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**10th ADRI**  
International  
Multidisciplinary Conference  
3-5 Maret 2017 and Call for Paper

# PROCEEDING

**10th ADRI 2017  
International  
Multidisciplinary  
Conference and  
Call for Paper**



**Batam, 3-4 Maret 2017**



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Conference and Call for Paper,  
Batam, March 3-4, 2017**

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## PREFACE

Praise being said to Allah Almighty God for all the grace and guidance that has been given to us all, so the Proceedings of the 10th ADRI 2017 International Multidisciplinary Conference and Call for Papers Batam, March 3 - 4, 2017 can be realized. Proceedings contains a number of articles and research papers from lecturers, teachers, students, researchers and / or observer of the development of science and technology.

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[www.p-adri.or.id/prosiding/prosiding10batam](http://www.p-adri.or.id/prosiding/prosiding10batam).

Hopefully, these proceedings may give benefit to us all, for the development of science, technology, arts, culture, and sports. In addition, is also expected to be a reference for the nation and state-building efforts so that science and technology become a strong pillar in the face of the ASEAN Economic Community.

Lastly, there is no ivory that is not cracked. We are sorry if there are things that are less pleasing.

Thanks you very much.

Batam, March 3, 2017.

Publisher Manager of Perkumpulan Ahli & Dosen Republik Indonesia (ADRI),

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## Table Of Contents

Title	Page
Image Of Women In Figures Yasmin Ayu Works In The Novel Float Utami <i>Rerin Maulinda</i>	1
Mathematical Difficulties Learners in Solving Creative Thinking in The Geometry Ability <i>Depi Setialesmana</i>	5
Impact Analysis Of Cooperative Learning Model Application Type Two Stay Two Stray (Tsts) Toward Learning Outcomes Of Mathematics <i>Muhammad Nurhusain</i>	9
Do They Feeling Positive on Their Occupation? A Study of Psychological Well Being to Improve Lecturer Performance <i>Rezki Ashriyana Sulistiobudi and Megawati Batubara</i>	14
The Training of Giving Argument Towards Technical Peer Tutors <i>Ridhani, Ahmad</i>	18
Minimum Service Standards for Basic Education in Border Region <i>Samion and Yudi Darma</i>	21
The Development of Social Studies Learning and Assessment Materials Based on Local Potential for Secondary School <i>Dwi Atmono, Muhammad Rahmattullah, Sri Setiti</i>	28
Necessity of Education of Culture Values in a Global Perspective <i>Titin Setiartin and JojoNuryanto</i>	32
Teaching Competence of Teacher As An Intervening Variable in Intelligence Spiritual, Intellectual, And Psychomotor of The Religious Human Resources In SMPN 42 Batam <i>Chablullah Wibisono and Hidayat Hasbullah</i>	35
Student's Learning Obstacle Of Perimeter And Area Concept Of Parallelogram In Learning Mathematics At Junior High School <i>Nani Ratnaningsih</i>	42
The Effectiveness of Reading, Responding, & Writing Model in Teaching Writing Hortatory Exposition Text in Bahasa Indonesia <i>Asep Nurjamin</i>	48
The Influence Of Cooperative Learning Model Type Student Teams Achievement Division (Stad) Toward Learning Motivation And Student Learning Outcomes (Experimental studies in Entrepreneurship Learning Concepts At Class X SMK BINASWASTA Kuningan Regency) <i>Pupu Saeful Rahmat</i>	51
Increasing Teacher Ability Through Learning Process On Lesson Study Implementation Based Elementary School Teacher Group In Pontianak <i>Ahmad Yani T and Rahayu Apriliaswati</i>	56
What Makes A Successful Entrepreneur?A Comparative Study Between Students Who Succeed And Failed InEntrepreneurship Educational Program At University <i>Anissa Lestari Kadiyono and RezkiAshriyanaSulistiobudi</i>	61
The Impact Of Application Of Value Clarification Technique (Vct) Towards Ecoliteracy And Critical Thinking Skill Student Of Social Science In Primary School	67

<i>Dadang Iskandar, Deasy Rahmawati, and Acep Roni Hamdani</i> Student's Learning Obstacle of Perimeter and Area Concept of Parallelogram in Learning Mathematics at Junior High School <i>Nani Ratnaningsih</i>	74
Implementation Cryptography Data Encryption Standard (DES) And Triple Data Encryption Standard (3DES) Method In Communication System Based Near Field Communication (NFC) <i>Ratnadewi, Roy Pramono Adhie, Yonatan Hutama, Johnny Christian, and Denny Setiawan Wijaya</i>	80
Verification Image Of The Veins On The Back Palm With Modified Local Line Binary Pattern (Mllbp) And Histogram <i>Agus Prijono, Aan Darmawan Hangkawidjaja, and Ratnadewi</i>	85
Eco-centrism Paradigm In Design and Planning Of A Friendly City <i>Bhakti Alamsyah</i>	90
The Design of Expert System Application Using Backward Chaining Method to Diagnose Disorders in Diesel Power Plants (PLTD) in PT Semen Padang <i>Idwar and Hayatul Muttaqin</i>	94
Effect of Discipline and Facilities Working on Employee Productivity in. Bpr Gema Pesisir <i>Yusnaena and Rien Tonanda</i>	101
<i>Civil Law Review Of Completion Of Nonperforming Loans Revolving Loan Program National Urban Community Self Surabaya</i> <i>M. Roesli, Achmad Daeng GS, Odiak Rusdiadi, and M. Hidayat</i>	104
Work Engagement As A Predictor Of Lecturer's Performance <i>Megawati Batubara and Anissa Lestari Kadiyono</i>	109
The Local Government Policy In Border Area On The Education Rights Fulfilment For Person With Disabilities In North Kalimantan Province <i>Yahya Ahmad Zein, Arif Rohman, and Dewi Nurvianti</i>	113
Principle Pacta Sunt Servanda Relating To The Contract Due To International Business Law <i>Cindawati</i>	119
Juridical Analysis Of Leuser Ecosystem Area In Nanggroe Aceh Darussalam <i>Triono Eddy</i>	126
Does Total Quality Management As An Intervening Variable Have A Positive Effect On The Human Resources Quality <i>Samrin</i>	131
Association Career Women Parenting With Social Personal Development to Child of 2-5 Years <i>Feti Wulandari Ratna</i>	138
Organizational Commitment, Leadership and Work Productivity As Predictors Of Job Satisfaction and Its Effect on Quality of Revenue Department in Batam <i>Chablullah Wibisono and Januar Arif Kurniawan</i>	143
Democracy In Indonesia Constitutional Life <i>B Panji Gunawan</i>	152
Creative Economy Development Strategy For Economic Growth To Pontianak <i>Syarif Agussaid Alkadrie and Rully Subekti</i>	159

The Factors Affecting Stock Prices On Go Public Industry Company Listing Of Indonesia Stock Exchange (Food and Beverages, Pharmaceuticals and Consumer Goods)	167
<i>Benny Setia</i>	
An Analysis Of The Impact Of Service Quality, Price And Location On Customer Satisfaction (A Study of Herry Motor Sampit Workshop)	173
<i>Eddy Supramono</i>	
The Impact of Motivation and Compensation on Performance of Employee in pt. Mustika sembuluh kabupaten kotawaringin timur	178
<i>H.M. Thamrin Noor</i>	
Indonesia Economic Policy Package Volume 5: Could Impact to the Economy?	182
<i>Singagerda, FauraniSanti and Imanudin, Barry D'Amazo</i>	
Police And Public Image Satisfaction On Quality Of Service In Corner Driver's Licenseunit	189
<i>Asmara Indahingwati</i>	
Get Created To Work Quality Of Life, Commitment And Performance Of Arrears Collection Of Taxpayers In Samsat Mojokerto	194
<i>Asmara Indahingwati</i>	
Consumer Protection Arrangements Purchase Products Through E-Commerce	200
<i>Evi Purnamawati and Ardiana Hidayah</i>	
Reflection Income Smoothing Toward Market Response	204
<i>Noviansyah Rizal, Ratna Wijayanti Daniar Paramita</i>	
Financial Distress and Corporate Strategy for Manufacturing Sector in Indonesian Stock Exchange: An Empirical Analysis	208
<i>Aminullah Assagaf</i>	
The Impact Of The Work Discipline And Remuneration (Compensation) on The Performance Of Employees at H. Asan airport Operating Unit Office	218
<i>Ansita Christiana and Yuli Fitriani</i>	
The Correlation Health Education About HIV-Aids to Pregnant Toward HIV Check Interest (analytic studies in maternity out-patient clinic in pare government hospital kediri regency in 2016 year)	223
<i>Luluk Susiloningtyas</i>	
Organoleptic Characteristic of Frozen Beef on Different Thawing Methods	231
<i>Harapin Hafid, Astriana Napirah, Lisa Meliana, Nuraini and Inderawati</i>	
Effect Of Different Types Of Containers To Growth Rate And Survival Rate Of Manggabai (Glossogobius Giuris)	234
<i>Juliana and Yuniarti Koniyo</i>	
Study Of Minimum Wage, Level Of Education, Employment Opportunity, And Unemployment Educated : Empirical Study In Padang	238
<i>Erni Febrina Harahap</i>	
Study Population With Growth Allometri And Conditions Index Fish Of Kurau (Polynemus Taeniatus) Acquired In Bunyu Island Waters, North Borneo	242
<i>Gazali Salim and Pius Bae Kelen</i>	

# IMAGE OF WOMEN IN FIGURES YASMIN AYU WORKS IN THE NOVEL *float* UTAMI

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**Abstrak.** The form of images of women can be attributed to the physical, psychological, and social culture in life in society. In keeping with its image, women as individuals must play his part well as individuals, families and social communities. The image of women in the social aspects of simplified in two roles: as a family and the role of women in society woman. The interaction of the characters in the novel can be defined as a process of communication that occurs either between the individual figures, between individuals and groups, and among groups. Any form of interaction that occurs, will give birth to the view so that the objective character interaction will be revealed. When the view is revealed, it will be revealed the role of heroine in the interaction, for example, the role of mediator (intermediary) between the male characters and jobs. In this case the image of the woman described Yasmin character is a woman who is intelligent, knowledgeable, had a brilliant career, able to adapt well to anyone, bold, very manyayangi friends and colleagues. But behind all the positive things dirinnya, stored negative things known only to a handful of parties. One of them is forbidden relationship with Saman and its sexual fantasies.

Keywords: Image, Women, and Interactions

## I. INTRODUCTION

Born literary works to life, because it is in literature always talking about human beings and their relationship with life, be it between man and man, man and nature or the environment, and human and God.

In the history of mankind, the degree of women often under male. It can be observed from the traditions of the great religions of the world. Hindu tradition, for example linking the status of women in the social status of women is seen as giving the advantage to the husband in achieving the goal of life (dharma, artha, kama). Buddhist traditions regard women as beings who always depend on the part of men. In view of the Jews, the fall of man into sin caused by women, so that women predominantly male. Not to mention the traditions and interpretations of scripture were misinterpreted, and the dependence of women in terms of economic, psychological, and social make a doctrine that men over women.

The novel as a form of literary works will never be separated from the figures in it, be it a female figure and leaders of men. Patriarchal culture in the community was adopted in the novel, so as to create a female character that is always under male authority figure. View of male characters are so manifest in all shapes attitudes and actions that will give birth to a female character suffering.

Based on the feminist ideology that directs women to be aware on the subject of sexual identity and gender, women writers of the 2000s period of struggling to try to align the position of women and men. Patriarchal culture (the position of men over women) to have abolished by novelist of the 2000s (especially female writers).

The form of images of women can be attributed to the physical, psychological, social and cultural dwanitaalam women's life in the neighborhood. In keeping with its image,

women as individuals must play his part well as individuals, families and social communities. The image of women in the social aspects of simplified in two roles: as a family and the role of women in society woman.

The interaction of the characters in the novel can be defined as a process of communication that occurs either between the individual figures, between individuals and groups, and among groups. Any form of interaction that occurs, will give birth to the view so that the objective character interaction will be revealed. When the view is revealed, it will be revealed the role of heroine in the interaction, for example, the role of mediator (intermediary) between the male characters and jobs.

