knowledge is at the service of the funder's problem that they must help address. Bazian's speech sparked questions if there should be an ethical line drawn between the government and intellectual circle in general. More critically, has ethical principle been completely forgotten from the scholastic philosophy in the modern world?

Responding to several news coverage on American Psychological Association (APA)'s participation in Central Intelligence Agency (CIA) torture interrogation, president of APA Nadine Kaslow asserted that the association were outraged, saddened and pained that two psychologists were allegedly engaged in CIA's brutal interrogation methods and received approximately $81 million from perversion of psychological science [3]. Following the incident, US-based corporate law firm Sidley Austin, LLP released an independent review relating to APA ethics guidelines, national security interrogations and torture following the investigation. The review highlighted new

vocabulary of an old concern: embedded intellectuals.

> As APA governance considers what questions to address as part of this process, we note that our investigation has uncovered serious concerns about the ability of APA officials – and APA itself – to act independently from the presidential administration in power, and from powerful government agencies that provide the profession of psychology with very substantial benefits. And this is especially true of (US Department of Defense) DoD. In some ways, DoD is like a rich, powerful uncle to APA, helping it in important ways throughout APA's life. Acting independently of a benefactor like this is difficult [4].

Embedded intellectuals receiving compensation for personal advantage is not the only concern regarding ethical compliance in scientific and professional conduct. It is true that documented cases of researchers engaged in misconduct have been relatively few through these years. Still, given the APA case and other increasingly reported misconduct such as research fabrication, data misinterpretation, plagiarism, or forgery; these violations underscores a serious ethical problem within academia and intellectual circles in general.

From the religious perspective, issues regarding ethical use of knowledge is much more complicated as it involve not only mankind, but also the divine. A study by Abdul Rashid Moten on academic dishonesty and misconduct in the Muslim world revealed a disturbing fact that while many countries are taking steps to curb it, others tolerate it. Common (mis)understanding used to justify the latter approach is the logic that "…knowledge was not conceived as a commodity to be bought and sold but something created by God for the benefit of all [5]." Given the fact this misleading idea persists among Islamic academia unfold a sad truth that little has been done to end ignorance to the historical fact that even though Islamic knowledge was spread and passed down through memorization and oral transmission, careful method to verify its validity accompany the chain transmission of knowledge. In the study of *hadith* (Prophetic sayings), for example, identifying and examining each narrator's biography, intellectuality, and character are necessary for certain *hadith* to deserve the title of *shahih* or *genuine/authentic.*

An intriguing sociological study by Gambetta and Hertog on the dangerous misuse of knowledge in the Muslim World raised another serious concern among Muslim educators. The study reported in 2007 that the share of Muslims with higher education involved in world terror appears to be impressive: 60.1% [6]. It also underlines that graduates from the subject of engineering, medicine and Islamic studies are strongly overrepresented in the radical movements. Jihad in particular has been used as a justification to cross the ethical boundaries within Islamic scholarship. The result revealed a global phenomenon that many Islamic radicals are actually not economically dispossessed and often better educated than their peers. Obviously there are other significant contributing factors we need to consider such as social injustice, frustrated expectation and relative deprivation that play role in the case of the involvement of the educated radicals [7]. This finding, nevertheless, challenged the traditional optimistic view of the terrorism-nexus where education is expected to give positive impact on personal attitudes towards extremist ideologies and the legitimacy of violence, resulting in higher moral constraints associated with the use of violence.

Event/group	Total	With higher education	% higher education	Subject of edu. known	Engineers	% engineers **
WTC 1993	12	12	100	12	5	41.7
Bali	23	7	30.4	6	4	66.7
African embassies	16	7	43.8	7	3	42.9
September 11	25	17	68.0	14	8	57.1
Central al-Qaeda staff*	22	9	40.9	6	4	66.7
Core Arab cluster*	14	5	35.7	4	1	25
SE Asian cluster*	3	2	66.7	1	0	0
Maghreb Arab cluster*	9	7	77.8	7	3	42.9
Hamas	81	52	64.2	48	19	39.6
Palestian Islamic Jihad	17	8	47.1	8	1	12.5
Ibrahim sample	34	29	85.3	25	9	36.0
Jemaah Islamiah	31	6	19.4	6	5	83.3
Further sundry cases	39	34	87.2	34	16	47.1
Total	326	196	60.1	178	78	43.8

Table 1. Individuals with higher education, finished or unfinished

While many try to identify causes of ethical misconduct in the academic world such as; ambition for materialism, power, and fame [8], or psychopathy, unbridled ambitions, pressure for publication, competition for funding, and sheer sloppiness [9], later discussion on the involvement of skillful engineers and knowledgeable Islamic scholars in many radical activities invites Muslim academic community to consider the deprivation of humane character in Islamic scholarship. Behind all, notably in the period where the role of religion in humanity is being questioned, there has been a pervasive strive within the Muslim world for a certain practical approach to achieve a harmonious life between God, himself, and the society at large.

The general notion of noble character and moral responsibility is embodied in the term *adab* — a classical concept of unquestioned qualities that has been long time neglected. Most studies on Islamic ethic and character education to date has been heavily focusing on the role of faith and God's revelation as the primary source guiding the contemporary discourse on Islamic ethics. Despite the long and rich history of Islamic thought and civilization, there has been little reported research on how other important elements of Islamic thought such as Islamic philosophy is devoted to the discussion of ethics. This paper tries to fill the research gap by presenting the classical concept of *adab* and exploring the multiplicity of knowledge in Islam.

This paper addresses the academic worlds' longtime concern on whether ethical principle has been completely forgotten from the scholastic philosophy in the modern world. It further debates any potential contributions of *adab* in developing humane character and academic integrity. Due to its scope limitation, argumentation in this study may not apply to discourse outside the Islamic framework. By and large, this tittle is drawn largely from my current study on Muslim and Islamic education in the United States, hence the use of example taken. However, given the multiplicity of different ethical traditions shaping American experience and ethical values, it is impossible to impose a single legitimate ethical framework for ethical discourse in such plural society. Therefore, analysis in this paper rests on an attempt to examine how Islam thinks about Muslim education responsibility to construct global ethical conversation in the academic discourse and how we can learn from each other. After all, history showed how each of world's major ethical tradition such as Buddhism or Confucianism carries with it centuries of experience and examples from which we can always learn.

2. Discussion

2.1 *Adab*: its Virtue as Islamic Ideals

Before defining *Adab*, let us begin by clarifying that Islamic ethics today is framed by a diverse spectrum of interconnected ideals and interpretation of the many resources scattered throughout many Islamic major sources; the Quran, Prophetic tradition (as a model of behavior), *Kalam* (scholastic theology), *Fiqh* (jurisprudence), and also the works of *Sufism* (Islamic mysticism). Unlike other religion where religious community can be represented by institutional authorities, (Sunni) Muslims have no equivalent institutionalized authority to legislate single authorized Islamic norms. And due to its volitional characteristics, many significant ethical judgments are left up to individual conscience with the reference to major source [10]. Two of the most common references are the Quran and Sunnah (Prophetic tradition).

While *adab* is popularly translated into the English *character*, it carries much more that. Hunt Jannin elaborates the multiple meaning of the term in *The Pursuit of Learning in the Islamic World* [11]. In the modern Arabic, *adab* means "literature", but it also connotes a wide range of qualities — ethics, education, and upbringing, high moral principle and correct behavior, scholarship and knowledge, all at once. As a key concept in Medieval Islamic culture, *adab* improves one's culture of self-description through instruction and experience resulted in civility and becomes a means of achieving social goals. *Adab* requires trainings of knowledge in history, poetry, ideas, proverbs, parallels, precedents, and correct use of language. It is the social and intellectual currency of the elite and those who aspire to be part of it [12]. An *adib*, someone who practices *adab*, is considered by the society as the architects of civilization. On a larger spectrum, *adab* is inseparable from the community and society. Peter Brown provides an interesting example in *Moral Conduct and* Authority*: The Place of Adab in South Asian Islam* [13], that *adab* of eating are often coupled with; medical advice (if you eat when you are sated, the food will eat your heart and liver), social propriety (don't stretch your hand in front of others), and piety (eat with reverence of God over each mouthful). From the *adab* of eating, one learns to measure, be humble, and be responsible in his every deed: to himself, other people (society) and God. Brown emphasized

that what distinctive about the concept of *adab* as Muslim's concept of moral conduct is that its growth was the results of Muslim's historical experience as a dominant ruling minority in the world. In such a situation, the comprehensiveness and depth of the culture that guide the ruling elites would be of great importance. That is the reason why *adab*, mostly in the Sufi writing, is widely expressed in a varied literatures and often addressed to specific particular social groups such as the *adab* of kings, courtiers, of judges, physicians, or *mufti* (Muslim legal scholars).

The public discourse of *adab* is grounded in p hilosophical and moral language and concerns and represents a significant part of the cosmopolitan heritage of ethics in Islam. In classical pedagogical Islamic theory, *adab* is understood as the foundation of ethics and social structure [14]. The essential features of *adab* appear in a number of texts devoted to Islamic pedagogy. One of the most famous was *The Concept of Education In Islam* by Malaysian philosopher Syed Naquib al-Attas. Definition of *adab* in this paper is based onto his famous keynote address, *The Concept of Islamic Education* delivered at the "First World Conference on Muslim Education" in 1977. According to al-Attas, *adab* is: "… the discipline of body, mind, soul that assures the recognition and acknowledgement of one's proper place in relation to one's self, society, and community [15]". At-Attas' definition stresses two integrated components on its domain; the self and the others. On a personal level, *adab* stresses: *self-recognition* and *acknowledgement* of the proper i.e. the rights and the wrongs. The two characters reflect fundamental points that ethical norms are defined as the development of personal character involving the inner spiritual life in its fulfillment. According to al-Attas, Muslims defined human as *al-haywan al-natiq* (the rational animal) who possesses an inner faculty that formulates meaning, which involves judgment, discrimination, and classification which constitutes his rationality. In Islamic philosophy, this rational faculty is called *'aql.* The term *aql* is synonymous with *qalb* or *heart* in a sense that it is a spiritual substance that helps the rational soul to recognize and distinguish truth from falsehood. A very broad topic it may seem, this paper will take the most general understanding of *adab* as a proper knowledge and behavior in the total process though which an individual is educated, guided, and formed into a Muslim with noble character.

Like other intellectuals, Muslims scholars also complained about serious ethical problem of the educated Muslim and intellectual circles in general. For many Muslim philosophers who were concerned about action more than contemplation, a little right behavior (education, *adab*) is more needed than knowledge. Famous sufi as-Sari as-Saqati (in Rosenthal) supported the preference of other important attributions over knowledge arguing that "… knowledge may be said to be just one of four qualities needed in addition to behavior (*adab*), integrity (*amanah*), and modesty (*iffah*) [16]. The fact that now we question scholar's misuse of knowledge for fame and power raises a more serious concern in the Muslim world: ignorance. While there is no clear-cut solution to this matter, refinement and training of the character through Islamic education will be presented in the last section as a contribution to solution of this this debatable problem.