He said the world of social interaction can be defined as a human connection that results in a process that produces the effect of influencing the relationship remains and eventually allow the formation of the social structure. The result of the interaction is determined by the value and the meaning and interpretation given by the parties involved in the interaction. Social interaction is divided into three, namely the interaction between individuals, interactions between individuals and groups, interaction among groups with the group.

Interaction process according to Gillin Gillin and divided into interaction processes associative and dissociative interaction process. Associative interaction process consists of four special forms of cooperation, namely, accommodation, assimilation, and acculturation.

Cooperation is a joint effort between individuals-individuals or groups of people to achieve one or more objectives together.

Accommodations used in two meanings, namely to refer to a state and a process. As a condition, the accommodation means a fact the existence of a balance in the interaction between individuals and groups of people in connection with

the social norms and social values prevailing in society. As a process, accommodation refers to human efforts to defuse a conflict, namely the efforts to achieve stability.

Assimilation is a process to develop the same attitudes, which although sometimes emotional. Assimilation aims to achieve unity or at least achieve an integration within the organization so that the two groups were assimilated would eliminate the differences between them. Acculturation is the process of mixing or union between two or more cultures, so as to create a new cultural form that unites both parties are acculturated. While the process of dissociative interaction consists of three forms, namely competition, contravention, and conflict.

Competition is a social process when those individuals or groups of people who seek competitive advantage through the areas of life that at one time the center of attention of the public by attracting public attention or to sharpen existing prejudices, without using threats or

violence. Contravention is a form of social process which is of rivalry and conflict and characterized by symptoms of uncertainty about a person or a plan and hidden feelings of dislike, hatred or suspicion to one's personality. Conflict is a social process when those individuals or groups of people trying to meet their needs as well as threats or violence This paper aims to reveal the image of the characters in the novel Yasmin float. Beginning with Yasmin figures describe interaction with male figure or figures other women. And lastly Yasmin figures describe the image in terms of physical, psychological, social image, role and status as a woman in the neighborhood.

## II. RESULT AND DISCUSSION

### Interaction Yasmin and Saman

Interaction processes run Yasmin and Saman at first is a process of interaction between individuals and groups. Saman as individuals who lead a group of students (Yasmin, Cok, Laila, and Shakuntala) at the time they were in junior high. Such interactions are based on jobs and tasks, and after they graduated from high school then the interaction becomes stalled. This was evidenced by the following quote

"..... In the past it was a guy in junior high retreat director brothers ....." [1].

A few years later, Yasmin and Saman interaction. It was due to similarities job, Yasmin as well as a lawyer and activist as well as an activist Saman. The similarity in the work of making Yasmin and Saman frequent interaction, in addition to their common views make them continue to interact. Ha That was evidenced by the following quote.

"..... They meet again after many years. Saman has now become an activist, together with Yasmin, the lawyer and activist "[1].

Often they interact, common views, and also a sense of awe at the individual self, make Yasmin and Saman are involved in relationships based feeling. Besides other factors that make Yasmin related to Saman is boredom on her husband Luke were kept busy with his work. Thus the interaction that they do not solely based on the work alone, but also on the basis of feelings. This was evidenced by the quote below.

"... I understand if it then Yasmin fancied skinny guy since they are often involved. Therefore, her husband started to become bureaucrats BPPT is too calm and tender that would be boring Yasmin. I'm just bored with Luke, especially as he is every day meet. Last year, Saman hunted by the police and the army for being the mastermind of the riots in Medan. How he did not seem exotic in the eyes Yasmin? Poor, emaciated, dirty, and fugitive "[1].

On the run Saman abroad, of attraction between Yasmin and Saman proven, they do a relationship that should not be done because each had been bound; Yasmin and Saman already has a husband is a pastor. But either Yasmin or Saman not regret the act. Yasmin feels to be himself when dealing with Saman. Forms of interaction based on feelings strengthen interaction processes that run both. In addition to taking care of the job, Yasmin and Saman also interact to other things, that feeling. This was evidenced by the quote below.

"..... Saman, for years I've lived with that fantasy, without ever happen. Until the day I met you again. You revive my childhood imaginary long betrayed me "[1].

".... But when I tell Yasmin, turned him more excited. He said "I'll come menggung Laila trip. Poor her. Later his money runs out. Besides, I also need to some organizations there to find support for the democracy movement in Indonesia. "Immediately I was laughing and screaming," Hooray be a reason to be going out with Saman, here ye! "[1].

### Interaction Yasmin and float

Larung introduced to Yasmin equally combined demo will follow. There is a match between Yasmin and float, proved to them a few times conduct cooperation in the field of work. Further cooperation is making float involved in the movement and activists Yasmin, the thing that makes float is received at the Yasmin movement is due to the neatness float in the works. This was evidenced by the quote below.

"That's when she me introduce Yasmin. Apparently, then they match. After that, they make cooperation several times. The three of us became good friends "[1].

"... I can not. I'm happy with him, Cok. When I noticed that he was the person responsible. Hard to get so neat activists make their financial statements "[1].

Cooperation between Yasmin and float continues to perform well, until one day float linked by Yasmin told Saman. Saman and float interaction is the interaction of work. Float plan to create an underground printing while Saman The fundraising abroad. While the political climate in Indonesia heats up, many demonstrations and arrests of activists carried out by the New Order government. Yasmin hid three activists planned to be taken abroad. To get all three of these activists, float assigned to escort while Saman who will pick him up, but the plan was not running smoothly until they got caught.

Yasmin role in running Saman and provide jobs in America make Yasmin as a mediator. Yasmin shape made intercession is intercession to work. Not only that, by placing Saman and hired at Human Rights Watch means Yasmin Human Rights Watch has connected with the climate of democracy in Indonesia, even Southeast Asia

Yasmin action in the process of interaction with the male figure has removed the concept of patriarchy that has been inherent in a female character. Interaction processes that have been implemented to make Yasmin Yasmin as a subject who consciously act in accordance with his wishes without coercion based on feelings and social values. Yasmin with every movement participated fight for what is believed to be correct, even though he had to deal with the New Order government. What do Yasmin is a proof that the heroine could play a role in world politics.

#### Interaction Yasmin and Cok

Yasmin and Cok relationship started since they were in high school. Their friendship intertwined with Tala and Laila. This is evidenced in the following quote.

"When I was in high school, feels once he has a prima donna complex". [1].

"In fact, usually all four of us never knew each other secrets." [1]

Interactions between Yasmin and Cok being so close is very close to starting from the school level. In the past they were new to the world and seek their identity each.

Yasmin only tells about the secret affair with Cok. This is done so as not to offend his friend Laila

."Bahlan now, his affair with Saman only he admit me. Not in both our best friend, Laila or Shakuntala. [1].

"Secondly, I do not want to hurt Laila. He's really the same first love Saman. I do not want to seize a lover of people. [1] Interaction is based on the quote above that, Yasmin remained united and always menomor friendly relations rather than personal relationships

#### Citra People Yasmin

Social interaction undertaken female figures as well as forms of violence they experienced, will be able to help deduce how the image (the image of) a female character in the novel. The image of female figures can be interpreted as a picture of a female character that includes mental and spiritual attitude and behavior heroine in the novel. Overview of the female figures include an overview of the physical, psychological, and social factors are detailed as follows: female character education, social status, relationships, and the role of the heroine.

The image of female figures or representations of feminist literary heroine is one of the important part that must be disclosed. As we know that the image of a female character can not be separated from the socio-cultural realities of society. With the unfolding of the image of the heroine of gender injustice experienced by a female character will be revealed and it became the basis of a struggle to align and equalize male and female.

Yasmin figure in his behavior described as the good guy, you want to always look perfect, has a strong position, to love their fellow human beings, concerned with the problems of humanity, and hypocritical because they do not want to admit the affair.

People Yasmin described as having a physical is almost perfect. Beautiful face, slender and smooth-skinned. This was evidenced by the quote below.

"Yasmin Moningka is an impressive woman many men because their skin is clean and slender body "[1].

"Look at my friend Yasmin Moningka. His face was handsome, clean as a marble statue "[1].

The above quotation explains that Yasmin is a woman who has more beauty than her friends. No wonder, people are becoming interested in seeing the physical Yasmin.

Psychic Yasmin portrayed as a woman who is smart, knowledgeable, courageous, and always stood for the weak, although it is hypocritical. This was evidenced by the quote below.

"Look at my friend Yasmin Moningka. Sempuran woman, beautiful, intelligent, wealthy, religious, moral education of Pancasila, faithful husband. At least that's what he wanted to admit about himself. That he did not want to admit: the affair with Saman. "[1]

"Yasmin is the most accomplished and most affluent among my closest friends. We called him the girls who has everything. He is now a lawyer in the office of his own father, Joshua Moningka & Partners. But he often joined the team of legal aid to those who are poor or afflicted "[1].

The above quotation explains that Yasmin is an intelligent woman, achievement, care for those who are oppressed, but also hypocritical. Hypocrisy was because he wanted to keep his self-image.

People Yasmin float in the novel depicts a female figure adult sempurma, calmly beautiful and shapely. Physical image that is reflected from Yasmin figures show that it is the women who were targeted by the men-see. In terms of physical, he then upholds the honor that he has but in fact it can not be kept by him. Here's an excerpt.

"See my friend Yasmin. His face was handsome, clean as a marble statue. His life was as regular as a straight ladder" [1]

"Oh, virginity is the crown which must be upheld" [1]

"... Kukurung them both in bungalowku in Pekanbaru for two nights. And it turns out, the incident. They make love. Ha ha ha. It's easier than purebred dogs mating. In fact, Yasmin left-hickey hickey on his neck ... "[1]

The quote above intentionally featuring characters Yasmin as an ideal woman for men. Supported by his relationship with Luke that ended in marriage. However, Yasmin also has another lover is Saman. That is the beauty of Yasmin makes Saman's crazy to undergo marital relationship regardless of the status of Yasmin as a wife of another man. And the attitude of Yasmin hypocritically upholding the honor that he could not watch over their own.

Beautiful woman, educated but an affair because it has a high fantasy and sexual pleasure. This was evidenced by the quote below.

".... I have to admit there is a part of me that feels guilty for this relationship ..... [1].

"But since when I started sexually attracted to boys? Perhaps since the period fallis, barangkalisejak end of the anal-I can not remember what I felt at the age of three years. "[1].

Yasmin is a smart woman. He is a lawyer and activist. When he was in high school he never skipped school, piano lessons and ballet industrious and diligent assignment. He continued his studies at the Faculty of Law UI without test [1] . Here's an excerpt from the statement.

"... For a child he always appeared as the sweet and pious girl. Never skip. Not lazy piano lessons and ballet "[1]

### III. CONCLUSIONS

Yasmin including women who dare. He is a lawyer and activist. He helped Saman on a mission to escape from Indonesia after massive demonstrations allegedly caused by Saman. Therefore he shared Cok passed Saman abroad. Not only Saman, he also passed some young people who are involved in the movements of the demonstration under police hunted together float and Saman. Quotation as follows:

We hide the three activists who were military hunted. They are accused of orchestrating the 27 July incident, along with the PRD. They were charged under Article subversion "[1].

In terms of education, character Yasmin is a character who has a higher education. Yasmin is a graduate of Faculty of Law. In terms of economics, Yasmin is a figure that berekonomi upscale. His social status as a wife and a career woman (lawyer), but in the interaction and its role Yasmin figure freed from domestic role that always imposed on the wife. His role is more in the public sector, and in its interaction with male characters Yasmin, including one female character who is considered very important. No disparagement to its existence in the public sector, even though she was a woman. This was evidenced by the quote below.

"Not. I'm an attorney. I am here also work affairs. To advocate human rights. "[1]

The image of female figures that have been described above, it can be deduced that the physical image of the heroine is beautiful and attractive, intelligent psychic image, social image; highly educated, upper-middle berekonomi, career women, in the process of interaction with male characters more in the public sector than the domestic sector, and has an important role in the interaction.