2.2 Knowledge in Islamic Scholarship

The very first word revealed to Prophet Muhammad was the imperative: *iqra* (اقرأ) or "read!" God's first command to humankind carry a fundamental message that active endeavor to seek knowledge is important in Islam. Reductionism in the key term "knowledge" could lead to the simplistic understanding drifting scholars away from the philosophical wisdom it bears. In the Quran, '*ilm* (علم) or *knowledge* and its derivatives such as *alim* (عالم) or *knowledgeable person* is one of the most repeated words throughout the book.

While arguing that attempting to define the concept of knowledge from the perspective of Islam is almost impossible due to its vast scope, Rosenthal managed to summarize a comprehensive Muslim definition of knowledge in (at least) twelve different characteristics derived from many classical Islamic works from Ibn Al-Arabi, Al-Ghazali, to Ibn Qayyim Al-Jawziyyah. For the purpose of this paper, only those related to the discussion of *Adab* are included. Rosenthal argued that Islamic theory of knowledge believed that English and other Western translation translation of '*ilm* as *knowledge*, falls short of expressing all the necessary aspect of the Arabic '*ilm.* Knowledge holds a general meaning of information about something while '*ilm* embraces a more complex term including theory, action, and education [17]. In many cases, the term *ma'rifah* (المعرفة) or *gnosis* can serve as a direct synonym of '*ilm* to explain knowledge. Gnosis itself is the common Greek for *knowledge*, signifying the involvement of a spirituality and insight within. This paper, therefore, argues that discussion of knowledge

held within Islamic framework should not rely only on intellectual aspect of humanity.

In *Knowledge Triumphant*, Rosenthal elaborates the fourfold concept of knowledge in Islam:

Firstly, knowledge is Islam. This traditionalist approach argues that all knowledge specifically came from the ultimate source *i.e.* Allah and must be only sought for His sake. For this reason, "true human knowledge should be equated with religious insight". The accumulated evidence that this equation should exist is quite persuasive. For example, QS 58:11 equates *'ilm* (translated into b*eing given knowledge* within the context) and *iman* (believing). Another Quranic passage also implies that knowledge is a necessary consequence of faith (The Quran, 2:4).

Unfortunately, those who only hold to this view tend to forcefully consider that only Islamic science is worth studying and other attributes of 'secular' knowledge is not considered as important and even against it. This, is of course contradicted to the fundamental principle of "knowledge is Islam" itself because if all knowledge comes only from God and is given to human being for His sake, then His being omnipresence in all knowledge will make a secular knowledge nonexistent. It also diminished human's rational faculty as a sensible and intelligible being. Rather than making the division of knowledge based the source, many Islamic scholars agree on classification based on how knowledge is acquired by human. The first category of knowledge is obtained through the direct revelation of the Quran. The Quran is the knowledge *par excellence* suffices for man's guidance and excellence. The second one is acquired through man's rational effort: speculation, observation, and research on his experience. While the first one refers to the objective truth, the second is necessary or human's understanding [18]. Regardless how it is revealed, both serve as man's guidance to inculcate goodness or justice as a believer, individual self, and integral part of the society.

Secondly, knowledge is light. Rosenthal clarifies this concept arguing that knowledge hold a spiritual essence that would be best understood when it is defined with the vocabulary of Sufism (Islamic mysticism). Sufism is the practice to find the pathway to God's love through direct personal experience with God. From the Sufi perspective, light served as a metaphor for knowledge provides guidance, as do wisdom and religious knowledge, for the knowledgeable to walk out from the darkness of ignorance. Quoting eminent Muslim sufi, al-Muhasibi (in Rosenthal) assured, "…the light of knowledge could only seen by the pious (*ahl at-tuqa*), just as the light of the day was useful only for those able to see, and not the blind [19]". The very goal of mysticism is self-knowledge or inner knowledge. This goal is affirmed by a *hadith* of the Prophet, "He who knows himself knows God" [20]. This is why knowledge about oneself is important for the self or *nafs* is one's biggest trap in the path to God. To be able to know one's own flaw and drawbacks is therefore a prerequisite before a Muslim wanting to seek knowledge of the others.

Thirdly, knowledge is thought. This stance is best understood as a philosophical approach as Rosenthal suggested, for it invites human's logic to be integrated in the philosophical antiquity of the Islamic world and knowledge. There has been a conflicting idea on the role of logic in Islamic scholarship. "For the unsophisticated reader of Quran, it was sufficient to assume that numerous explicit statement in the Holy book provided a satisfactory solution for the problems of the origins and character of knowledge" and "in short, logic, like other Greek science … was one of the means by which the true faith of pious believers could be undermined and Islam, perhaps eventually be destroyed [21]". But embattled as it was, logic always found its steadfast supporters such as Ibn Rushd, al-Farabi and al-Razi.

Logic, for its supporters, is the instrument for *'ilm,* the science of knowledge (*ilm al ilm*) and without it seeker of knowledge will be unable to distinguish right from wrong, truth from falsehood (Ibn 'Arabi in Rosenthal). According to Plato, the person undergoing education equates with the man of reason [22]. Logic, along with grammar and rhetoric, is therefore an essential characteristic of any education pertaining to the mind. The three, known as the *trivium*, and *the quadrivium* — geometry, arithmetic, astronomy and theory of music, became the cultural and educational program of the Renaissance known as liberal arts.

Finally, knowledge is society. The embodiment of knowledge into good deeds and proper action has been a subject of criticism of Muslim scholars of all time. *'Ilm* as compared to action or deeds (*amal*) is stated on every possible occasion. For instance, al-Ghazali said (in Rosenthal) that knowledge is the roots of roots and action can take on form only through knowledge. Action without knowledge, to many Muslim thinkers, is useless and no better than animals [23]. This analogy corresponds to the al-Attas' definition of human in Islam as a rationale animal. Recognition to the need for proper action

for the knowledgeable, according to al-Attas, elucidating the concept of education peculiar to Islam: education is to be defined as the recognition and acknowledgement, progressively instilled to a man, of the proper places of things in the order of creation, such that it leads to the recognition of God [24]. This major key concept is couched in *adab* as a discipline that assures recognition and acknowledgement of the right and proper condition in life. The condition of being in the proper place is what we called justice and *adab* serves as the method of knowing it.

As previously mentioned, Al-attas elaborates the concept of *adab* as the action to discipline mind and soul; the acquisition of the good qualities in order to perform the correct as against erroneous action; of right against wrong; and the preservation from disgrace. The emphasis on *adab* which includes *'amal* in education ensure that *'ilm* is being put to the good use of a person. And since society consists of people, cultivation of a good person will lead to the birth of a civilized society.

3. Towards a Humane Scholarship; Restoring *Adab* in Muslim Education

The loss of *adab* in scholarship endeavor, al-Attas argued, is a betrayal towards knowledge which presents general dilemma of: 1) confusion and error in knowledge; 2) further loss of *adab* in the community; 3) the rise of leaders who are not qualified for valid leadership and may bring the condition of injustice. This vicious circle and remedy must address its chief cause i.e. the loss of *adab* since no true knowledge can be achieved without the precondition of *adab*. This chain of effects lead education practitioner to reconsider the importance of pursuing knowledge the right way. With the abundant case of ethical misconduct involving the educated circle, it is not surprising that the situation resulted in the popular belief that education plays trivial no zero role in advocating deep rooted problem of the global society[25].

Corresponding to al-attas' concept of *adab*, Metcalf adds that the sense of ethical norms embodied in *adab* can be achieved through intellectual knowledge, spiritual cultivation, and training of correct behavior [26]. In modern context, where attending formal education is prerequisite, method and center of education has shifted from self or independent group studies in the library or mosque to collective and structured method of learning in formal educational institution. This, to some extent, has reduced the role of the self, family and the society at large in educating a person towards perfecting his noble character. Consequently, school takes ultimate role in this supposedly integral process of character education.

Miskawayh (d. 1030) is regarded as one of the most brilliant Islamic philosopher, particularly in the fields of education and human character, support the idea that education can actually do the role in so far as its main goals are; the formation of character, and the acquisition of good manners and ways of behavior. Influenced by Greek philosophy, Miskawayh defines character as "a state of the soul which causes it to perform its actions without thought or deliberation [27]". He stands in opposition to ancient views holding belief that character is set by the nature and therefore inalterable. He inclined to Aristotle who made it clear in his *Book of Ethics* that "a bad man may, by discipline, become good". Therefore, every character is subject to change. For Miskawayh, attainment of human's perfection is a lifelong process.

The first perfection is with respect to the other, or practical, or perfection as form to its matter. Virtuous action is important for a beginning without an end is wasted, while an end without a beginning is impossible. Miskawayh believes that the good, when it is still in the soul then it is a mere object, but when it is brought forth to actuality and becomes complete, it is perfection. With this respect, the role of educational institution should not be limited only to transfer of knowledge but also to train individual's own efforts to distinguished between what is right and wrong in the eye of God and common good. Lapidus supports the ideals that reason must prevail in the educational process, "… by reason, man may discern the truth, distinguished good from evil, and learn how to pursue good deeds and good thoughts … if he pursues reason, man may rise in the hierarchy of being the divine realm; if he falls prey to passion, he will be sucked in the vortex of animality [28]." Speaking on the rise of educated Muslim radicals, al-Attas contended that the loss of *adab* has sabotages authentic and creative intellectual efforts within the learning process which provides the breeding ground for the emergence of extremists who make ignorance their capital. The intelligent man should then seek virtue in his rational soul, examine the imperfections, and strive to remedy them to the extent of his capacity and efforts. Preference of reason over passion, receive a special attention to Miskaways arguing that in contrast to the opinion of the common mob, whom he referred as "the ignorant and degraded people", the second perfection lies on

the philosophical idea that human's happiness does not lie on sensual pleasures.

Following the cultivation of the rationale over proper judgment is the training of inner disposition, for perfection is not a matter of reasonable deeds but also inward quality. Happiness, to Miskawayh, is human ability to live happily in accordance with the requirement of the virtue. The knowledgeable, in Miskawayh's opinion, can reach this happiness through intellectual efforts, and make himself free from material things. Miskawayh (in Lapidus) adds, the proper food of the rational soul is knowledge, the acquisition of intelligible, the practice of veracity in one's opinion, the acceptance of truth no matter where or whom it may be, and the shunning of falsehood and lying whatever it may be [29]. In the world where materialism and consumerism is celebrated by the media and capitalist corporation, it is common to define a man's happiness by the amount of possession he has and how content he is with his possession. This drive for the love of material things allows truth to be compromised by the interest of the powerful. Intellectuals who fall on this category, has put his intellectual freedom at stake. Al-attas warn the danger of an intellectual's inability to balance the physical and spiritual realities of the world by underlining the subconscious threat of the weakening mental capacity and intelligence. Soon enough, deterioration, sadness and regret will appear in successive series [30].

One outstanding example of the contemporary Islamic education inculcating the notion of *adab* based on classical Islamic tradition is Zaytuna College. This first accredited Muslim liberal arts education in the US is known for its emphasis on the importance of logic on its curriculum. Student of Zaytuna will need to take three semesters of logic, arguing that it is important to develop Muslim scholars who are trained in the interpretative possibilities of any text (https://www.zaytuna.edu/academics). The college embraces the thought of Naquib al-Attas on the importance of *adab* as a fundamental element in Muslim education. Zaytuna's concept of *adab* includes decency, comportment, decorum, etiquette, manners, morals, propriety, and humaneness, as a means to acquire tools for lifelong learning. Zaytuna provides example that philosophical tradition is doubly significant: not only for its value in continuing and embracing classical Greek philosophy but also for its commitment to synthesizing Islam and philosophical thought. Its steady growth signifies the growing realization among Muslim to value their own heritage and celebrate the multiplicity feature of their tradition.

4. Conclusion

This paper provides none but one conclusion. Unethical misconduct by the knowledgeable does not necessarily corresponds to the lack of education. In the case of unethical misuse of knowledge in the Muslim world, the inclusion of *adab* as the foundation of character education is often neglected by the Muslim community. When perceived as the art to craft a civilized society, sign that *adab* is rooted in a certain community is the ability of its member to provide a proper judgment over his action in a complex situation. The simplest measurement of whether or not *adab* is deeply rooted in the society can be seen from their *adab* of eating. When a person has the capacity to provide proper judgment to himself, he will mind the nutritional content of what he consumes. His ability to conduct properly towards other can be seen if the food he consumed is produced ethically and does not violate other's beings right. His faith in God, above all, is what drives his motives to act properly — to please Him and serve Him rightly in the world for the eternal purpose of the hereafter. I do not think there is a single generic solution towards the problem of ethics and morality that would apply to all elements of Muslim society in this diverse world. This study therefore has not provided a systematic way on how *adab* should be restored in Muslim education in general, a sample of Zaytuna College in the US and their method of Muslim liberal arts is one small prove out of many other alternatives that each community can formulate their own method to restore *adab* in the system according to their interpretation to the local value and personal virtue.

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USING SPATIAL DATA ON INSTRUCTIONAL MEDIA

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Abstract

This paper aims to describe the development of media-based learning for learning spatial data integrated Social studies and contextual. Spatial data obtained from Google Maps combined with elevation data Shuttle Radar Topography Mission (SRTM) in order to obtain contextual information. Additional information from Google Earth to make a more concerted media presented on each content. Media development using ADDIE Model consists of five stages, namely, Analysis-Design-Develop-Implement-Evaluate. Applications used in developing ie, Global Mapper. The advantage is easy to use and able to read many types of file extensions. The next stage of the development of this medium is as basic data to make a diorama of 3D spatial data to be more integrated and contextual learning.

Keywords: Media, Spatial Data, Integrated, and Contextual

1. Introduction

The world will live in our children changed four times faster than in our schools (Willard Degget, 1992). The change is a result of the rapid technological developments are now reaching nearly all areas (Harfiyanto, et al, 2015). But the world of education tend to be slow to absorb and offset the development of technology. There are some schools that even digital technology still does not go at all so educators can not develop pedagogical competence. But there are also schools that have already purchased the latest learning technologies faced a low level of usage.

Technology in learning is an intermediary that facilitates the process of delivering information. The use of technology in learning proven to improve the achievement of learning outcomes (ICF, 2015).

Social studies learning gains characterized by a mix of geography, economics, history, and sociology. Geography is the basis of social studies lesson with her study of the characteristics of knowledge about space. Knowledge of space already owned by the learner as their initial stock of knowledge. Educators need only facilitate to increase their motivation to learn. Ames (1992) recommends that the class assignments must be meaningful and relevant to the lives of young people, so there is a perceived benefit in understanding the content. This can be achieved with good classroom management. One of them through the medium of learning kotekstual.

Social studies material characteristics described above is the basis that there should be media-based learning spatial data for an integrated and contextual learning. Spatial information obtained from Google Maps combined with elevation data Shuttle Radar Topography Mission in order to obtain contextual information. Additional information from Google Earth to make a more concerted media presented on each content. It is expected to present the knowledge of instructional media early and hooking up with a concept that will be built (Pentrich et al, 1993) can maintain good classroom climate (Nuthall, 1999).

2. Method

Media using ADDIE development model consisting of five stages, namely, Analysis-Design-Develop-Implement-Evaluate.
Applications used in developing ie, Global Mapper. The advantage is easy to use and able to read many types of file extensions. The next stage of the development of this medium is as basic data to make a diorama of 3D spatial data to be more integrated and contextual learning.

ADDIE emerged in the 1990s developed by Reiser and Mollenda. One function is to guide in building the infrastructure and effective learning, dynamic and performance support. This model uses five stages of development (Sukenda et al. 2013), namely:

2.1 Analysis

The analysis is the first step that must be done by a developer of learning. Kaye Shelton and George saltsman (2007) states that there are three segments to be analyzed, namely learners, learning, as well as the medium for conveying materials ajarnya. Steps in the analysis stage at least is: analyze the learners; determining

teaching materials; setting standards of competence to be achieved; and determines the media to be used.

2.2 Design

Design is based on what has been formulated in the analysis stage. Stages of the design is analogous to the manufacture of the syllabus. In the syllabus should contain contact information, learning objectives, attendance requirements, delays in policy work, the schedule of learning, guidance, communication tools, technology policy, as well as interface design for learning. The steps in this phase is to create a syllabus which includes: selecting a standard of competence which have been made in the analysis stage; define basic competencies; determine indicators of success; choose a form of assessment; specify the source or learning materials; implement learning strategies; create a storyboard; interface design;

2.3 Development

This stage is the stage of production where everything that has been made in the design stage to be real. Step-langah in this stage are: create learning objects such as text documents, animations, images, videos and so on; make any additional documents that support.

2.4 Implementation

At this stage of learning the system is ready for use by learners. The activities carried out in this stage is to prepare and market it to students.

2.5 Evaluation

Evaluation can be done in two forms namely formative and summative evaluation. Formative evaluation conducted during and in between these stages. The purpose of this evaluation is to improve learning systems that were created before the final version is applied. Summative evaluation is done after the final version is implemented and aims to assess the effectiveness of the overall learning. The questions that could be asked in the evaluation phase are: What is the purpose of learning achieved by learners ?; How do you feel the learners during the learning process? like or dislike?; Are there elements of learning that works well or not well ?; What should be improved ?; Whether the information or the message is quite clear and easy to understand ?; Whether learning interesting, important, and motivating?

3. Results

3.1 Analysis

Planning the use of effective learning media known by the term ASSURE (Analyze learner characteristic, State Objective, Select or modify media, Utilize, Require learner response, and Evaluate) (Smaldino , SE, Lowther , DL, & Russell, JD 2012). There are so many considerations in selecting instructional media (Ali, 2009). There are at least four things that need to be considered (Arsyad, 2005), namely: (1) source, (2) the making, (3) flexibility and (4) durability.

Social studies is very rich media sources. The surrounding environment is a place of learning for students. Bring directly into the field is a very fun and interesting in learning. But many weaknesses in learning in the field. Mastery of learners, time management, affordability and cost. If it is not prepared properly it is the worst impacts learning outcomes are not achieved. To overcome this there should be a medium capable of bringing about the phenomenon/facts/data field into the classroom.

If the phenomenon/facts/data used is that found around the learner, the learning will have a double impact (Purnomo, 2016). The impact is the achievement of learning objectives and learners are motivated. Contextual learning that will enhance their learning motivation.

For example in the social studies lesson on the theme of the market. The material chosen from the fact that there are around learners. Malang has a land area of ??about 1200 ha of rice fields. It is clearly impossible to meet the food needs of its population of 800,000. Therefore it is necessary to interact with other regions in order to meet food needs. Itnteraksi in the form of demand and supply. A meeting place called the demand and supply market.

Market location will be used as the material searched using the search engine Google Earth and presented using Global Mapper. Global Mapper software use in presenting the phenomenon/ facts/ data field into the classroom has many advantages. This device can serve it complete with spatial information. So that learners can see where it happened ?; what is going on around it either social or physical environment ?; and why is happening there?

Another advantage of Global Mapper software is able to read many file extensions making it easier for users to present the phenomenon/facts/data in the field from a variety of sources. Data updates are easily made content presented attract the attention of learners. The

novelty factor is one variable media can last a long time or can only be used a few times only.

3.2 Design

Design a learning plan from the analysis of material characteristics or conditions of learners. Here are the results of the draft presentation of the material on the market in social studies learning.

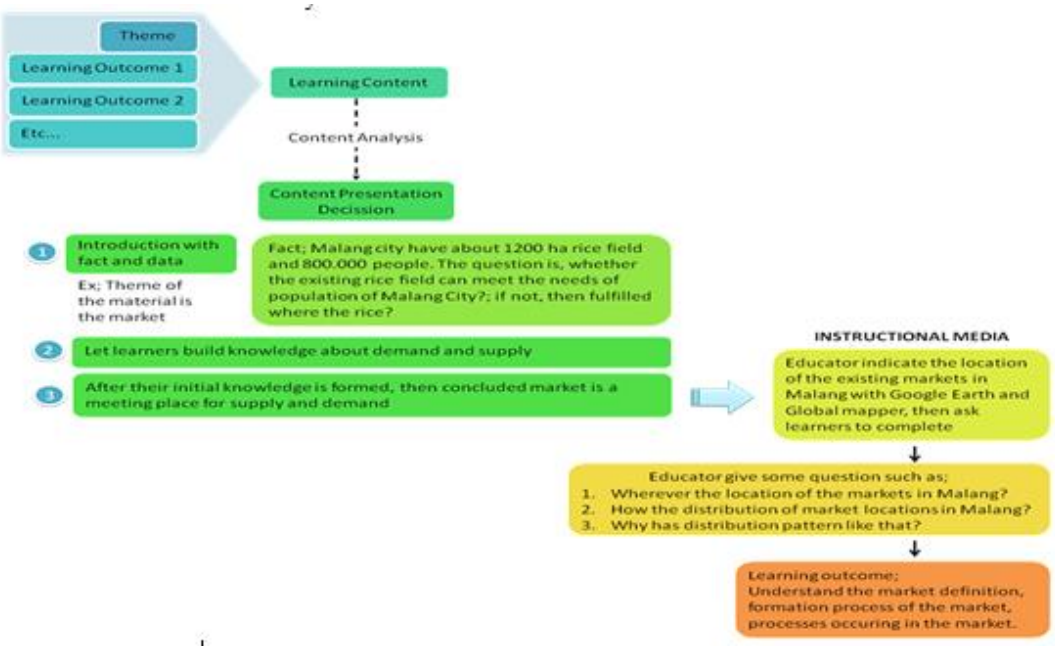

Figure 1. Design the application of spatial media based learning

3.3 Development

This stage begins with the search for spatial data distribution market locations in Malang using Google Earth. Deliberately incomplete data sought and used as a learning task to educate participants to complete it. The available data is presented using Global Mapper. Its function is to visualize the distribution of market location. Some locations are important given the link for additional information.