Yasmin existing characters in the novel's heroine float is imaged as follows:

- 1) The heroine is a beautiful and intelligent imaged.
- 2) The heroine is imaged and independent career woman.
- 3) The heroine imaged high sexual fantasies.
- 4) The heroine is imaged hypocritical but brave.
- 5) The heroine is imaged loving and caring friends around.

### DAFTAR PUSTAKA

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# Mathematical Difficulties Learners in Solving Creative Thinking in The Geometry Ability

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**Abstract.** The purpose of this study to identify the Difficulties and disadvantages experience by learners in terms of the process of settlement problems of mathematical creative thinking abilities part of indicators .The research instrument used was a matter of mathematics creative thinking ability test and interview guidelines Subject in this study in class VIII-D Junior High School. Based on the research results, Difficulties and disadvantages experienced by learners when solving test creative thinking abilities mathematics include, most learners do not express a variety of ideas, ideas or plans of settlement diverse, does not solve the problem in various ways, does not try to solve problems in ways own or use a non-standard way, and most learners do not develop and elaborate the answer in solving problems.

Keywords: difficulties, kreatif thinking

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## I. INTRODUCTION

This Skills to think or thought that trained not only important in the world of work, education and research or research. These skills are essential to be owned by everyone both in the workplace and in everyday life. This is similar to the phrase that was brought by Sudarma, Momon states "With its good thinking skills, someone will have the capital to be able to solve the problem that happened in his life" [1].

The skills need to be developed in the mathematical sciences are skills in creative thinking skills so that learners can further develop its mathematical abilities. Based on research in SMP Negeri 4 Tasikmalaya has been done by Mazhardy, Rifki Ramdhan (2013) concerning the ability of creative thinking mathematically, the data obtained from the results of his research after the data created in the five-point scale is the largest percentage is in the interval  $11 \leq C < 15$  60% learners with a level of mastery of the material classified as moderate. While there is the lowest frequency in the interval score  $18 \leq A \leq 20$  that only 7.5% of students with an excellent level of mastery of the material.

This shows that not all learners have the ability to think creatively higher mathematics, the data that exist on the criteria most moderate and the least data exist on the criteria very well. In addition, learners who reached KKM as many as 11 people with 27.5% and the percentage of learners who have not yet reached KKM as many as 29 people with a percentage of 72.5%.

Subsequent research conducted in MTs Futuhiyyah 2 Mranggan the mathematical creative thinking ability that was done by Faizah, Ulfa Aminatul (2013). Research results

show that creative thinking pattern of 20 learners as much as 10.26% of high category, the category was as much as 38.46%, and as much as 51.28% lower categories. From the results of this study indicate that the mathematical creative thinking abilities of learners is still low.

This can be caused because students find difficulty in solving problems of mathematical creative thinking ability tests. Based on research that has been done by Ratnaningsih, Nani (2007) that the description of the general performance of learners in solving problems are: lack of attention to the question in the matter or less careful in understanding the problem, so that learners incomplete answers; still weak in turning about the story into a mathematical model; answered about inadvertently making the wrong in the calculation; and did not re-examine what has been done.

Some The research results show that learners have a wide range of characters that is always required to develop and enhance their creativity. Process improvement and development of creativity of learners, including the development of creative thinking abilities mathematics and become familiar with them in mathematics. Mathematical creative thinking ability is the ability to develop ideas derived from the *study of literature* (literature) to get a new concept of science that has been obtained previously. Indicators of creative thinking that *fluency* (fluency), *flexibility* (flexibility), *elaboration* (breadth), *Originality* (authenticity).

In response to these problems, we need innovation in mathematics learning process that needs to be done by teachers especially learning model used. The learning process is innovative and creative to do the math teacher is one of them by applying the learning model *Inquiry* Alberta

and model of *Problem Based Learning* (Problem Based Learning).

Learning model *Inquiry* Alberta will train creative thinking abilities of learners in finding concepts and principles of learning. Branch, Jennifer and Dianne Oberg [2] states that Alberta Inquiry learning model is the "process by which learners are involved in their learning, formulate questions, investigate widely and then build a new understanding, meaning and knowledge". With the knowledge that has been owned by learners before, then the teacher will guide learners to discover the concepts and principles of mathematics material being studied. However, the guidance provided is limited and few. Learning model *Inquiry* Albertais a process where learners are engaged in learning, formulate questions, investigate widely and then build a new understanding, meaning and knowledge. Stages in learning model *Inquiry* Alberta that is planned (*planning*), recall (*retrieving*), finishing (*processing*), creating / generating (*creating*), giving and receiving (*sharing*), and evaluate (*evaluating*).

The learning model is selected to determine the difficulty of mathematical creative thinking abilities of learners. The model also emphasizes the active learners in solving mathematical problems that are academic, to measure creative thinking abilities of each learner. The purpose of the problem to determine and medeskripsikan What difficulties experienced by learners in solving problems of mathematical creative thinking abilities and to know what is experienced shortages of learners in solving problems of mathematical creative thinking abilities of each indicator?

## II. METHODS

Purposively selected data source that is above considerations. The subject is the students of SMPN 1 Banjarsari with respondents VIII D were 41 learners Focus research to identify difficulties and disadvantages experienced by learners in terms of the process of settlement problems of mathematical creative thinking abilities of each indicator.

Data collection techniques used in this study, namely, Mathematics Creative Thinking Skills test and interview. Instrument of research is about the ability to think creatively mathematical and interview guidelines. The data obtained from the test results as a reference to determine the level of difficulty experienced by learners in working on these issues, and what factors cause this to happen. These tests were performed one after the learning process is carried out. Regarding the interview as well as the difficulties experienced by learners in solving problems Matematik. Wawancara Creative Thinking Ability tests used are semi-structured interviews.

To know these difficulties there are six steps that need to do is choose the students who make mistakes or errors fatal, grouping of students based on the type of fault, choose three students who make mistakes are different to each aspect of creative thinking abilities mathematics, ask learners look back job, held a debriefing process with learners and record the results in a question and answer interview guidelines.

## III. RESULT AND DISCUSSION

All Creative thinking ability test data obtained. For about the first measures the smoothness indicator which measures the ability of learners to provide a lot of ideas and a lot of answers to be able to give an exact answer. This problem can be solved by using the formula of the surface area of the beam, as in the matter mentioned "prism squares" so that from that learners should not be stuck with the context of the sentence in question in the matter, to determine the possibility of settlement of this problem learners have to be creative in determining the numbers precisely because the factors of numbers ending in zero can be a number multiples of 5 and 10 as well as an even number.

In this matter, there are still many students who err in answering the questions. One of the answers to the following learners.

1. Dik: prisma segi empat tinggi 20 cm  
 = luas permukaan 1600 cm<sup>2</sup>  
 Dit: panjang dan lebar...?  
 $K1 = (P \times t) + (P \times t) + (L \times 20) = 1600 \text{ cm}^2$

Fig. 1

From the results of the completion of the number one, the students looked bewildered working and solving problems. How to do it was wrong because the formula used is wrong and learners tend to forget with these formulas because they do not remember and do not try to learn to work on the problems at home, so they tend to forget formulas to be used to solve the problems in the problem number one and resulted in participants learners do not know how to solve it.

Dik:  $t = 20 \text{ cm}$   
 $CP = 1600 \text{ cm}^2$   
 Dit: p? l?  
 Jwb  
 $= \frac{1}{2} \times \text{L alas} \times t \text{ prisma}$   
 $= \frac{1}{2} \times (p \times l + p \times t + l \times t) = 1600$   
 $= (p \times l + p \times t + l \times t) = 1600$   
 $= (p \times l + p \times 20 + l \times 20) = 1600$   
 $\frac{1600}{2} = 800$   
 $p \times l + 20p + 20l = 800$

Fig. 2

From the completion of the second question number one, seen learners already stuck with a problem, the students wrote the formula wrong prism surface area and convert it into the formula beam surface area that is also wrong. Learners also looks confused in solving because he

inadvertently resolving this problem and do not know the steps in resolving this matter.

So, from some types of errors were committed learners to Question 1, it is concluded that the learners are not able to understand the material / concept with good and less practiced in working on. Most learners tend to not remember the formula and confused in resolving this problem and there are learners who are careless in working on so that learners are less careful in calculating and does not attempt to re-examine the answer.

Problem number two is to measure aspects of flexibility which measures the ability of students to solve problems in different ways and the answers varied. This problem-solving process can be done by looking at how many beams is small and there are how many pyramid. By using a formula approach the pyramid volume and the volume of the beam, then the settlement of this problem can be solved in a creative way. The beam can be seen as a big block and small block with different lengths so that there are various ways to solve them. So the size of the room got up volume is the sum of the third volume of a pyramid and the five beams that form a small or a large beam shape.

This problem-solving process, learners are still many difficulties in doing it. As answers to these learners.

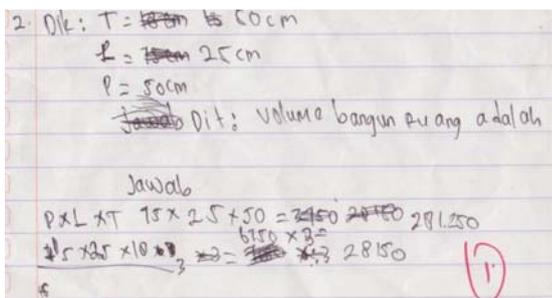


Fig. 3

Examples of such settlement learners tend to be confused in the work on the problems. The formula learners have used are correct, but the operation is still wrong calculations done in multiplication. Learners also forget the pyramid volume formula, so that learners are only writing formula beam volume alone.

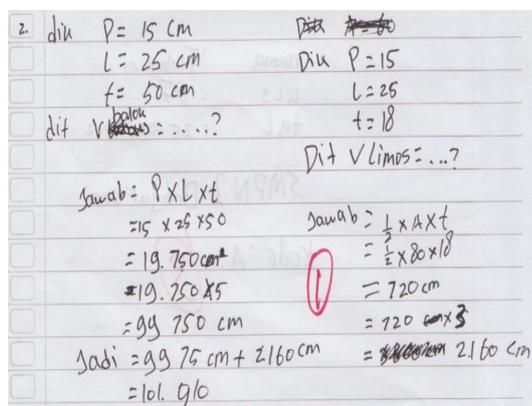


Fig. 4

Based on the answers to such learners shows that learners are already able to understand the questions well. However,

learners are still wrong in writing the pyramid volume formula. Learners simply write the formula for the area of triangle is not a pyramid volume formula to determine the volume of a pyramid-learners still wrong. Then the process of calculating the volume of the beam is still wrong, learners are less cautious in doing multiplication operation in the search for the beam volume so the results are wrong.

So, from some of the problem-solving can be concluded that the learners are still many who do not understand and know the material well, especially in the application of the formula of the matter, then there are still many who do wrong calculation process and forget to remember the formula. In addition, there are also students who have been working on the questions well, but he lacks understanding and look about so that what is being asked and asked the question was not answered perfectly by the learners so that learners are still sloppy and less cautious in working on and not trying to check back the answer.

Problem number three is to measure aspects of the authenticity of the ability of learners to provide the concept and answers with the language and its own way. On this matter, learners do not be fooled by the problems presented in the matter, to answer the broad mica thick takes a lot of students who are still fooled when using broad approach of the pyramid can be obtained broad mica thick needed but the broad base of zero because the pyramid of the shaped hood of food. As for the wide table can be covered with the hood of food, learners must use the Pythagorean proposition approach in completing and using the formula for the area of the triangle. But to know this, learners must use creative thinking to see the possibility of the process being performed.

There are several answers learners interesting to discuss because there are errors that learners do in solving problems such as the following three numbers.

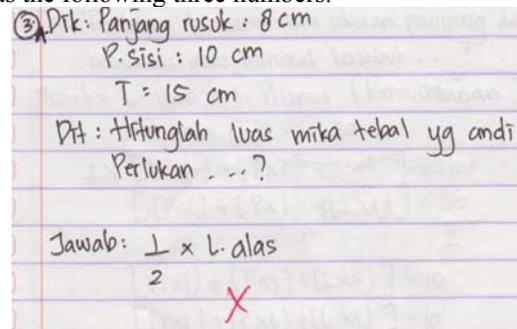


Fig. 5

Based on the answers from learners shows that the learners are not able to work on the problems. Learners forget a formula to do it and do not know how to do it so that learners do not resolve the problem. In addition, learners also when interviewed do not remember the formula for the area of triangle and the Pythagorean proposition so that learners do not know how to do the problems in his own way. In this case the learners must often practice and learn that things like this can be minimized.