Figure 2. Development of spatial data-based instructional media

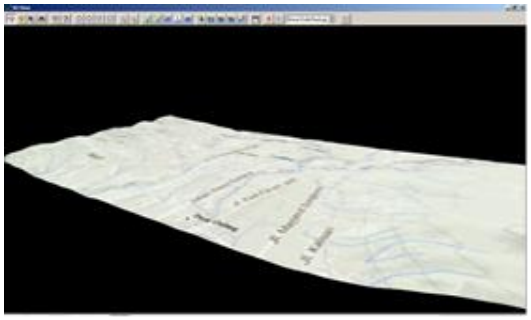

Figure 3. Display social studies media with the theme of spatial data market

3.4 Implementation

Implementation is done in one class test. With the same theme they were asked to identify the location of the distribution market in Malang. After exhaustive students were asked to provide a description of each of the markets that they find, such as the Tower Market fruit and vegetable wholesale market.

Implementation is done to measure the extent to which these media can increase the motivation of learners. Measurement of motivation includes three aspects, namely (1) the option to engage in tasks, (2) the level of involvement in the task, and (3) a willingness to stick to the task. All that includes behavioral indicators of motivation. Tyson, Venville, Harrison, and Treagust (1997) supports this view.

3.5 Evaluation

Evaluation of this through the development of learner motivation observed during the study. Motivation analyzed using an interactive model analysis (interactive models of analysis) developed by Miles and Huberman. This interactive model focuses on three component.

The first data reduction, ie the process of selecting, focusing, simplifying and abstracting data from various data sources, for example from field notes, documents, archives and so on. Further reinforce the process, shortening, discard unnecessary, determine the focus and organize the data so that conclusions can be made. Second, data presentation, such as assembling data and present it properly to make it more easily understood. Presentation can be in the form of a matrix, drawings/schematics, network, tables and so on. Third, draw conclusions/verification, the initial conclusion still not strong, open and skeptical.

The final conclusion is done after data collection ended. Verification is obtained through the process of negotiation/consensus between subjects, discussions with colleagues, checking data between the members. Overall this section is not a separate section, but is an integral and interrelated (Miles and Huberman, 1992). Learn scheme qualitative data analysis techniques can be seen in the following figure.

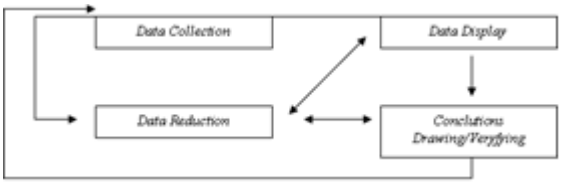

Figure 4. Interactive Data Analysis Model of Miles and Huberman (Miles & Huberman, 1992)

4. Discussion

The results of the validation study media show results very valid. Validation is done by experts in accordance with the field include scientific content and language.

Table 1 . The results of the validation study media by experts

Media	Ideal Score	Validator				Mean
		1	2	3	4	
Lesson Plan	60	55	55	56	58	56
Instructional Design	80	77	76	78	79	77,5

After learning media is validated by experts, then conducted tests on a limited group. The results will be used as consideration repairs and improvements. From the test results concluded that the media developed can improve and keep learners motivated for learning.

From the measurement results found that 38 of 40 students motivated for learning.

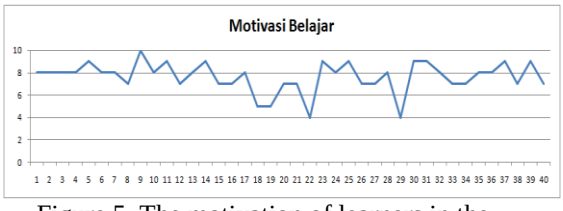

Figure 5. The motivation of learners in the classroom trials

Media Learning developed aims to increase the motivation of learners. Motivation has been defined as "an internal state that activates, guides and maintains behavior" (Green, 2002). From the educational standpoint, the term "motivation" can apply to any process that activate and maintain learning behavior.

First, the motivation has been described in terms of "extrinsic" and "intrinsic". Ryan and Deci, et al. (2001) defined in the following way: "... Intrinsic motivation refers to doing something of interest or pleasure, and extrinsic motivation ... refers to doing something because they expect appreciation for the results do". Therefore extrinsic motivation focuses on external factors and the individual tasks, such as awards, honors, privileges, or attention. For example, educators can give students a sticker for work already completed. On the other hand, intrinsic motivation is directly related to the task being performed. According to the theory of intrinsic motivation, a person feels happy when learning something new or succeed in challenging task. This creates a feeling of confidence and mastery of self-reinforcing, so that students will be more inclined to engage in learning activities in the future. Intrinsic motivation is generally considered to be more effective in promoting learning and achievement (Deci et al., 2001).

Lepper and Hodell (1989) suggested that intrinsic motivation can be improved in the classroom by providing challenge, curiosity, fantasy, and control. Challenge refers to the level of difficulty that will allow learners to experience a sense of mastery and competence when they succeeded. The level can vary the challenges presented in the form of duties of learners for learners in accordance with their capabilities, but Stipek (2002) argues that these differences can be compensated by allowing them to work at their own pace, or who finish early. Intrinsic motivation can also be enhanced with the activities that take advantage of the imagination and fantasy, because it allows them to step out of real life and make comparisons to real life.

Value expectations with regard to assessment of students about their expectations of success and usefulness of content (Wigfield & Eccles, 2000). Hope is the belief learners about the ability and chances of success in carrying out their specific task, while the value assignment refers to the perceived value of the material to be studied. Three kinds of value have been identified. "Top Value" is the extent to which tasks related to self-image. For example, students who consider themselves proficient in the field of SOCIAL STUDIES would like to confirm with social studies well. "Values ?Utility" regarding the usefulness of the task. For example, social studies can help to enter the Social studies program at the university. "Intrinsic Value" refers to the pleasure inherent in the task, and is closely associated with the construction of intrinsic motivation.

If motivation is a prerequisite for the development of knowledge, then educators should try to promote positive motivation as much as possible, and to do this they should ideally take advantage of a variety of motivational strategies. One of them using instructional media that is able to increase motivation.

5. Conclusion

SOCIAL STUDIES-based instructional media development of spatial data using ADDIE very effective in improving and maintaining the motivation of learners. Development through five stages: analysis, design, development, implementation, and evaluation. Phase analysis is a preparatory stage of learning to identify the character of the material and presentation solutions. Stage design to produce a picture of how the learning scenarios implemented. Development stage of designing presentation materials by using Google Earth and Global Mapper. The final stage is an evaluation that measures the extent to which the effectiveness of the media developed.

The material presented is a phenomenon/facts /data that is around the learner. This opens the way knowledge is already owned by them and hooking up with a concept that will be built. Establish the concept of prior knowledge will increase confidence that they learn things that are useful in life. So that will be fun learning and increase motivation to learn in the future.

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A RESEARCH ABOUT PROFILES OF SOCIAL SCIENCES TEACHERS ON CLASS MANAGEMENT

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Abstract

In this study, it is aimed to prove the what is the profiles of social sciences teachers and if there is a siginificant discrepancy according to the variables of gender, age, profeesional seniority, aducational background and the organization where she works. In this study, the descriptive model is used in order to show the case. In this study quantitative data means is used. In this study the participant's knowledge gender, age, proffesional seniority, educational background and the organization where she works is developed by researcher who is aimed to gain 'Personal Data Form' and developed by Bosworth (1996) and adaptation in toTurkish by Akman & Umay (2007) Classroom management Profiles is used. The sample of this study is composed of 170 social science teachers who are working in offical secondary schools boundto Minister of Education in Van , İpekyolu,Edremit and Tuşba centers 2014-2015 Educational and Training Term. As a result of the study there is a relationship between classroom management profiles and gender of thesocial science teachers. The woman teacher's points is higher than man's. Another data that is obtained from the studyis , there is a relationship between the classroom management profiles and social sciences teachers's martial statüs.

Keywords: Class Management, Teacher, Social Science Teachers.

1. Introduction

Class management; is the management of human and time sources beneficially by infusing class rules to students, a branch of learning organisation, to form harmony essential environment with class rules. Moreover class management; is the organising the life in class as an orchestra by using factors such as organising sources, regulating the environment in an effective way, observing development of students and predicting students problems in advance (Lemlech, 1988, Cited in, Şanlı, 2015). Class management is based on teaching and classroom environment. Teacher uses his/her abilities in these two areas to achieve the class aims.

Teacher is the most important factor of class management. Providing a learning environment and classroom environment is the basic role of teacher in class. As an effective class manager; it is expected from teacher to prepare the classroom for education, determining classroom rules and infusing them to students, regulating the learning and urging students to show rational behaviours (Ağaoğlu, 2002).

When teacher provides the essential environment in classroom, he/she can try to performing learning targets and improving the students instead of wasting time (Macrae, 1998, Cited in, Şanlı, 2015). An effective class management; contains many knowledge and ability areas such as determining the classroom rules, improving them, leadership features of teacher, communication in classroom, motivation management, adjusting time in classroom, organising the classroom and creating learning environment. All these areas are cyclical and affect each other (Arı ve Saban, 1999).

There are many studies examining the class management profiles of teachers (Aluçdibi, Ekici, 2012; Ekici, 2004; Ekici, Aluçdibi, Öztürk, 2012; Kurt,2013). However, while scanning the literature it can be seen that there isn't studies on social sciences teachers' class management. Therefore, it is expected that data obtained from the study will enable to examine in a detailed way the profiles of social sciences teachers' working in public schools and contribute to practical application possibility to education precautions and new studies.

Aim of the study

The aim of this study is to examine the class management profiles of Social Studies teachers in terms of various variables.

Method

Descriptive method, in other words descriptive survey model, was used in this research. Descriptive method is a research approach that aims to explain past and present cases in their existing form (Karasar, 2008). Descriptive method aims to explain interactive relations of cases considering current cases' relations with past cases and conditions (Kaptan, 1998). Quantitative data collection tools were used in this study depending on research problem.