Answer learners shows that learners do not understand the Pythagorean proposition. Indeed, learners are already looking at the questions well because the answer to 3a are correct and they are not fooled.

So, from some of the answers that learners can be concluded that the students did not master the material well. The material must be mastered not only the material woke up this space alone, but must connect between this material with material that has been studied before, because at this Question 3 learners have to work accurately with the knowledge and the level of his own creativity. Most learners can do about this properly, no one answered because with less caution and careless, so not in accordance with the demands of questions being asked, the students also tend to forget again with the concept of the arguments of Pythagoras and the formula for the area of the triangle, so the majority of learners can not answer the question carefully and precisely. In addition, the students also find it difficult to change the shape of non-routine matter in the form of a mathematical model that most learners who are fooled and answer because wrong because they do not know the concept and do not understand the material very well.

Problem number four in measuring the breadth of that measure the ability to develop answers or knowledge given to explain, or describe in more detail enriching the knowledge. On this question, the learner must be creative in solving because, the higher the size of the rest of the prism should be known in advance by multiplying the volume of the rest of the glass with a tall glass. Then the number of ice cubes to be incorporated into the glass makes the water glass rises following the shape of the prism so that the volume equal to the volume of a prism with a height of water is spilled. Then after the calculation process will be obtained high-water spill. Due to the high residual value that is smaller than the height of high water spilled spilling excess water will be obtained by reducing the water level with a high residual spill. Thus, the volume of water that would spill can be determined by using a prism volume formula.

There was some confusion and mistakes of the answers learners will be described below.

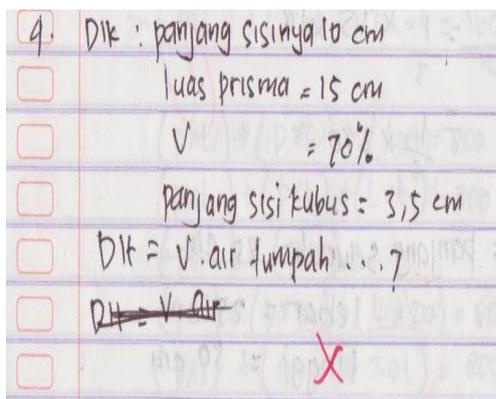


Fig. 6

The answer from the students indicates that learners do not understand the material very well, so confused about how to do it. Learners also do not remember the formula and do not know how to do it.

So, from a few answers to such learners can be deduced that learners do not understand the concept and the material well. Learners do not practice work on the problems at home and learners are less careful in performing the calculation process. Learners do not know how to do it even while learning already discussed together. Learners tend to forget formulas and careless in the application of the formula. They are wrong in writing a symbol of multiplication and addition. Learners are also likely not trying to re-examine their work so that mistakes and errors that do not unanalyzed and not corrected for the reason pursuit time to work on the problems others.

#### IV. CONCLUSIONS

In conclusion difficulties experienced by learners when solving mathematical creative thinking ability tests include, most learners do not put forward various ideas, ideas or diverse settlement plan, does not solve the problem in different ways, do not try to solve problems in ways own or use a non-standard way, and most learners do not develop and itemize the answer in solving the problem. Shortcomings in the performance of students in general in solving problems are: lack of attention to the question in the matter or less careful in understanding the problem, so that students are less complete answer; still weak in turning about the story into a mathematical model; answered about inadvertently making the wrong calculation. Her advice Learners are expected to improve the ability to think creatively mathematical manner diligent study, understand the material well and often practice in working and completing math problems so that the process of thinking learners can grow and develop into a better direction.

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# Impact Analysis Of Cooperative Learning Model Application Type Two Stay Two Stray (Tsts) Toward Learning Outcomes Of Mathematics

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**Abstract.** This research is a comparative experiment. This study aims to determine the effect of the application of cooperative learning model Two Stay Two Stray (TSTS) towards mathematics learning outcomes through comparison with the results of studying mathematics taught using direct learning model. Population, namely the eighth grade students of SMP Negeri 2 Polong Bangkeng Utara Kabupaten Takalar semester of academic year 2016/2017, with a sample of students in grade VIIIA and VIIIB class. The data were analyzed using descriptive statistical analysis techniques and inferential statistics. Descriptive analysis showed that the average student learning outcomes experimental class at the high category, an average of 80.78 with a standard deviation of 11.28; and the average student learning outcomes control class in middle category with an average score of 73.82 with a standard deviation of 12.98. Inferential analysis results obtained H<sub>0</sub> and H<sub>1</sub> accepted. It can be concluded with 95% confidence that the results of students' mathematics learning through cooperative learning model Two Stay Two Stray (TSTS) higher than the results of students' mathematics learning through direct learning model.

Keywords: Cooperative, two stay two stray (TSTS), learning outcomes.

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## I. INTRODUCTION

The development of science and technology (Science and Technology) enables all parties can obtain abundant information, quickly and easily from a variety of sources and places in the world. Thus, students need to have the ability to obtain, select, manage, survive on the state information that is always changing, uncertain and competitive. So it takes a variety of method and learning strategy that accelerate knowledge acquisition. Due to the development of science and technology requires critical thinking, systematic, logical, creative, and effective cooperation willingness.

Mathematics is one of the basic science that has a strong and clear structure and link with the concept. The function and role of mathematics makes it easy to keep abreast of the times, namely science and technology. Math becomes a means of logical, creative, systematic, and critical thinking. Because of the importance of mathematics in various levels of education, it is necessary to get the attention and serious treatment, the students in various levels of education, including the middle school is absolutely required to master math and expected to have a high result.

To make the potential above happen, a new orientation is required in math education that includes the reformation of math education program target towards the development of thinking and speaking ability, preparing the students to face the social issue of the impact of science and technology, cultivation of ethical values and aesthetics, problem-solving skills, development of attitude independence, creativity and responsibility.

To achieve the maximum educational purposes is not only the factor of students but also the factor of teacher. In preparing a learning material to the stage of implementation, a teacher must be highly selective in choosing the model and learning approach that will be applied. Selecting of models, approaches and methods in accordance with the characteristics

of the material to be taught is an important factor to achieve an effective learning process and quality learning outcomes. The learning outcomes is in accordance proposed by A. J. Romizowski that the learning outcomes is output of a processing system input. Input from the system is in the form of a variety of information while the output is an act or performance. Learning outcomes are patterns of actions, values, understandings, attitudes, appreciation and skills [1].

The fact is not always in line with expectation. Based on the previous research obtained by researcher from the teachers of math, the mathematics learning outcomes at the eighth grade of SMP Negeri 2 Polong Bangkeng Utara, Takalar Regency is still low. The cause is largely due to the lack of student participation in the learning process. This happens because the study only focused on teachers. From interviews with teachers of mathematics, that the learning model used in SMP Negeri 2 Polong Bangkeng Utara, Takalar Regency is still rely on direct learning. Direct instruction is often used because the teacher thought it was easy to implement in learning process. However, it can not be denied that in the direct instruction which known as active teaching. Direct learning also called whole-class teaching. It refers to a style of teaching where teachers are actively involved in carrying directly on the entire class where there is a phenomenon in direct learning has focused on teacher [1].

To overcome the disadvantages of learning, should be select the appropriate learning method so that the learning objectives can be achieved and students were able to involve themselves actively. One of the learning model that can be used in mathematics learning is cooperative learning model Two Stay Two Stray (TSTS).

Cooperative learning model Two Stay Two Stray (TSTS) was developed based on the Spencer Kagan premise (1992). The Two Stay Two Stray learning model is provide an opportunity to share results and information with other groups [2]. The Two Stay Two Stray learning model is two students

stay in group and two other students visit another group. Two students who stay in group provide information to guests about the group's result, while the guests record the results of the group discussion which visited by them [3]. According to Nurhusain [4] that the cooperative learning type Two Stay Two Stray (TSTS) can improve students' mathematics learning outcomes.

Based on the description above, the researcher is interested and motivated to carry out the research that aims to determine the effect of the application of cooperative learning model Two Stay Two Stray (TSTS) towards mathematics learning outcomes through the comparison with the results of studying mathematics taught using direct learning model.

## II. METHODS

### Types of research

The research was an experimental research which involved two classes or two groups, one class as an experimental class and one class as a control class. Experimental class taught by cooperative learning type Two Stay Two Stray (TSTS), while the control class taught by direct learning model.

### Time and Place of Research

The research was conducted in the first semester of 2016/2017 academic year in the eighth grade of SMP Negeri 2 Polong Bangkeng Utara which is located in the Lassang Village, Polong Bangkeng Utara, Takalar.

### Research Design

The design used in this research is randomized subjects posttest only control group design Sukardi (2014: 185) with two different treatment groups. Both groups will be randomized to determine the experimental class and control class. The first group as an experimental class taught using cooperative learning model type of two stay two stray (TSTS), while the second group as the control class taught using direct learning model. Once treated, the two groups were given test to determine the effect of treatment given. The study design can be seen in Table I below.

TABLE I  
RESEARCH DESIGN

Random	Group	Treatment	Post Test
R	E	T <sub>1</sub>	Y <sub>1</sub>
R	K	T <sub>2</sub>	Y <sub>2</sub>

Source: Sukardi (2014: 185)

- R : Random
- E : Experimental class
- K : Control class
- T<sub>1</sub> : Treatment using cooperative learning model type Two Stay Two Stray (TSTS).
- T<sub>2</sub> : Treatment using direct learning model
- Y<sub>1</sub> : The results of students' mathematics learning after being taught by using cooperative learning model type Two Stay Two Stray (TSTS).
- Y<sub>2</sub> : The results of students' mathematics learning after being taught by using direct learning model.

### Population

The population in this research were all students at the eighth grade of SMP Negeri 2 Polong Bangkeng Utara consisted of 5 classes homogeneous with the number of 122 students, where class VIII<sub>A</sub> consisted of 28 students, class

VIII<sub>B</sub> consisted of 28 students, class VIII<sub>C</sub> consisted of 24 students, class VIII<sub>D</sub> consisted of 26 students and class VIII<sub>E</sub> consisted of 16 students in the first semester of 2016/2017 academic year. The population is homogeneous because the students are not classified in a particular grade.

### Sample

The sampling technique used was cluster random sampling or random sampling group because the population consisted of several groups/ classes in the eighth grade which have the same average value for each class before giving the treatment. The selected sample is class VIII<sub>A</sub> and class VIII<sub>B</sub>.

### Draft of Treatment

The treatment by applying cooperative learning model Two Stay Two Stray (TSTS) as follows: (a) The teacher divides the students in the group that consists of 4 (four) students; (b) The teacher gives the task in the form of questions that should be discuss; (c) After intra-group discussion is over, two students visit another group; (d) Members of the group who stay in group provide information to guests about the group's result; (e) Two students were served as guests are required to visit each group; (f) If they have done their duties, they returned to their group; (g) the students who visit and those who served a guests match and discuss the work they have done.

The treatment by applying direct learning model as follows: (a) The teacher explains the competencies and learning objectives, lesson background information, the importance of learning, and preparing students to learn; (b) The teacher demonstrates knowledge/ skills or present the information step by step; (c) The teacher plans and provides the early guidance; (d) The teacher checks whether the student has successfully done a task or not and providing feedback; (e) The teacher prepares the advanced training with particular attention for more complex situation in everyday life.

### Data, Instrument and Data Collection Technique

The data, source, instrument, and data collection technique in this research are listed in Table II below.