Population and sample

Social Studies teachers working in Van province form the population of this study. Randomly chosen 117 Social Studies teachers who work at public middle schools ministered by National Education Ministry in Ipekyolu, Tusba and Edremit districts of Van province form the sample group of this study.

Data collection

The data for this research was collected by researchers at public middle schools ministered by National Education Ministry between April, 20th, 2015- April, 30th, 2015 in the spring semester of 2014-2015 academic year. During data collection, it was reminded by researchers that the answers of teacher candidates' would be completely used for scientific purposes and identities of candidates would be kept confidential.

Data collection tool

In this research, "Class Management Profile Survey" developed by Boswerth (1996) and adapted to Turkish by Akman & Umay (2007) was used as data collection tool. The scale developed by Bosworth is a five-level likert-type scale, comprising four subcategories, i.e. authoritarian, authoritative, laissez-faire and indifferent, and a total of 12 questions. For whichever predefined profile a teacher received the highest score, she or he is supposed to have that given profile. Adapting the scale into Turkish, Akman and Umay (2007) conducted Principal Components Factor Analysis on the scale and found out that the scale – which originally has four subcategories – ended up with five dimensions. The Cronbach Alpha Reliability Coefficient of the scale is 0.408.

Data analysis

In the evaluation of quantitative data of this study, the data emerging from the analyses of SPSS statistical packet program was tabulated as frequency (frequency interval) and percentile by entering to SPSS 10.0 package program. T-test for independent samples and one-way analysis of variance (ANOVA) in parametric tests; and Tukey test in post-hoc tests were used as the data showed normal distribution. Significance level for statistical analysis was found to be .05.

2. The Result and Suggestions

As a result of the research, it was found that there is a relation between the class management profiles and Social Science teachers' genders. Female teachers have higher point average than male teachers. In literature it was not faced with any work related to Social Science teachers' classroom management. But when the literature is scanned, it was found that this research is inconsistent with the studies which the other branch teachers participated in. For example, it contradicts with Ekici,Aluçdibi and Öztürk (2012) studies. They identified that there is no meaningful statistical difference in point average of Biology teachers' classroom management profiles as a result of their research according to gender. However, it coinside with Ekici study (2004). It can be said that there are both same sides and different sides between the research and the study results in literature. Doing some research supported with qualitative datas is very important in terms of different perspectives on evaluating the result.

Another findings about this research is that there is a relation between Social Science teachers' classroom managements and the teachers' marital statuses. Marital status affects classroom management profile in favor of single teachers.

A similar finding is related to the age of the teacher. The results show us that there is a difference among teachers who are at the age of 24 and below and at the age of 25-35 and at the age of 36 and over and also a positive difference among teachers who are at the age of 24 and below.

As a result of the research, it was not found a meaningful relation between Social Science teachers' professional seniorities and their classroom management profiles. And this coinside with Ekici, Aluçdibi and Öztürk (2012) and Ekici (2004) studies. For example, when teachers' professional seniorities they use in classroom management profiles are analysed, it was identified that the teachers having higher professional seniorities have the lowest classroom management profile points.

According to this research we can suggest the followings:

- It can be analyzed and compared classroom management profiles of different branch teachers.
- Teachers should be supported to have positive classroom management profile.

- Teachers should be supported with inservice trainings on the subject of positive classroom management.
- Researchers can search sufficiency of different branch teachers' classroom management.
- To eliminate the difference between teacher groups and their classroom management skills, more inservice trainings should be organized.
- To develop teachers' skills and knowledge about classroom management, activities like courses,seminars,conferences etc. should be organized with cooperation between Ministry of Education and University.

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EXPLORATION AND EFFECTIVENESS OF BLACK BOX METHOD IN DEVELOPING EXPERIMENTAL OF VISUAL COMMUNICATION DESIGN LEARNING

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Abstract

Experimental of visual communication design became one of the courses deepening of visual communication design. In the process of learning of experimental courses visual communication design through the application of its methodology process. Design methods known and continually introduced applicability through three methods: Glass Box Method, Black Box Method, and Self Organization. Black Box Method is a method that is applied in the design of technical learning project designed to explore creative ideas, concept design, artistic technique, presentation of the artistic design and value of the message through the visual language. It led this study to test the effectiveness of the Black Box Method exploration activities in learning and development of learning through the experimental process of visual communication design. The other objective of the reaearch is to recommend the Black Box Method as an alternative method to increase the effectiveness of the process of learning development of Experimental visual communication design.

This is a qualitative research. Described the factual data findings reflectively regarding the learning process and the effectiveness of the Black Box Method found in the field. Purposive sampling was used to determe the subject of research, the instrument used in this study with the help of procedure method application process questionnaire, student worksheets, and the creation of visual communication design work to see the effectiveness of the method. Data collection procedures using a model of reflection (Reflection-in-Action) by Ralph (designing reflexively and intuitively). The degree of confidence (credibility) developed by Lexy J. Meleong is used to analyse the data through the process of checking the validity of the data.

The researchers hope the results of this study were able to do a test of the effectiveness of Black Box Method exploration activities in the learning process and the development of learning through experimental visual communication design process. The researchers tried to convey the results of research which recommended Black Box Method as an alternative method in increasing the effectiveness of the process of learning development of Experimental vidual communication design.

Key words: exploration, affectivity, *Black Box Method,* Learning Development, and Eksperimental visual communication design

1. Introduction

The purpose of the higher educational institutions, especially higher education set forth in Law No. 12 In 2012 is to build human faith and fear of God Almighty and the noble character, healthy, knowledgeable, skilled, creative, independent, skilled, competent, and cultured for the sake of the nation. Related to the educational purposes then all education stakeholders ideally develop the learning process and another aspects to improve the quality of student learning outcomes. The learning outcomes oriented to build awareness of learning, moral awareness through basic cultural values, and develop self intellectual pontention as an academic intellectual, scientist, and professional. In line with the goals of education, Ki Hajar Dewantara asserted that the purpose of education was to prepare and build quality of people through the aspect of the intellectual (IQ) and personal aspects (personality on EQ and SQ) development.

According to the statements above, the stategic instruments of the the provision of education are teaching and learning activities,

learning processes, application of methods of learning, leisure learning climate, and academic climate stability that prioritized to improve the competence of students both in hardskills and soft skills aspect that integrated with character education. The improvement and development needed commitment among educational institutions, government, student readiness and dedication of faculty synergistically.

The growth of the creative industries in Yogyakarta showed a significant progress through stakeholder support, vision and regulation in the declaration of the creative industriy year. The development of Experimental of Visual communication design course required the readiness of the students to take theoretical and practical knowledge. Then hardskills and soft skills development can be done by giving the right learning methodology. This course is a next step-course after taking basic courses such as Typography, Illustration, Graphic Design and Visual communication design (all four courses gave students the basic artistic visual communication and exploration). The courses train students in the selection of typefaces, colors, signs, and chose certain symbols that can present the world of creative ideas through visual communication materials.

In Experimental Visual communication design, students have priority to enrich the knowledge of design, the deepening of the technical aspects, explore creative and innovative ideas through the variety of design methods and think as a designer, and to provoke the power of the imagination to think out of the box. In the Black Box Method, students encouraged to sell the idea to present their creative ideas and artistic explorative design products through multi media presentation skills.

Design Method (Jones:1972), presented three focus in the design process, 1) the method of divergent, 2) the method of transformation, 3) the method of convergence, and then developed by Nate Burgos and Adam Kalish by adding two methods: 1) method of continuity and 2) methods of articulation. Jones saw these design methods in other ways, namely in the way of acting and thinking and designer groups by dividing in two ways: the traditional way and the modern way. The traditional way are (1) the designer as craftsman (method craft), (2) the designer as a draftsman (method of image), whereas the method of modern describes (1) the designer as a black box (method blak box), 2) the designer as a glass box (method glass box), 3) the designer as a processing system (programming), and 4) the designer as a design controller and assessor (design criteria analysis method).

Learning device has a major influence on the achievement of student learning outcomes. The development of learning tools is a set of processes or activities undertaken to produce a learning device based on the theory of development that has been there. Researchers want to review the effectiveness of a method through a study entitled "Exploration Black Box Method For Learning Development Experimental Visual communication design".

Formulation of the problem:

1. Is the creative exploration activities of Black Box Method can improve student learning motivation in learning Experimental visual communication design?
2. How creative exploration activities of Black Box Method enhance the creativity of students in the learning of Experimental visual communication design?
3. How can the effectiveness of student learning outcomes are achieved through creative exploration of the Black Box Method course on Experimental Design Visual Communication?
4. How effective the creative exploration of the Black Box Method can be used as a reference as the development of learning in the course Experimental Design Visual Communication?

2. Method

2.1 Types of Research

This study includes the qualitative research. This study aimed to determine the effectiveness of black box method refers to the working procedure design methods Christopher Jones with process models action (Reflection-in-Action) made by John Dewey and Ralph and technical problems found in the process of learning development courses experimental design communication visual.

2.2 Research Methodology

The method used is the experimental method. Solso & Maclin (2002) stated that the research experiment is a study in which found at least one variable that is manipulated to study the cause-effect relationships. Therefore, experimental research in close relation to test a hypothesis in order to find influence, relationships, and the differences imposed changes to the treatment group. To determine

(whether or not) there is a change in a state that strictly control then we need to be treated (treatment) and to look for a specific treatment effect against the other in a runaway condition (Sugiyono, 2010).

2.3 Determination of Research Subjects

Determining the subject of research was done by using purposive sampling taking selected, taken, and determined carefully with particular considerations (a sample taken from a student who has passed the course typography, graphic design and visual communication design). It was done to support the learning and mastery of graphic techniques so that students have similar capabilities before obtaining treatment of black box design method particularly in the subject of experimental visual communication design.

2.4 Instruments and Data Research

1. Motivation Questionnaire Sheet Through the Black Box Method.

The questionnaire was designed to know the motivation to learn and the level of enthusiasm in the learning process Experimental methods of visual communication design with Black Box Method. The data obtained will be used as an indicator of the positive impact of these methods and effective in the teaching-learning process or not.

2. Students' worksheets in creating Visual Communication Design arts

Preparation of students' worksheets were intended to provide an overview of procedures and methods of design applied in the process of creating the work visual communication design. Students' worksheet also served to determine the student's ability to absorb the design method in performing the procedure of making works that have aesthetic value, artistic, communicative, and quality. These instruments were then validated by an expert to be used as an instrument precise and measurable.

3. Study Evaluation Sheet

Instrumen evaluasi belajar disusun untuk dijadikan sebagai alat ukur karya visual communication design baik dari aspek gagasan, skill, maupun kreativitasnya. Instrumen tersebut diharapkan mampu mempresentasikan efektivitas *black box methode* sebagai upaya pengembangan pembelajaran Experimental visual communication design.

2.5 Data Collection Procedures

Data were obtained from interviews, observations of both the visual and gesture student work shown or caught by naked eye during the design process, and evaluate the results of the work produced after receiving treatment. A comprehensive data obtained by (1) giving a questionnaire to evaluate the response sheet, enthusiasm, and motivation of student learning through practice procedures black box method. (2) students' worksheets to determine the student's ability to absorb the design method in performing the procedure of making works that have aesthetic value, artistic, communicative, and quality. (3) Study Evaluation Techniques for measuring the success and effectiveness of black box method in the learning process of visual communication courses Experimental design.

2.6 data analysis

The process of data analysis in this study conducted using data analysis techniques and models McDonough McDonough (Cohen, Manion, dan Morrison, 2007: 108)

a. *Data analysis)*

Determined the effectiveness of black box ekspreimental learning method on visual communication design

b. *Data revision*

Determined aspects of ideas, techniques, artistic, cargo expression, aesthetic and value of the message on the work of visual communication design

c. *Data verification*

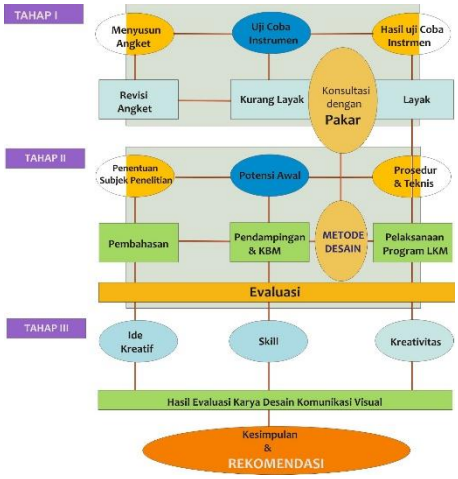
Obtained accurate research findings that can be made on the development of learning Ekspreimental vusial communication design

2.7 Validity of Data

Moleong (2000: 173-181) stated the validity of the data obtained by using degree of confidence (credibility) through examination of data (participation, persistence observation, triangulation, peer checking, the adequacy of reference, the negative case studies, and checking members). Triangulation served as a comparison against the data. Triangulation confirmed the data from one source to another source by comparing data result of learning.

2.8 Stages of Research

The process of implementation of this research was conducted through three stages that can be illustrated in the following scheme:



Picture 1. Diagran The The process of implementation of this research

3. Discussion

3.1 Creative exploration

Creative exploration is an act of digging, exploring, cultivating creativity, encountering the idea and arranging concept of the creation of new designs. Exploration tends to be a specific treatment that serves to explore the possibility of finding creative ideas, and creativity (as raw material for value creation in the presentation of art works of art or design). In visual communication design point of view, exploration associated with creative exploration and creativity (as they both affect each other). Creativity and exploratory actions became the subject matter of the development of creative industries both in the process of study and practice.

Creative industries triggered by the power of ideas and integrated design. Barnes Wallis (Whitfield, 1975) stated that a good design is entirely dependent on the mind alone. John Baker (Whitfield, 1975) stated that the integrated whole team this is a very exciting experience as part of the potential of creative work. Business potential in the field of creative industries remain open wide to be seized by businesses (especially businesses graphic design, advertising, craft industry).

Creative industries are business activities that focus on creative and innovative visual communication design which must be drawn from the lecture. Bryan Lawson in How Designers Think (2007: 156) states that creativity is an idea based on personal reactions to the idea itself. As corroborated De Bono (1976) which asserts that creativity is a value-laden and symbolizes the quality assessment and new. Exploration and creativity have an influence on the process of discovering something.

The learning method is said to be particularly effective if the instructional objectives can be achieved. Effectiveness refers to the ability to have a proper purpose or achieve its intended purpose. Effectiveness is also associated with the achievement of objectives or results obtained, the use or benefit of the results obtained, the power level function elements or components, as well as levels of user satisfaction. Effectiveness means trying to achieve goals that have been set in accordance with the needs required, also in accordance with the plan, either in the use of data, the means, nor the time or trying to perform certain activities both physical and non-physical to obtain maximum results both quantitatively and qualitative.

Exploration methods led to the achievement of the learning effectiveness to deliver students to achieve instructional objectives that have been set, provide a learning experience that is attractive, involving students actively thus supporting the achievement of instructional objectives, and have the means to support the learning process. Aspects of reviewing the results of student learning outcomes after the program of learning (cognitive, affective and psychomotor). Aspects of the process includes observations of student skills, motivation, response, collaboration, active participation, the level of difficulty in the use of media, time, and problem solving techniques were taken by students in the face of difficulties in teaching and learning process. Aspects of supporting facilities include classrooms, labs, instructional media and textbooks.

The learning method measures the level of success of a learning process. Criteria for effectiveness in this study refers to:

a. Mastery learning75% of students have obtained a score of 60 (Nurgana, 1985: 63)
b. The learning model is said to be statistically effective when student results showed a significant difference between before and after learning (significant gain)
c. The learning model is said to be effective if the model can increase student interest and motivation. Students learn in a state of pleasant. Effective learning activities can be achieved when the entire learning device can be met. The effectiveness of learning is influenced use of methods and techniques appropriate learning so as to motivate learning and improve student learning

outcomes

3.2 Black Box Method

Method is a structured and systematic effort to carry out a job in order to achieve certain goals. Bahasa Indonesia Pusat Bahasa (2008: 320) identifies the word method as a way of, design, style, road, rules, modus operandi, organization, design, program, procedure, process, system, ordinances and certain tricks.

Black box method is a method of intuitive thinking or imagining. The main characteristics of black box method are:

1) Target design is not determined exactly and can be changed with minds of designers as well as additional data input
2) The decision specified by the designer in the last data input on this matter, as well as input from other cases similar or equivalent (analogy), plus a self-experience designer of the input itself
3) The decision of the designer can be retrieved more quickly but is random, using prevalence (temporarily) the applicable public or otherwise to accommodate and follow the will of the people
4) Designer digests or manipulates the image that represents the structure of the overall problem. Then, with out of the box-way he rendered complex problems into simple and at the same time generate problem solving (leap of insight)

Picture 2. Brainstorming design Procces

In the black box method, a designer will be directed to have a lot of experience and references, and a sharp thought (the speed of thought, flexibility of thinking and originality think). The steps of thinking of a designer in the black box method include analogies, applications, speculation and intuition.

Black Box Method is a modern way of thinking that explores the power of inspiration and intuition to find creative ideas. There are several ways of doing the design process; The Rational Model, Reflection-in-Action, and Action Centric Perspective.

Picture 3. Brainstorming idea & visual form in design Procces

Reflective and intuitive design them to be contrary to a rational pattern, which is based on the habits and goals that have been set. John Dewey in Ralph (2010: 139) stated there is a real difference between routine actions with reflective action. According to Dewey, routine actions are caused by factors such as tradition, customs and authority and institutional definitions and expectations. Design and explain something with Reflection lies in how and

feeling, while the rational aspect lies in the explanation. Boud, Keogh and Walker (1985: 43) showed the reflection can produce something more extensive and focused. Reflection is an important human activity which refers to their own experiences and thoughts through a process of reflection and evaluation; he said it was an important experience in learning and work.

Centric Perspective Action is a set of interrelated concepts. The results of field research and reference a designer used as process design considerations rationally predictable with empirical action, and this depends on the complexity and size of design complexity faced by designers.

Jones in his book Design Method (1972), presented three focus in the design process that is divergent, transformation, and convergence. Then Nate Burgos and Adam Kalish added two other methods; continuity and Articulation.

Design Method	Development of Chritopher Jones' Design method			
General	Traditional		Modern	
Action Method	Craft	Test (trial & error) Evolution of Craft	Black Box Method	Inspiration Idea
Action-rational method	Picture	Sketch Concept Detail	Glass Box Method	Brainstorming Synectic Design concept
Rational Method			Desainer as a processing system	Programing
			Desainer as an accessor	Single and multi criteria

Picture 4. Development of the Jones Method

Jones saw it in another way, the traditional way and the modern way. The traditional way include 1) designer as craftsman (method craft) and 2) Designer as a draftsman. While modern methods include 1) Designer as a black box (black box method), 2) Designer as a glass box (glass box method), 3) Designer as a processing system (programming), and 4) Designer as a design controller and assessor.The main thing in the Black Box Method is a process of thinking through the free exchange of ideas are then transformed systematically. The thought process can also be made synthetically by studying the problems as bait, then analogized systematically.

3.3 C. Learning process and development

Learning device has a major influence on the achievement of student learning outcomes. The development of learning tools is a set of processes or activities undertaken to generate learning device in accordance with existing development theory. The development is based on two goals: (1) development for a prototype product, (2) the formulation of methodological suggestions for designing and evaluating a prototype.

The study is the development of a systematic review of the planning, development and evaluation of programs, processes and learning products that must meet the criteria of validity, the practicalities and effectiveness. A product or program is said to be valid if it is able to reflect state-of-the-art knowledge. It is being touted as the validity of the content; while components consistent product called construct validity. Furthermore, a product is said to be practical if the product is usable. Then, a product said to be effective if it can deliver results in accordance with the objectives set by the developer.

In general, instructional design models can be classified into class-oriented model, the model system-oriented, product-oriented model, the model of procedural and circular models. Model-oriented classes are usually devoted to design learning micro level (class) is only done in two hours or more lessons. (Source: http://rasifirdani.blogspot.com/2013/03/ various model-development-perangkat.html).

Model development of ITS is made to the design of learning as the chart below: Broadly speaking, the development model ITS follow the patterns and cycles of development that includes: (1) the formulation of objectives, (2) development of evaluation tools, (3) learning activities, (4) development program activities, (5) the implementation of the development. Corresponding chart above, formulating objectives form the basis for the determination and formulation of learning evaluation tools and learning activities. The formulation of the learning activities more into basic development of the program of activities, which in turn is the implementation of the development. Results of the implementation would be evaluated, and then the evaluation results are used to revise the program development activities, the formulation of learning activities and evaluation tools.

(http://staff.uny.ac.id/sites/default/files/pengabdian/bambang-subali-dr/pengembangan-desain-pembelajaran-kontekstual-ppm-di-smp-tealrejo.pdf)

In principle, the development of learning is a management technique in the search for

problem solving instructional, therefore the development of learning should be developed in a systematic and systemic. There Are Some examples of instructional design models through Bela Model Banathy devices.

1. Formulate Objectives (formulate objectives), is to formulate a statement that says what we expected from learners to be done, it is known, and is perceived as a learning experience.
2. Develop Test (develop test) is in this stage developed assays to measure the objectives that have been formulated before, this test tool development should be based on objectives that have been formulated before, and used to determine the competence of what has been achieved learners and how levels can be mastered by the learner.
3. Analyzing Learning Activities (analyze learning task), is to formulate what should dipelajarisehingga can show the expected behavior. In this stage should be the characteristics of the initial capabilities of learners already be described by the instructor so there will be activities or processes that do learners is a process that has been dominated by learners before.
4. Instructional Systems Design (design system) that is in this step needs to consider alternatives and identify what should be done to ensure learners will master the activities that have been analyzed in the previous step.
5. Implement activities and test results (implement and test outp ut) which measures a system that has been designed or tested pre-designed learning before being implemented. Furthermore, from this activity will be obtained a description of the system that need to be refined.