TABLE II  
DATA, INSTRUMENT AND DATA COLLECTION TECHNIQUE

No.	Data	Instrument	Data Collection Technique
1.	The learning result of experimental class	Test	Providing test at the end of treatment in experimental class
2.	The learning result of control class	Test	Providing test at the end of treatment in control class

### Data Analysis Technique

#### Descriptive Statistics

Descriptive statistics is used to describe the mathematics learning outcomes which obtained from tests of student learning outcomes and student activity during the learning process. For the purpose of analysis, it used table of frequency distribution, average, standard deviation, median, mode, range and the ideal score. The guideline used is the procedures adopted from the Education Ministry in 2006 according to the Table III below.

TABLE III  
STUDENT RESULT CATEGORY

Score (%)	Student Result Category
0-54	Very Poor
55-64	Poor
65-79	Average
80-89	Good
90-100	Very Good

Adapted from Education Ministry in 2006

### Inferential Statistics

#### Normality tests

Normality test is used to determine whether the data that used is normal distribution or not. For the test used Chi-squared formula which stated as follows:

$$\chi^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

(Misbahuddin and Hasan. 2013: 279-280)

$\chi^2$  = Chi-squared test

$f_o$  = the observed frequency

$f_e$  = the expected frequency

The criteria of normal distribution is if  $\chi^2_{test} < \chi^2_{table}$  where  $\chi^2_{table}$  which gained from  $\chi^2$  with  $df = (k - 2)$  and the significance level  $\alpha = 0.05$ . So, the data is normally distributed.  $\chi^2_{table} = \chi^2_{(\alpha; dk)}$ .

#### Homogeneity tests

Homogeneity test is a prerequisite test of analysis on the feasibility of data to be analyzed by using a specific statistical test.

Homogeneity test is used to test the homogeneity data result of learning outcomes with the following formula:

$$F_0 = \frac{\text{large variance}}{\text{small variance}} \quad [5]$$

The criteria of testing if  $F_{test} < F_{table}$  in the significance level  $\alpha = 0,05$  so, the data is homogeneous.  $F_{table} = F_{(x)(V_1, V_2)}$ , where  $V_1 = n_1 - 1$  and  $V_2 = n_2 - 1$

#### Hypothesis Tests

Statistical analysis to test the hypothesis is "The average of students' mathematics learning outcomes by applying cooperative learning model Two Stay Two Stray (TSTS) is higher than before applying direct learning model". It was used t-test of independent samples, with formula as follows:

$$t_{hit} = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where,  $S^2 = \frac{(n_1-1)S_1^2 + (n_2-1)S_2^2}{n_1+n_2-2}$  or  $S = \sqrt{\frac{(n_1-1)S_1^2 + (n_2-1)S_2^2}{n_1+n_2-2}}$  (Tiro, 2008: 252)

$S^2$  = Combined variance

$S$  = Combined standard deviation

$\bar{x}_1$  = Mean of *Two Stay Two Stray* (TSTS) group

$\bar{x}_2$  = Mean of Direct instructional group

$n_1$  = The number of *Two Stay Two Stray* (TSTS) group members.

$n_2$  = The number of Direct instructional group members.

$s_1$  = Standard deviation of experimental group

$s_2$  = Standard deviation of control group

For the hypothesis testing, The null hypothesis  $H_0$  is accepted if  $t \leq t_{(1-\alpha)}$  and  $H_0$  is rejected if  $t > t_{(1-\alpha)}$  with the significance level ( $\alpha$ ) = 0,05 and degree of freedom ( $df$ ) =  $n_1 + n_2 - 2$ .

#### Statistical Hypothesis

Statistical hypothesis used as follows:

$$H_0: \mu_2 \leq \mu_1$$

$$H_1: \mu_2 > \mu_1$$

$\mu_1$  = the mean score of students' learning outcomes by applying cooperative learning model *Two Stay Two Stray* (TSTS).

$\mu_2$  = the mean score of students' learning outcomes by applying direct learning model.

### III. RESULT AND DISCUSSION

#### Research Result

##### The Results of Descriptive Statistics Analysis

Descriptive statistics were used to describe the research variables obtained by the measurement results, i.e. the data result of learning algebra factorization rate for each group. The data of test results for experimental class that was taught through cooperative learning model Two Stay Two Stray (TSTS) can be seen in Table IV below:

TABLE IV  
DESCRIPTION OF STUDENT LEARNING OUTCOMES SCORES IN EXPERIMENTAL CLASS

Statistics	Value
Sample	28
Maximum Score	96
Minimum Score	50
Range	46
Mean Score	80,75
Variance	126,269
Standard deviation	11,237
Median	81,50
Mode	82

Source: SPSS

The overall score obtained from the respondents, if were grouped in five categories according to the guidelines that were used to follow the procedures applied by the Education Ministry in 2006, then the frequency distribution, percentage and category of learning outcomes on Algebra Factorization at the eighth grade students of SMP Negeri 2 Polong Bangkeng Utara by applying cooperative learning model Two Stay Two Stray (TSTS) can be seen in Table V below:

TABLE V  
DISTRIBUTION OF FREQUENCY AND PERCENTAGE IN EXPERIMENTAL CLASS

Scores	Category	Frequency	Percentage (%)
0 - 54	Very Poor	1	3,57
55 - 64	Poor	1	3,57
65 - 79	Average	10	35,71
80 - 89	Good	8	28,57
90 - 100	Very Good	8	28,57
<b>Total</b>		28	100

Based on Table 4 above, from 28 students who were given the test, the results on Algebra Factorization shows that the mean score of students' learning outcomes through cooperative learning model Two Stay Two Stray (TSTS) is

80.75 which indicates that the students' ability in understanding the material of Algebra Factorization centered at 80.75 with a standard deviation of 11.273, which means deviation data from the average value is 11.273. Median 81 means 50% of the students have a score on 81 and 50% have a score under 76. Mode of 82 which means the most students got 82. Because the value of mean < median < mode value, then shaped of distribution is a negative curve means the tendency of data gathered above the average. Furthermore, based on Table 4 and Table 5, the information is obtained that the average of learning outcomes is 80.75 of the score ideal of 100 and in a good category.

While the data of test results for control class that was taught by applying direct learning model can be seen in Table VI below:

TABLE VI  
DESCRIPTION OF STUDENT LEARNING OUTCOMES SCORES IN CONTROL CLASS

Statistics	Value
Sample	28
Maximum Score	94
Minimum Score	45
Range	49
Mean Score	73,82
Variance	168,522
Standard deviation	12,982
Median	76
Mode	70

Source: SPSS

The overall score obtained from the respondents, if were grouped in five categories according to the guidelines that were used to follow the procedures applied by the Education Ministry in 2006, then the frequency distribution, percentage and category of learning outcomes on Algebra Factorization at the eighth grade students of SMP Negeri 2 Polong Bangkeng Utara by applying direct learning model shown in Table VII below:

TABLE VII  
DISTRIBUTION OF FREQUENCY AND PERCENTAGE OF DIRECT LEARNING MODEL

Score	Category	Frequency	Percentage (%)
0 – 54	Very Poor	3	10,71
55 – 64	Poor	2	7,14
65 – 79	Average	12	42,85
80 – 89	Good	7	25
90 – 100	Very Good	4	14,28
<b>Total</b>		28	100

Based on Table 6 above, from 28 students who were given the test, the results on Algebra Factorization shows that the mean score of students' learning outcomes through direct learning model is 73.82 which indicates that the students' ability in understanding the material of Algebra Factorization centered at 73.82 with a standard deviation of 12.98, which means deviation data from the average value is 12.98. Median 76 means 50% of students obtained a score above 76 and 50% under 76. Mode of 70 which means the most students got 70. Because the value of mode < mean, then shaped of distribution was a positive curve means means the tendency of data gathered under the average. Furthermore, based on Table

6 and Table 7, the information is obtained that the average of learning outcomes is 73.82 of the score ideal of 100 and in an average category.

### The Results of Inferential Statistical Analysis Normality Tests

Normality test aims to determine whether population is normally distributed or not. Normality test was conducted using Chi-square table. Based on the result of analysis, the students who taught by cooperative learning model Two Stay Two Stray (TSTS) was at the level of significance  $\alpha = 0.05$  with degrees of freedom (df) = 27, obtained by Chi-square calculation ( $\chi^2_{test} = 7.90$  and Chi-square table ( $\chi^2_{table} = 9.48$ ). Because  $\chi^2_{test} < \chi^2_{table}$ , means score of mathematics learning outcomes of students taught by cooperative learning model Two Stay Two Stray (TSTS) was normally distributed. Furthermore, the group who taught by direct learning model obtained by Chi-square calculation ( $\chi^2_{test} = 6.79$  and Chi-square table ( $\chi^2_{table} = 9.48$ ). Because  $\chi^2_{test} < \chi^2_{table}$ , means score of mathematics learning outcomes of students taught by direct learning model was normally distributed. This is in line with the results of the analysis using SPSS as shown in Table VIII below:

TABEL VIII  
TESTS OF NORMALITY

Class	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Learning Results	.098	28	.200*	.945	28	.146
Control	.099	28	.200*	.951	28	.213

a. Lilliefors Significance Correction

\*. This is a lower bound of the true significance.

Source: SPSS

Based on Table VIII above, it shows that the probability value for class taught by cooperative learning model Two Stay Two Stray (TSTS) is 0.146 and for class taught by direct learning model is 0.213. Because the probability value is greater than  $\alpha = 0.05$  then both of data is normally distributed.

### Homogeneity Tests

Testing of homogeneity both mathematics learning outcomes data used F test comparing large and small variance. The aims of homogeneity test is to determine whether these two groups have the same ability or not. From these calculations obtained value of  $F_{test} = 1.33$  with the level significance ( $\alpha = 0.05$  and  $df = (V_1, V_2) = (27, 27)$  and obtained  $F_{table} = 1.90$ . Because  $F_{test} < F_{table}$  means that score of student learning outcomes taught using cooperative learning model Two Stay Two Stray (TSTS) and direct learning model in the eighth grade of SMP Negeri 2 Polong Bangkeng Utara, Takalar is homogeneous. This is in line with the results of the analysis using SPSS as shown in Table IX below:

TABEL IX  
TEST OF HOMOGENEITY OF VARIANCES

Levene Statistic	df1	df2	Sig.
.483	1	54	.490

Source: SPSS

Based on Table 9 above, it shows that probability value is  $0.490 > \alpha = 0.05$ . It indicates that the research data have the same variance (homogeneous).

### The Results of Hypothesis Tests

In Chapter II has presented the hypothesis that a temporary answer for the problem research, which are statistically defined as follows:  $H_0: \mu_2 \leq \mu_1$  opponent to  $H_1: \mu_2 > \mu_1$ . To test this hypothesis used t-test by finding the standard deviation combined first.

From the calculation, it was obtained  $t_{\text{test}} = 2.195$  with a significance level  $\alpha = 0.05$  and degrees of freedom (df) = 27, obtained  $t_{\text{table}} = 1.673$ . Because  $t_{\text{test}} < t_{\text{table}}$  namely  $2.195 > 1.673$  then  $H_0$  is rejected and  $H_1$  is accepted. This means that the level of confidence is 95%. It can be concluded that the mathematics learning outcomes of students taught using cooperative learning model type Two Stay Two Stray (TSTS) is higher than the mathematics learning outcomes of students taught using direct learning model.

### DISCUSSION

The study involved two different groups, namely the experimental group by applying cooperative learning model Two Stay Two Stray (TSTS) and the control group by applying direct learning model.

From the descriptive analysis results, it was obtained that the average of students' learning outcomes taught by cooperative learning model Two Stay Two Stray (TSTS) amounted to 80.75 with a standard deviation of 11.237 and the average results of students' mathematics learning taught by direct learning model was 73.82 with a standard deviation of 12.98. This shows that the average results of studying mathematics taught by cooperative learning model Two Stay Two Stray (TSTS) is higher than the average results of studying mathematics taught by direct learning model.

Theoretically, the application of cooperative learning model Two Stay Two Stray (TSTS) allows students a variety of activities. During the learning process students are given tasks such as problems to be solved in groups. This is done in order to make students more confidence and then the students are directed to another group to get information, so that students are more oriented and liveliness. After that, the students back to their group and match the findings and then deliver the information in front of the class. This is done to make students more willing to express their opinion. Therefore, the way to teach them is by giving a chance to the students to discover and explain their opinion, creative in solving problems. This can enrich their knowledge so the achievement or students' learning outcomes can be improved well.