Held Repair (change to improve), ie in this step did the feedback of the results obtained in the fifth step, the system is likely to change or improve learning systems.

3.4 Experimental of Visual Communication Design

Experimental visual communication design course on Arts Education department of UST Yogyakarta aims to make the students able to create communication plans through the visual language based on experimentation idea conceptually, technically artistic exploration, as well as aesthetic exploration. In the implementation of visual communication lecture Experimental design should be a balance between the introduction to the study of theory with practice, so that the learning activities of students should be first introduced to how the work of a good design, creative, unique, and ideal. It can be used as an important reference for students to examine all existing systems on the idea, conceptual, and procedures through the development of the sensitivity of the selection of typefaces, colors, signs, and chose certain symbols that may be present creativity through visual communication materials.

Students positioned as an aspiring graphic designer so that learning takes precedence over design knowledge enrichment, deepening of the technical aspects, studying the creative and innovative ideas through a variety of design methods and thinking as a designer, and to provoke the power of the imagination to think out of the box. Introducing and applying various methods of design through experimental processes (one of which is the Black Box Method).

1. Process of design

In general the design process starts from pre-design, process, and post design. A designer make the process of designing, planning and carrying out the setting information, information materials, and messages komunikas. The design process includes two aspects of cognitive and practical. Design seeks to find the most suitable representation to communicate some specific information.Final design is the result of any particular design process, such as processes, products, services, and systems. Lexivisual, audiovisual, and based on the representation multivisual different design process.

2. Area of Design

Design covers various aspects of human life. Clothing, architectural design, ceramic design, communication design, costume design, craft design, document design, editorial design, engineering design, environmental design, exhibition design, fashion design, furniture design, graphic design, image design, industrial design, information design, design instruction, instructional message design, interaction design, interior design, landscape design, manufacturing design, mechanical design, ornate design, package design, pattern design, poster design, presentation design, product design, service design, text design, and textile design.

3. Design Levels

Levels of design include project design, process design, tool design, product design, and

system design. Cover design perspective view as: the level of theory, manual level, the manufacturing level (fabrication), and the level of design users.

4. Final Design

The final design, or simply design, is the result of any design process. In this information age we have a growing need for a learning-based computer, the computer interface, directories, educational materials, exhibits, forms, graphic symbols, hypertext system, teaching materials, instructional materials, lists, maintenance information, manuals, maps, multimedia products , nonfiction books, online help to manage computer-based systems, plans, procedural assistance, product description, public information systems in hospitals, and museums.This course as the course continued after taking basic courses Typography, Illustration, Graphic Design, and visual communication design.

Picture 5. Application Sign Board & Marchandise

Picture 6. Applicative Calender Design

4. Conclusion

The results of this study indicate that the application of the Black Box Method in the learning process of the Experimental of Visual Communication Design give significant influences on the effectiveness and student learning achievement. It can be concluded that:

1. Black Box Method can improve student learning motivation. It can be seen from the students' learning behavioral changes increasingly and a conducive learning atmosphere throughout the learning activity.
2. Black Box Method improve students' creativity. Achievements obtained relatively increased student and can spontaneously expressed their creative ideas.
3. The effectiveness of student learning outcomes can be achieved through a process of creative exploration of the Black Box Method through exploration sessions and assignment creation coorporate design identity for example.
4. In general, the results showed an increase in effective learning outcomes through creative exploration activities Black Box Method so it can serve as a reference for the development of learning in the subject of Experimental of Visual Communication Design.

DEDICATION

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A STUDY ON TEACHER CANDIDATES' ATTITUDES TOWARDS MOBILE LEARNING IN TEACHING AND LEARNING ENVIRONMENT

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Abstract

Mobile technology is developing and becomes more and more popular in recent years. Soon mobile technologies will be the biggest part of the education so that the curriculums will be designed for this and mobile learning technologies will be more useful to develop different learning environments. In this study, role of mobile learning, mobile based education is discussed. This study also tries to indicate some possible views that contribute to M-learning and also the advantages of mobile learning for the teachers in the classroom. The study tries to show prospective teachers perceptions towards mobile learning and its benefits. Firstly study was conducted at Yuzuncu Yıl University involving 468 candidates teachers from different departments and all participants are third graders from education faculty. Next some demographic questions and m-learning scale used and the results showed that the use of mobile devices have both positive effects on learning and teaching. Finally some problems and limitations about mobile device usage were exposed the use of mobile devices were exposed. Prospective teacher's view towards m-learning devices in all subscales differs significantly according to departments.

Keywords: M-learning, mobile technology, behaviors, digital classes.

1. Introduction

It can be seen today that the fast growing mobile learning has started to be used in many areas of our lives. Different learning methods are developed through the digital revolution and new technologies which are experienced throughout the world. The mobile based learning is used more intense day by day by the adults and employees as much as by the children and students within the digital environment. These new technologies reveal different learning opportunities competing with the traditional schools (Collins & Halverson, 2009, 1)[1]. People can receive training outside the school everywhere they want for example at home, in the libraries, internet cafes, and workplaces however and whenever they want.

The term mobile suggest both the motion state of the individuals as well as the portability of the devices. The mobile learning experiences inside and outside the classroom are emphasized due to the mobility, portability and interaction with the device (Hockly, 2013)[2].In this context the mobile learning is a new learning model that allows the use and access to the educational materials anywhere and anytime based on the use of the mobile technologies and internet (Hockly, 2013; Naismith, Lonsdale, Vavoula&Sharples, 2004; Sharples, Amedillo-Sanchez, Milrad&Vavoula, 2009)[3]. In other words, it is a training method realized through mobile technology that provides access to the educational content without being connected and advantage from the dynamically produces services and increases the efficiency of the productivity and performance by giving immediate answers to the individual requirements of the users (Keskin, 2010) [4].

This learning model which uses the mobile technology and allows learning anywhere and anytime supports the individual learning (a) determined by the learning speed of the students, situated learning (b) containing real context, collaborative learning (c) which realizes learning by working in groups and helping each other and the informal non-formal learning (d) approaches (Naismith &Corlett, 2006; Cheon, 2012) [3]. Detailed and descriptive learning network and tools related to the mobile learning environment were given in Figure 1.

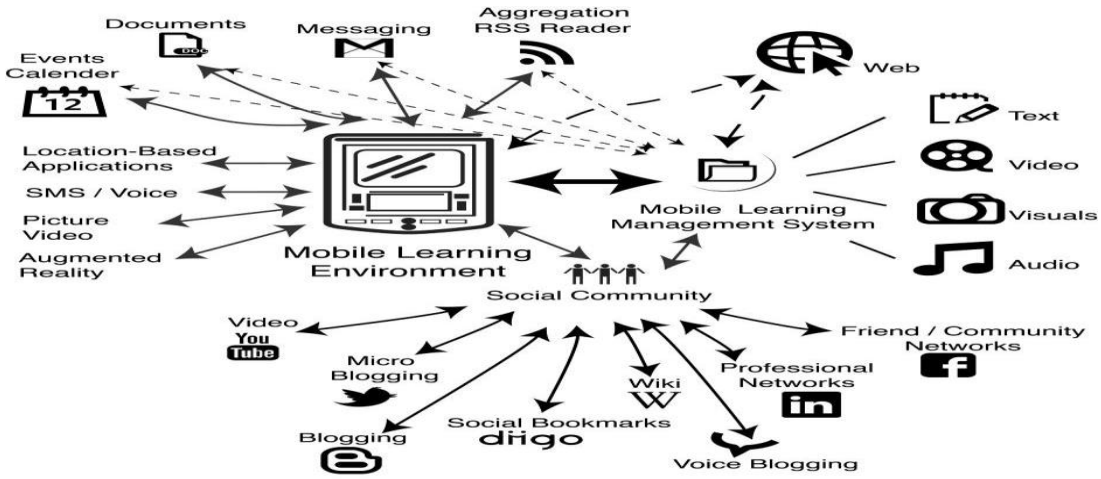

Figure 1. Mobile Learning Environment.

As it is seen in Figure 1. Due to the improvements in technology various alternatives are available to the users to provide learning at anytime and anywhere. Mobile phones, mobile computers, tablet computers, notebooks, video players, MP3 players, game consoles and digital books are among the tools that support the mobile learning. The computer- assisted learning environment has emerged recently and education was moved to the internet environment with the improvement of the internet network (www.wikipedia.org) [5].

According to "Meister, Jeanne, Willyerd&Karie (2011) [6]" the advantages of using mobile learning in the education are the followings in terms of the teachers and students: (1) *Availability and flexibility.* The mobile learning can be accessed anytime and anywhere, at the moment when something is needed to be learnt, and the learning is realized not in theory but at its place. (2) *Learning rule.* The ability that mobile learning can be accessed at any time allows the learners to manage their own learning processes. (3) *Evaluating dead time.* For example the learning can be realized while waiting for the service bus, during the breaks or even while eating in the cafeteria. (4*) Compliance with the different learning styles.* The learning styles brings along many eases for the different students. (5) *The improvement of the social learning.* The SMS reminders, information sharing, question forums, phone calls and the use of mobile devices increase the interaction between the teachers and students. (6) *Correcting mistakes.* It ensures the correction of the mistakes by accessing the incorrect or forgotten information quickly. (7) *Increase in the persistency of the information.* The brief information notes that are transferred in series or the exams and homework performed in the mobile environment help to keep the learned lessons in mind and increase the likelihood of success when they are used among the other training activities.(8) *Usability.* The mobile learning applications prepared by using mobile tools are available for many different devices in many different platforms. Consequently, the different approaches of the mobile learning and its different learning experiences make learning attractive for the students. No doubt that this creates a unique opportunity in the field of education.

The rapid developments in the mobile technology could not be considered independently from education, therefore the mobile technologies has started to be used in the field of education rapidly. According to "Traxle (2009) [7]" mobile teaching which was considered as an alternative for the traditional teaching first, could be used as the complementary of the traditional education with

time and it was seen to reveal many successful results. SRI International Research Institution revealed that 90 % of the teachers using mobile technologies in 2003 thought that

these technologies contributed positively to the learning of the students. M-learning gives possibility to personalize the education given to the students. For example, a school in the USA established a paperless classroom. Additional help is provided for those who want to use technology for teaching and for those whose second language is English (www.paperlessclassroom.org). In Korea which is known as one of the leading mobile learning countries, students can download their lectures to their portable computers since 2004. Intensive works are carried out in different countries on the issue of ensuring the wide use of these technologies in the education in the next decade. In Turkey great strides have been made with the Fatih project which has been started with large expenditures in order to create an infrastructure on this issue.