This is supported by the research conducted by Fitriani (2013). The results of analysis of student learning outcomes, student activities, and student response to the activities of cooperative learning type Two Stay Two Stray (TSTS) are met, the application of cooperative model of type Two Stay Two Stray (TSTS) is effective to be used in learning Algebra Factorization at the eighth grade of SMP Negeri 2 Polong Bangkeng Utara, Takalar.

Based on the result of previous research and the theory above, it can be concluded that the application of cooperative learning model Two Stay Two Stray (TSTS) can improve the learning outcomes, where the students' learning outcomes taught using cooperative learning model type Two Stay Two

Stray (TSTS) is higher than the learning outcomes of students who were taught using direct learning model at the eighth grade of SMP Negeri 2 Polong Bangkeng Utara, Takalar.

### IV. CONCLUSIONS

Based on the data analysis and discussion of the research by using cooperative learning model type Two Stay Two Stray (TSTS) and learning by using direct learning model at the eighth grade of SMP Negeri 2 Polong Bangkeng Utara, Takalar, it can be concluded that the application of cooperative learning model Two Stay Two Stray (TSTS) positively impact on mathematics learning outcomes that can be seen as the follows:

1. The mathematics learning outcomes at the eighth grade students of SMP Negeri 2 Polong Bangkeng Utara, Takalar taught using cooperative learning model Two Stay Two Stray (TSTS) is in a good category with the mean score 80.75 and standard deviation is 11.237.
2. The mathematics learning outcomes at the eighth grade students of SMP Negeri 2 Polong Bangkeng Utara, Takalar taught using direct learning model is in average category with the mean score 73.82 and standard deviation is 12.98.
3. The mathematics learning outcomes at the eighth grade students of SMP Negeri 2 Polong Bangkeng Utara, Takalar taught using cooperative learning model Two Stay Two Stray (TSTS) is higher than the mathematics learning outcomes taught using direct learning model.

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# Do They Feeling Positive on Their Occupation? A Study of Psychological Well Being to Improve Lecturer Performance

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**Abstract.** Being an lecturer, can be an esteemed job. Various task, as a consequence of its occupation is Tri Dharma Perguruan Tinggi namely teach, research and perform community service. As well as with the development of the education system in Indonesia, it has a great impact on job demand as a lecturer. Curriculum was develop continuously, change in governance rules, institution policy, performance evaluation system and increase demand of quality research are such of challenges of leacturer faced recently. To keep optimally functioning and have a positive attitude in such situation was important to maintain psychological well being in work and also in their life. Psychological well being can described aspects that makes people feel positive in aspects of self acceptance, positive relation with others, autonomy, environmental mastery, purpose in life and personal growth. The study was conducted to 204 lecturers in one of state higher education in West Java. Statistical descriptive, regression and confirmatory factor analysis was used to find which factor was contributed most, including the demography factor of participant. The result of the study shows that sharing knowledge to others, bring a goodness for student and pursue a deep purposes meaning of life as a lecturer were important factors that help to keep them relatively happy with their job. Furthermore, gender profile was also revealed a differentiated pattern of psychological well being. Then, a good state of well being will generate to a great performance at work. Implication of the study was also discussed.

Keywords: Psychological Well Being, Lecturer, Purpose In Life

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## I. INTRODUCTION

Nowadays, work demands on lecturers as the core resources of the university became also change. Was once more the role of a teacher, is now greater demand as an agent of research, the agent of culture and agent of knowledge and technology transfer. Thus, it will be a direct impact on the increasing demands of the lecturer performance. Role as a teacher, researcher and perform the community services besides the task in structural position in their faculty become a more complex work of the lecturers. Then, it will affect their balanced and also the function of psychological well being.

Well-being is defined as the degree of how much a person can function optimally [1]. Psychological well-being is the realization of the fully potential of individuals where individuals can receive all the strength and weakness of himself, independent, able to foster positive relationships with others, can master the environment in the sense to modify the environment to suit his wishes, have a purpose in life, and continue to develop his personal [2]. Psychological well-being can be characterized by obtaining happiness, life satisfaction and the absence of symptoms of depression. [3] mentions that the psychological well-being consists of six dimensions, namely self acceptance, positive relation to thers, autonomy, environmental mastery, purpose of life and personal growth.

a. Self-Acceptance, as a central feature of mental health as well as a characteristics of self-actualization, optimal functioning, and maturity.

- b. Positive Relation with Others. Its described as having strong feelings of empathy and affection for all human beings and as being capable of greater love, deeper friendship, and more complete identification with others
- c. Autonomy. It described as showing autonomous functioning and resistance to enculturation.
- d. Environmental Mastery is ability to choose or create environments suitable to his or her psychic conditions.
- e. Purpose in Life, is defined to include beliefs that give one the feeling there is purpose in and meaning to life.
- f. Personal Growth, is continue to develop one's potential, to grow and expand as a person. Openness to experience, for example, is a key characteristic of the fully functioning person. Such an individual is continually developing and becoming, rather than achieving a fixed state wherein all problems are solved.

Then, the psychological well being is important to increasing the productivity and performance. Psychological wellbeing measures the pleasantness dimension of individual feelings [4]. Role of the pleasantness dimension of well-being (i.e., happiness vs. sadness or depression) in the determination of various individual outcomes [5]. For example low self esteem, depression, pessimistic. Then, it will related to dysfunctional psychological well-being [6]. Because these

variables have in, turn, been related to declines in work outcomes [7], it is possible that psychological well-being and performance are related [8].

More evidence that psychological well-being is related to employee performance, but not much research pay attention to psychological well being of lecturer. Whereas, it crucial because productivity of lecturers work will be affect to the quality of the students. Dysfunctional well being of lecturer will be impact to the task of Tridharma such as teach, research and community services as well. While today, the higher education are required to produce graduates who are capable, competitive and have a good personal characteristics.

## II. METHODS

This research approach is non-experimental research approach, descriptive and verificative research method. In this study, data collection is conducted by using a questionnaire, consist of 3 different section. The first section includes questions regarding individual profile (gender, age, tenure, status, position). The second is main psychological well being questionnaire from [2]. Psychological well-being is explained through the 18 items of 6 dimensions namely self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth. which used the Likert Scale -1-4 which are Strongly Disagree, Disagree, Agree and Strongly Agree. The measuring instrument has a reliability coefficient of 0.962 (very good). The third section of the instrumen we also used qualitative supporting data through open-ended questions to broaden the discussion of research.

To determine selected sample, researchers used a non-probability sampling. The population of this research is lecturer in State University with minimum length of work around 2 years. Sampling techniques used is simple random sampling. Total of 202 lecturers respond to the questionnaire. The background characteristic of the samples are describe in demographic data. Altogether, 55,45 % participants were female. Some 79,21% of participants were employed status as government civil servants, 38,61% was 31-40 years old. About 39,11 %, have a tenure of more than 15 years, and 40,59% have functional grade as assistant professor.

TABLE I  
DEMOGRAPHIC

	Demographic	Percentage
Gender	Male	44,55%
	Female	55,45%
Age	<31 years old	12,87%
	31-40 years old	38,61%
	41-50 years old	29,70%
	>50 years old	18,81%
Status	Probation	5,45%
	Government Civil Servant	79,21%
	Permanent	13,86%
Tenure	Emeritus	1,49%
	1-5 years	24,75%
	6-10 years	21,78%
	11-15 years	15,35%
Grade	> 15 years	38,12%
	Instructor	39,11%
	Asisstant Professor	40,59%
	Associate Professor	18,81%

To justify the construct validity, we conduct in 2 way, using evidence on internal evidence test content and structure.

In evidence on test content, the tools have been examined by an expert, to review of the format, word for word and sentence is in accordance with the underlying conceptualization. While on the internal structure will be tested by confirmatory factor analysis to determine the differential item function. Through confirmatory factor analysis using Lisrel, to see any of the items that contributed significantly to the measurement of self-perceived employability with a cut point on a loading factor of 0.5. After getting the good item, then the data will be analyze using descriptive statistics to calculate the mean and standard deviation, and also to see how the distribution of data on each dimension.

## III. DISCUSSION

Validating the tools of Psychological Well Being Questionnaire conducted in 2 way. First evidence on test content which has been reviewed by the 3 experts in Psychological Well Being conceptualization. Item was corrected word by word related to concept and definition for each dimension. Based on expert review process, we have revised 10 of the 18 item of the questionnaire. Then, we conducted confirmatory factor analysis for psychological well being with cut off poin 0.5 for each item [9]. The result show that only 13 item was validated, 5 of 18 item was deleted since the *loading factor* below 0.5. Deleted item are item number 3, 6, 7, 12, 18. Each of dimension consist of 2-3 item. Self acceptance in 2 item, Postitive Relation in 2 item, Autonomy in 2 item, Enironment Mastery in 2 item, Purpose in Life in 2 item and Personal Growth in 3 item.

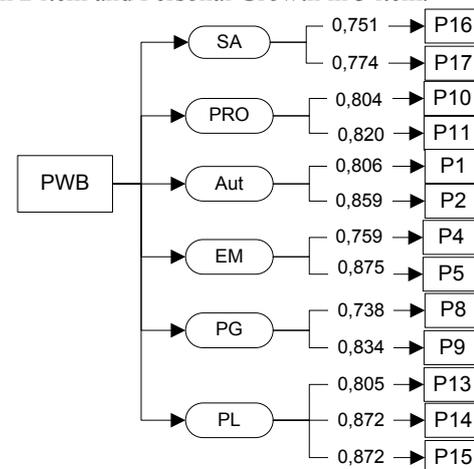


Fig. 1 Confirmatory Factor Analysis of PWB

All of the items have been validated, then researchers conducted descriptive analysis of each dimension in the psychological well being. Based on these results, shows that mean on Personal Growth and Purpose in Life were the gretest mean value. In line with the results of the CFA where the items on the dimensions of purpose in life has a loading factor which is larger than the other items. The items on the purpose in life, particularly in items 14 and 15 showed the valueable meaning of the activity perceived by a lecturer everyday, feeling satisfied, feeling the useful for personal purposes, give one the feeling there is purpose in and meaning to life. The items on this dimension indicates goals and ideals

that helped create the meaningful activities more than just the duty itself.

Meanwhile, loaded value of items number 9, item 5 and item 2 are larger than other items. Item 9 indicates the spirit of not giving up, always trying to improve and make positive changes, enhance the ability and knowledge through their entire life (personal growth).Lecturer think that by perform their role as teacher who conduct more discussion with the students, it will enabled him to gain a lot more knowledge. Item 5 on the dimensions of mastery enviornment stated that everyday tasks as a teacher does not make it worse, he was able to address and resolve the appropriate areas of expertise that it rules. Item 2 on the dimensions of autonomy stated that they would be happy because acclaim of others was not important anymore, happiness indicators exist at himself for giving will make them more meaningful.

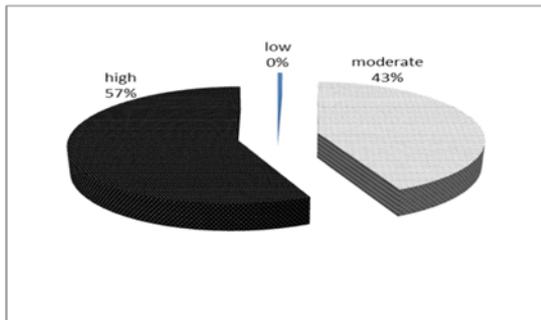


Fig. 2 Degree of Psychological Well Being

Most respondents perceived their psychological well being remain far higher (57%), while moderate around 43%, then only 1 person who felt the lack of well-being associated with his profession as a lecturer (Figure 2). The high degree of psychological well being will lead to higher job satisfaction. By doing so, it will be easier to face difficulties and challenges of work. [10] states that the pressure experienced by a lecturer of which were related to the recognition, the practice of organizational management, intrinsic factors in teaching, unsettled financial, labor conflict-family and new challenges, especially in colleges is undergoing a transition.