Purpose. Mobile technologies have started to be used also in education as well as in all other areas. When considering all these developments the different educational environments were forced to run by taking advantage of these innovations (Savill-Smith, Attewell& Stead, 2006[8]; Chinnery,2006)[9].In order to use the mobile devices effectively in education the teachers are expected to have a positive attitude towards the integration of technology to education. In this context the aim of this research is to determine the attitudes of the teacher candidates towards the mobile learning (servers, smart phones, tablets, MP3 players and game consoles) and their opinions about the effects of mobile learning on the education and learning. The research focused on the impact of mobile technology on learning inside and outside the classroom. Answers were sought for the following questions in line with the overall aim of the research.

1. The mobile device usage rates of the candidate teachers, the aim of the use and the frequency of the use?
2. What are the teacher candidates' attitudes towards the mobile assisted learning?
3. Do the teacher candidates' attitudes towards the mobile assisted learning vary according to their gender and the department they are studying at?

2. Method

The research was carried out with the descriptive research method. In the study the attitudes of the teacher candidates attending the Education Faculty of the YüzüncüYıl University towards the mobile learning were analysed.

Participants.The universe of the research consisted of the teacher candidates attending the Education Faculty of the YüzüncüYıl University. The sample group consisted of 468 teacher candidates attending 3rd grade at the same faculty. The students were selected from different departments through the stratified sampling method. Information about the teacher candidates constituting the sample group was given in Table 1.

Table 1. The distribution of the teacher candidates according to the gender and their departments

Demographics	Category	f	%
Gender	Female	236	50,6
	Male	262	49.4
Departments	Science	50	10,7
	Primary school Teacher	38	8,1
	Arts	52	11,1
	Social Science	55	11,8
	ELT	38	8,1
	Nursery	56	12,0
	Turkish Language	36	7,7
	Physical Education	34	7,3
	Turkish Lang and Lit.	37	7,9
	Maths	35	7,5
	Music	37	7,9
	Total	468	100

Collection and Data Analysis.The research data was collected by using the M-learning attitude scale which was developed by Çelik (2013)[10]. The scale is a 21-point participation 5-Likert type scale consisting of attitude sentences. The scale consists of 4 factors: (1) advantages of M-learning, (2) limitations in M-learning, (3) usability in M-learning, (4) freedom

in M-learning. The total variance of the scale was 51,116% while the Cronbach's Alpha internal consistency coefficient was calculated to be 0,881. Descriptive statistics (frequency and percentage calculations) and parametric tests (t-test, Anova) was used during the analysis of the collected data.

Teacher candidates were asked questions to gather information about their use of mobile devices, their aim of use and frequency of use and the obtained findings were given in Table 2, Table 3 and Tabble 4.

3. Findings

Table 2. Information about the teacher candidates' use of internet and mobile device

	Yes		No	
	f	%	f	%
Do you use any of these smart phone, tablet etc. ?	459	98,1	9	1,9
Do you have internet on your Mobile device ?	415	88,7	53	11,3

As it was seen in Table 2 almost all of the teacher candidates were using mobile devices. The vast majority of them (88,68%) had internet connection on the mobile device.

Tablo 3. Information about teacher candidates mobile device usage purposes

	Lesson (homework-project-research)		Communication and social media (facebook-Twitter-chat)		Entertainment (Games-Music)		News (newspaper and articles)	
	f	%	f	%	f	%	f	%
What purpose do you use for mobile devices?	56	12	264	56,4	73	15,6	75	16

As it was seen in Table 3 the mobile devices of the teacher candidates are mostly used for social media (Facebook, Twitter). Very few of the teacher candidates used their mobile devices for homework, research or project.

Table 4. Information about the teacher candidates' frequency of using mobile devices

	Less than an hour		Between 1-3 hours		More than 3 hours	
	f	%	f	%	f	%
How often do you use your mobile device?	69	14,7	189	40,4	210	44,9

As it can be understood in Table 4, nearly half of the teacher candidates (44,9%) were using their mobile devices for more than three hours. The rate of those who used the devices for less than one hour was very low.

The results of descriptive statistics of the scale applied in relation of the teacher candidates' attitudes towards m-learning were shown in Table 5.

Table 5. Descriptive statistics regarding the teacher candidates' attitudes towards m-learning

	N	$\overline{X}$	ss
Advantages	468	3,25	,555
Usefulness	468	3,46	,815
Freedom	468	3,52	,924
Limitation	468	3,92	,530
TOTAL	468	3,27	,485

As it was seen in Table 5, the teacher candidates participating in the research had medium-level positive attitudes towards m-learning ($\overline{X}$ =3,27). The most positive attitude was observed at the dimension of freedom ($\overline{X}$ =3,52). It was followed by the dimension of usefulness ($\overline{X}$ =3,46). The attitudes of these two dimensions were highly positive. In other words, the opinion that m-learning provided freedom and usefulness was joint at a high level. The opinion that m-learning offered advantages was joint at a medium level ($\overline{X}$ =3,25). The limitation attitudes towards the mobile devices was found to be mid-positive ($\overline{X}$ =2,92).

The results of the analysis whether the attitudes of the students towards the mobile learning varied according to the gender and the department they were attending were given in Table 6 and Table 7.

Table 6. The results of the teacher candidates' attitudes towards m-learning according to the gender

Gender	N	$\overline{X}$	SS	t	p
Female	236	3.28	.461	1.71	.865
Male	232	3.27	.509		

According to the findings given in Table 6, according to the gender significant difference was not observed among the teacher candidates' attitudes towards m-learning. The male and female teacher candidates' attitudes towards m-learning were medium-level positive in a similar way.

Table 7. The results of the teacher candidates' attitude scale scores according to the department they were attending

Department	N	$\overline{X}$	SS
Fen- Matematik	85	3,33	,430
Basic Education	149	3,19	,497
Native Language	73	3,35	,051
Foreign Language	38	3,42	,074
Fine Arts- Phisical Education	123	3,24	,052

As it was shown in Table 7, the teacher As it was shown in Table 7, the teacher candidates' attitudes towards m-learning varied according to the department they were attending. This finding showed that the department which they were attending had significant impact on their attitudes towards mobile learning. Accordingly, those, who were studying at the field of basic education (pre-school teacher, classroom teacher, social studies teacher ($\overline{X}$ =3,19) tended to have more negative attitudes towards m-learning than those attending other areas. The teacher candidates attending the foreign language department (English teacher) had the most positive attitude towards m-learning ($\overline{X}$ =3,42). They were followed by the teacher candidates attending language department (Turkish language and literature) ($\overline{X}$ =3,35) and science –math department ($\overline{X}$ =3,33).

4. Discussion and Suggestions

The aim of this study was to find out the attitudes of teacher candidates receiving education at the faculty of education at YüzüncüYıl University towards mobile learning and mobile devices. We reached interesting findings about teacher candidates' use of mobile devices, their purposes and use frequency. Almost all teacher candidates use mobile devices and the majority of these have internet connection on their mobile devices. This can be explained with developing economy of Turkey, improving life standards in the country and thus changing life habits in parallel with fast-growing communication technology in the world. However, it cannot be said that mobile devices that became so common are utilized to support learning. Teacher candidates mostly use mobile

devices for social media (facebook, twitter). Few of teacher candidates use mobile devices for homeworks, projects or researches. This situation can be explained with changing life and communication habits of youngsters. Considering that mobile devices are used too long, this new life style can be regarded as a process increasing worries about the new generation getting more and more isolated and confined in the virtual world.

When evaluated generally, the attitudes of the participants towards mobile learning are above average. In other words, candidates have a positive attitude above average. This was found out by "Saraç(2014)'s [11]" case study whose aim was to determine the attitudes of instructional technology candidates towards m-learning as a new learning platform. Teacher candidates mostly had positive attitudes about freedom and practical usage of mobile devices. They also partially agreed that m-learning creates a limitation. It is understandable that teacher candidates put emphasis on the freedom in university education period when the freedom is an important value and efforts are made to reach it. Here, we face an important paradox that should be discussed about whether mobile devices give freedom or surfing in the internet and social media causes a lonely and passive life. However, when used for the courses; it is understandable that teacher candidates have a positive attitude towards m-learning supported by mobile devices considering that they reduce dependency on information sources like books and they provide an opportunity to reach information fast and freely.

It was found out that teacher candidates educated in the field of foreign language have the most positive attitude towards m-learning. Extra support in language learning and teaching provided by mobile devices and use in classroom environment may have an effect on the opinions of teacher candidates educated in this field. These findings are in accordance with the results of the study on the use of mobile devices in foreign language learning. For example, "Regan, Mabogunje, Nash and Licata (2000)[12]"and "Thornton and Houser (2005)[13]", in their studies, stated that there are positive effects of using mobile devices on foreign language learning. Also, it was found out that teacher candidates educated in the field of primary education have the most negative attitude towards m-learning. Primary education (preschool and primary school) includes the education of children at small ages. So, it can be argued that teacher candidates in this field have this kind of attitude based on the fact that use of mobile devices will be limited for the education of children who are their target audience.

In the study, it was found out that attitudes of teacher candidates towards mobile learning don't differ in genders. Although this finding was in accordance with some study results, it differed from some others. In the studies that stated the difference, it was found that men have a more positive attitude towards m-learning than women. Al-Fahad, 2009; Chase & Meghan, 2007[14];Barkatsas, 2007); Abouserie, Moss, &Barasi, 1992[15];Pektaş&Erkip, 2006[16]; Deniz, 2005[17].

In the near future, demand in web-supported education programs and mobile learning is expected to increase. That this process makes the individual free regarding time and place has an important effect. Besides, like all other innovations, the sense of wonder that new mobile devices arouses in individuals and a strong motivation for using these are also effective. It is really a freedom that the individual can start and stop learning process wherever and whenever he wants. Until the recent past, the internet connection by desktop computers and landlines wasn't able to offer a real freedom in terms of time and place independency. It was a limitation for people to need a large desktop computer and cables. From now on, it is inevitable for people to increasingly use devices that provide easy and wireless connection wherever they want.

In education, moving from classical environment concept to the modern and digital environment creates a positive potential both for learners and teachers. Innovations like mobile-assisted classrooms, electronic libraries and digital labs are the products of this process. It should be remembered that mobile learning is never the alternative of teaching. All these technologies are technological assistants that facilitate learning and motivation, open some doors for the teachers and make the old applications taking much time faster. On the other hand, prompting students to mobile devices poses the risk of creating asocial individuals addicted to technology. In this context, considering the opportunities and facilities of mobile-assisted learning and its risks together, it is vital to raise awareness in teachers and students regarding the balanced and controlled use of this advantage.

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