Facing of such pressure, it is necessary to have some adequate capability in handling problems anyway. As the results of the study [10], job satisfaction significantly correlated with internal locus of control. This means that, when they face of varying workpressure, high demand of task, then they are more able to control it independently, as part of their responsibility to the task as a lecturer. The success and failure of the task itself, does not always depend on other people. It is also related to the ability to master the conditions (environmental mastery) related to concept of psychological well being.

TABLE II  
DESCRIPTIVE STATISTICS OF PWB

PWB & Dimension	Mean	SD
Psychological well being	3,13	0,39
Self Acceptance	3,11	0,58
Positive Relation	2,93	0,61
Autonomy	2,99	0,57
Environmental Mastery	3,01	0,52
Purpose in Life	3,20	0,58
Personal Growth	3,43	0,51

Adequate levels of lecturers psychological well being, will be high correlated with the ability to cope. As a study by [11] stated that teachers with cognitive coping approach will minimize the appearance of symptoms of the psychological stress so that serenity may be increased. This means, they will be more perceived well being higher in their life and also at work as well.

In line with mean value of each dimension, results of descriptive statistics (Table 1) and the comparison of the mean in the psychological well being (Figure 2), the aspect that makes the lecturers perceived moderate level of happiness is the purpose of life and the personal growth. Working as a lecturer not only means a matter of material or tangible reward, but further about satisfaction of their job,to gained opportunity in self-development to enhanc knowledge and experience.People with high degree of personal growth more open to experience and their environment [2]. A good understanding of their own potential and how to optimize it, will encourage the willingness to sharpen their skills and ability. Based on study by Batubara (2010), show that one of task to research as Tridharma perceived as normative task. It means the lectures do the role as a researcher because they “have to” not “want to”. Otherwise, teaching as a main duty was perceived as more involved and enjoyable affective work. It will be a important elements to make their life more meaningful.

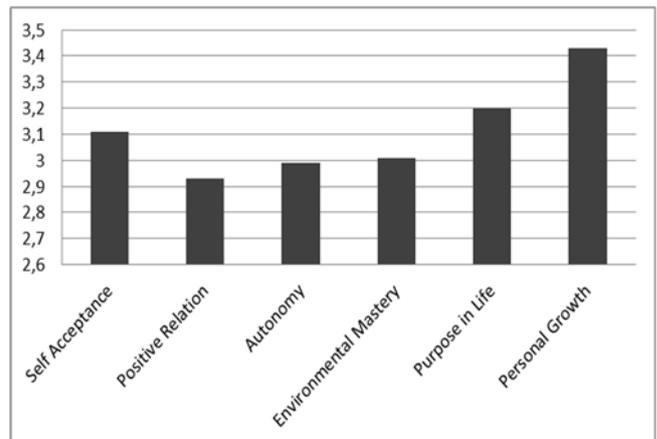


Fig. 3 Comparison Mean of PWB

Moreover, if it is correlate with the demographic factors, shows that gender contribut significantly, with a alpha correlation of 0, 16. Selain itu, jika dihubungkan dengan faktor demografi maka faktor yang berpengaruh adalah gender dengan korelasi 0, 16. It can be said that gender as male or female also affect how a lecturer perceived teh degree of psychological well-being. In Figure 4, illustrated that levels of psychological well being perceived more high in women than men. It is relevant to previous studies [12], which stated that women are more satisfied than men.

TABLE III  
DEMOGRAPHIC TOWARDS PSYCHOLOGICAL WELL BEING

Variables	Mean	SD	1	2	3	4	5	6	7
1 Gender	1,55	0,49	1						
2 Age	2,54	0,94	0,05	1					
3 Status	2,11	0,49	0,01	-,15*	1				
4 Tenure	2,67	1,22	0,12	,81**	-,16*	1			
5 Grade	1,83	0,78	0,09	,68**	-,14*	,76**	1		
6 Psy. Well Being	1,37	0,51	-,164*	0,03	0,02	-,55	-,38	1	

\*. Correlation is significant at the 0.05 level (2-tailed).

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

The condition can be caused by role of a man to fulfill the social demands to have a greater responsibility as head of the family, the need to generate more revenue than women. As stated by [10], one of the problems which pretty much faced by faculty members was about income and financial security. This condition can make them more burdened so that impact on the condition of dissatisfaction and lack of happiness at their work. This means that men have a degree of psychological well-being that relatively lower than women.

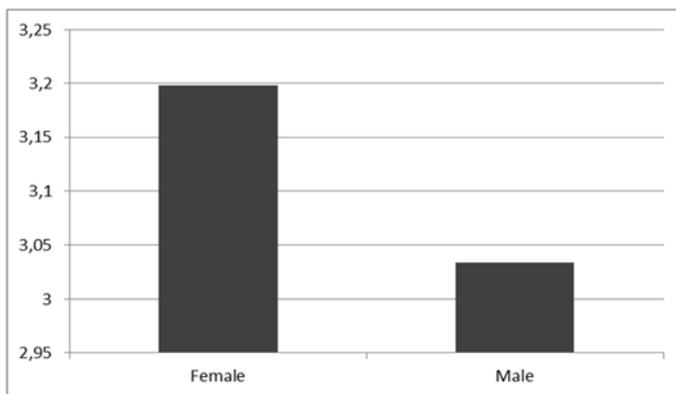


Fig. 4 Comparison Degree of Psychological Well Being in Male and Female

As the results of study from [8], psychological well being can be a predictor of performance. It means that the higher a person's happiness and psychological satisfaction will be optimal and productive in completing their tasks. In much of the literature, suggesting that psychological well being is a state of feeling happy and satisfied. In vice versa, difunctional of individual well being will lead to symptoms of anxiety, loss of self esteem, hypertension, depression [6]. Presumably, it will have an impact on the work productivity and performance. So that healthier individuals will be more likely to show maximum work productivity. In this case, as a lecturer they will be able to meet Tridharma and other performance indicators requested by the institution. Furthermore, the productivity of lecturers will have an impact to the quality of a their student, too. Therefore, psychological well being become one of the important things must be considered in the context of workers' health to maintain the quality of higher education.

#### IV. RESULT

High degree of psychological well being of the lecturer indicated that they are quite satisfied and happy on their job. It is more contributed by the meaning of the existence of purpose in life, related with profession of lecturers as provide knowledge to students and as a way to serve the community. Furthermore, the self-development opportunities both in terms

of knowledge and abilities will be more likely to enhancing along with the periode time as a lecturer. Effect of personal attribute to psychological well being was proven by the role of gender. Its become one of antecedents that related significantly with the state of happiness of lecturer. It can be develop as a basic finding to construct model of healthy employee both of in industry or academic setting.

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# The Training of Giving Argument Towards Technical Peer Tutors

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**Abstract.** The argument is needed to communicate. The Speakers communicate with the listener to deliver arguments in order to make the information presented can be understood and understandable. In the same case, the writer conveys arguments in order to make the information presented can be understood and understandable by readers. The author uses various arguments in expressing his ideas in order to be accepted by the reader. The argument is a set of statements in the form of the establishment of and support to it. The argument used to influence others in order to approve it. The establishment is delivered by a writer in order to be accepted by his readers. The establishment presented need to support with facts, evidence or reason, so that the information presented is more accurate. Disclosure in the process of writing the arguments needs to be drilled. Training writing arguments can be performed independently or by way of collaborating. Training by way of collaboration can be done, for example with the technique of peer tutors. Peers can provide input in the form of criticism and suggestions of improvements so that the arguments presented is understood by the reader. Entries submitted two arguments, namely the linguistic and content argument. The argument of the content refers to disclosure content ideas. Disclosure of the idea in the academic field uses the idea of the scientific spectrum. The author of scientific works should be able to use the language of Indonesia with good and true. The use of the language of Indonesia with a good writer is the ability to select the language diversity in accordance with the context of the communication. The use of the language of Indonesia correctly is the author's ability to understand and use the language of Indonesia in accordance with the system rules apply. The systems of rules that need to be mastered include structure rules system languages in various linguistic levels (word, form of word, sentence, paragraph, and discourse, vocabulary, spelling, and punctuation).

Keywords: Argument, delivering argument, establishment, peer tutor

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## I. INTRODUCTION

Written communication made to establish ideas and feelings to the reader by using written media. The author uses various arguments in expressing his ideas to be accepted by the reader. The argument is a set of statements in the form of the establishment and support of them [1]. The quality of the argument depends on the quality of the establishment which is maintained or confirmed as well as the quality of the evidence used to support the establishment. The relationship between the establishment and the evidence presented largely determines the quality of an argument.

The argument according to [2] is part of a broader process of argumentation that among those who had argued. People who argue reasoning from establishments that can be accepted by others until the establishment of which was opposed by the audience. Audiences will only accept the establishment resisted if they can persuade by rational reasoning reception power. In other words, someone's argument is reflected in the ability to connect establishments with evidence to convince others appropriately and correctly.

## II. DISCUSSION

### The Elements of Argument

The argument as one type of communication has three elements as proposed by [1] and [3]. First, the establishment or proposition expressed or conclusions desired by the speaker (the speaker or writer) to be received by the speakers (the listener or reader). Second, evidence of which is the fact or condition that is objectively observable, or proposition that

has generally been accepted as true, or conclusions which have strengthened before. The establishment was supported by the evidence and reasoning which connected both of them. Third, the efforts to influence other people by making a summary to make the establishment is accepted or rejected. There for, in order to convince others, the writer or speaker using establishment, proposition, evidence or the preparation of a summary of the arguments submitted in order to be accepted by others. The three elements of the argument will presented below.

### Establishment

The establishment is the opinion or conclusions drawn based on the evidence, guarantee, suppositions, and rebuttal. There is some word or group of words that indicate the establishment, such as so, therefore, as such, and conclusion. In other words the statement after signs are the establishment. The use of these signs in the argument makes readers easier to find the position to be defended by the author. Santoso (1995) suggested good reasoning seeks to include signs that explicitly so that readers can easily comprehend written by the author through signs (including markers reasons). [4] and the [5] calls these signs with indicator conclusions.

A written argumentative discourse should be directed by an establishment. The establishment is a clear and direct statement on the fundamental position of an opinion. It is the main argument of the elements of a discourse. The establishment of a single part can be the most important part of a discourse. The effectiveness and quality of the whole piece of writing depends on its founding. If the establishment

suggested some facts so it will contain the facts about something.

Based on the reference, the establishment is differentiated into three, namely fact establishment, value establishment and policy establishment. [1] and [6]. Fact establishment is a summary statement about the conditions or relationships in the past, present, and future. The fact establishment is the form of causal relationship between concludes a condition or event by other events or conditions. Thus, the establishment of facts can be forecast and the establishment of the fact of history. To support the establishment of the fact of the author requires sufficient and appropriate data. This data may include the data statistic; the witness can be trusted and allowing conditions to make predictions. For example, to conclude that alot of streets in East Kalimantan are damaged, must be supported by the evidence such as the data of roads damaged.

Value establishment is associated with argument effort to maintain that an action is right or wrong, good or bad, giving advantage or disadvantage, obtained or not and so on. Establishment of the attempt to assess the value of a deficiency or excess of an idea, object or behavior in accordance with the standards or criteria owned speakers. The focus of the founding values is values shared by the participants speaking. Therefore the data witch stance regarding the value to the existence of something both positive and negative. Thus, the data used to support an establishment can be customized with an action of a particular point of view.

Policy Establishment confirms the conditions that should exist or not exist. The argument tried soon be conducted suggested that policy making is based on specific facts or value (consideration) specific.

The establishment is also divided into interpretive establishment, evaluative establishment, and advocacy establishment for the particular purpose. Establishment of interpretation describes the opinions include an exploration of the meaning; the unveiling of the assumption; logical analysis; structure, and style; or a comparison of the various texts. When the authors summarize a passage, the authors show an establishment that can interpret an opinion. Establishments that can interpret about the events or circumstances may include consideration of such issues as cause and effect or context.

Evaluative establishment describes the opinion includes assessing the effectiveness of a particular presentation, for example the power of opinion, relationship, openness, and others. Comparison of various texts from an evaluative perspective can include making an assessment of the effectiveness of different text. Establishment of evaluative about events or circumstances may vote relating to the behavior of agents who participated in the event from the standpoint of ethical, political, practical, economic, or other points of view.

Defense establishments describes the opinion may include suggestions or guidelines relating to how it should respond to the text. For example, whether they should reject or accept opinions that have been made, or whether perhaps it needs more information to make a reasoned judgment.

## **Evidence**

Evidence is a factual condition that can be observed objectively, belief or premise has been accepted as true, or conclusions which have been consolidated before [7] : [8]. Evidence is supporting the establishment in order to serve as the founding formulated acceptable by speakers or writer [1].

Evidence can be classified into two groups, the facts and opinions to the facts [9]. People believe something facts through various means. First, it was verified through observation or experience. In other words, people that hear, see, touch, smell, or taste. Second, people believe the facts based on general experience. This common experience can be sourced from a report or a narrative description of the object or event; the statistics are collected and arranged in a systematic and informative, and the physical evidence that helps improve the argument.

The fact of opinion is the meaning of a person's interpretation factual evidence. If the facts based on experience, directly or indirectly, opinions regarding the consideration of how an event or declaration of a problem is understood evaluated and addressed.

Evidence in support of the argument is valid, if the evidence can be properly answered the questions asked. Validity is evidence used to support the argument to be accepted by society. Significance is evidence relied on the argument and had strategic value to the problems encountered, which have engineering properties, namely the ability to help produce a measurable impact and useful to solve a problem

The reason is a rational link between the evidence and the establishment as well as the steps made someone when making conclusions. Reason as an argument moves from the evidence into the establishment. It is composed of general principles that show how the evidence and the proposition that they are linked.

Assessment is the assumptions that are made about the author's subject by considering the facts. For example, an author writes the facts about the events showing the 30 September movement in 1965. From these facts, the author concludes that such events cannot be avoided and a only few scientists who want to protest it. There is no history book or newspaper that can prove that this assumption is correct. It is only human reasoning. The success or failure of the whole argument depends author may or may not use the provision of a sufficient reason to involve the correct judgment.

The last type of evidence is used in writing an argument is testimony. There are two types of testimony, the story of eyewitnesses who saw the events and the assessment of experts who have had the opportunity to examine and interpret facts. Both give validity to an argument.

## **Inference**

Part arguments which consist of reason is often called inference. Inference is done by connecting the proof (something that is already known and accepted as true) with the establishment (the unknown) to gain new knowledge [1] and [3]. In drafting the conclusions, arguing principles must be met, and both the principle of material and formal principles [3]. The principles include the clarity and certainty of material from proposes delivered and formal principles include the truths that guarantee the correct inference.

Making conclusions is the process of getting a proposition drawn from one or more propositions, while propositions

obtained must be justified by pulling a proposition. Proposition used to attract new proposition called the premise while the proposition drawn from the premise called conclusion or inference.

The Speakers or writers when they are making inferences they make explicit information. Implicitly information submitted it to accommodate the new information and the old. Such information is a cornerstone of the process of inference. There are two way in making Inference, inductive and deductive. In inductive inference, the conclusion should be more general than its premise, whereas the deductive inference, conclusion could not have been more common in nature than its premise. In other words, the withdrawal of inductive inference is the result of thinking of questions that specifically bring them to the general conclusions. Instead, drawing conclusions deductive thinking process is the result of the problems common to specific conclusions.

Making deductive conclusion can be done in two ways: directly and indirectly. Drawing conclusions directly done if the premise is only one. The conclusions of this nature immediately explain what that proposition. Because of its deductive, then the resulting conclusions could not be a more general nature of its premise. Drawing conclusions indirectly happen if the proposition or premise is more than one. Two propositions serve as the premise and the conclusion proposition:

#### **Technical of Peers Tutor**

Disclosure in the process of writing the arguments needs to be drilled. The Training of writing arguments can be made independently or collaborating. Writing independently performed by each author by giving thoughts, ideas and feelings through writing without the help of others. Each student is free to express his ideas expressively. Writing collaboratively conducted by each author giving the thoughts, ideas, and feelings through writing with the help of others.

Training of collaborating can be done with a variety of strategies, methods, and techniques. [10] using guided writing strategy to improve student writing children's stories. Zubaidah research results indicate that the use of guided writing strategy as a learning strategy was effective to use guided writing strategy. Coaching strategy aims to provide opportunities to students individually understand how to write a children's story.

Training of tutorial method by [11] to improve the attitude of responsibility and independent learning of students in the Geography Department. The results of the research show that the attitude of responsibility and self-reliance of student learning on the learning strategies of learning Geography can be improved through tutorial methods.

Training techniques disclosure argument with peer tutoring is done by providing opportunities for students who are writing theses to collaborate with other students to revise and edit their thesis proposal. Put submitted consists of two arguments, the argument and the argument content language. The argument refers to the disclosure content ideas. Disclosure of ideas in the academic field uses a variety of scientific ideas.

Authors of scientific work should be able to use Indonesian well and correctly. The use of Indonesian well is the writer's ability to choose the kind of language appropriate

to the context of communication. The use of Indonesian properly is the writer's ability to understand and use the Indonesian language in accordance with the applicable rules of the system. System rules that need to be mastered include language structure rules system in various levels of linguistic (words, formation of words, sentences, paragraphs, and discourse, vocabulary, spelling, and punctuation.

### **III. CONCLUSION**

Disclosure of the arguments in the writing process needs to be trained. Training writing arguments can be made independently or collaborating. Writing independently performed by each author by giving thoughts, ideas and feelings through writing without the help of others. Each student is free to express his ideas expressively. Writing collaboratively conducted by every writer give the thoughts, ideas and feelings through writing with the help of others.

Results of previous studies show that writing and thinking skills training can be done with a variety of strategies, methods, and techniques. Various strategies, methods, and techniques can improve student writing skills and thinking. The students have the opportunity to give his thoughts, ideas and feelings through writing individually and collaboration

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# Minimum Service Standards for Basic Education in Border Region

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**Abstract.** This study aims to analyze the achievement of MSS Basic Education, with a case study in the border area Entikong District of the district, followed by alternatives for achieving the standards in 2017 and prepare a strategy for its achievement. The method used in the study is the evaluation of research with the evaluation model inaccuracies or gaps (The Discrepancy Evaluation Model). This research subject is the Education Unit at the District Cabdikpora environment Entikong Sanggau consisting of principals and teachers, and Head Cabdikpora. The data used are primary and secondary data. The findings of these studies it is known that the availability of educational unit within an affordable than permanent settlement group; the number of students in each group learning for SD/MI does not exceed 32 people, while SMP/MTs exceeding 36, not available 1 (one) classrooms and there are not furnished with a table and chairs; each SMP/MTs provided a laboratory space science; Each Primary School/not available 1 (one) class teachers for each study group and for SMP/MTs unavailable teacher of Religious Education, Indonesian, Social Sciences, Arts, PE, and ICT; each SD/MI and SMP/MTs provided two (2) teachers who meet the academic qualifications S1 as much as 70%, but does not have a teaching certificate for the SD/MI; Chief of SD/MI has not qualified academic S-1 or D-IV and have a teaching certificate, already for SMP/MTs; curriculum development and innovative learning process is not implemented effectively; 50% SD/MI which has 100 titles enrichment and 10 reference books and each SMP/MTs 200 items of enrichment books and 20 reference books; 58.33% of permanent teachers work 35 hours per week in the education unit; 66.66% educational unit organized a learning process for 34 weeks per year; 66.66% The principal supervising lessons and provide feedback to teachers twice each semester.

Keywords: Minimum service standards, the border area

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## I. INTRODUCTION

Basic education is a basic foundation in the form of human/next generation quality. This is in accordance with the demands of the subjects that can deliver the required competence in children at a very age (infancy). Not a few children who live without basic education through Early Childhood Education (ECD) and/or Kindergarten (TK) which also greatly affects its readiness to continue at the level of primary school.

No wonder if the optimization of various lines made by the government, the school, and the community (parents) to improve the quality of students in basic education. Because, basic education can be likened to building a house of cards, if the bottom card vacillate position, it will cause the collapse of the entire building.

Real form of government is done in optimizing the sustainable level of basic education continues diupayakan, ranging from the improvement of facilities for pre facilities, curriculum development, improve the welfare of teachers, and there are many programs that are designed to improve the quality of education. It is also done by the parents, ranging from providing facilities, child nutrition, to provide additional tutoring outside of school (tutoring), both privately and classical.

In this regard the efforts made can be seen the extent to which the value or the evaluation results obtained. Images of accreditation the school / madrasah's West Kalimantan

province itself still needs special perhatian. Of the 32 provinces in 2013, the position of West Kalimantan in below average, even some of the standard 8 standard targeted accreditation ratings are at the two lowest numbers nationwide.

Based on these data with respect to the quality of course not independent of management and the management of quality school. Because quality school is a portrait of a quality education. So that the activities of implementation of management education in primary school is to achieve minimum service standards must be optimally so as to provide useful contribution towards improving the quality of basic education.

Understanding the importance of national education, the government continues to strive for the fulfillment of the right of every citizen in obtaining educational services to improve the quality of life of the nation. As the Preamble to the Constitution of the Republic of Indonesia in 1945 that obliges the government responsible for educating the nation and create common prosperity.

The government has made various efforts to improve public education Indonesia, one of them through a Compulsory Basic Education program 9 Year contained in Candy No. 47 of 2008. Compulsory Basic Education 9 Year consists of SD and MI or other levels equal to at least junior high school and MTs or other equivalent level.

Minimum Service Standards is one of the government's efforts in improving the quality of Compulsory Basic Education 9 Year evenly. Minimum Service Standards is a

measure of the performance of educational services held areas. Provincial Government and District/Municipal education by SPM in accordance with the Decree of the Minister of Education No. 129a/U/2004 About Minimum Service Standards Education is continuously updated until the [1] on the Amendment of National Education Minister Regulation No. 15 Year 2010 About the Service Standards minimal Basic Education in the District / City.

In accordance with the demands in the fulfillment of the MSS announced by the government would also need to be a top priority of the government, schools and the community so that a minimum service level in every school meets the standard criteria that have been determined. Subdistrict Entikong Sanggau is one area which is also a top priority. Because the District Entikong a border region which is a leading window between neighboring countries, in particular the country of Malaysia.

Aside from being a border area, another reason that attracted the attention of researchers in selecting the District Entikong Sanggau as the target area of research is the state of education, both the means of pre-means, the results of the evaluation of education, of delay information and transport as well as one of the regions that have not carried out evaluation related to minimum service standards.

From some of the above, this study was done to see and evaluate the extent-which the implementation of minimum service standards is performed as a distribution of education as well as a vehicle for information to help the government in improving the quality of education in every aspect of that practice Minimum Service Standards which is expected to be realized as expected by the government, schools and communities. Besides that SPM is not the final goal, but rather is a step towards achieving the National Education Standards.

## II. METHODS

This study included evaluation research. According [2] evaluation is a gathering activity data or information to be compared with the criteria after it is concluded. Evaluation of the program used in the study evaluating the implementation of minimum service standards this is an evaluation model inaccuracies or gaps (The Discrepancy Evaluation Model) for this study will be to compare the implementation of the SPM with the criteria or indicators according to the Regulation of the Minister of [1] on Amendment Regulation National Education No. 15 Year 2010 Minimum Service Standards for Basic Education in the District / City.

This study uses a quantitative approach which is used to measure the achievement of MSS Basic Education in Elementary District of Entikong Sanggau. The method used is descriptive method. According [3] descriptive research aims to describe the systematic and accurate facts and characteristics of the population or a particular field. Analysis of primary and secondary data as the completeness of the survey in this research study.

Subjects in this study is a source of obtaining data and research information. The subject is the source of this research is the parties who are in elementary school in the District Cabdikpora environment Entikong Sanggau consisting of principals and teachers. Place of execution of this study is programmed incidental in District Entikong Sanggau categorized as a border area where each school as a place of

research subjects are domiciled (teacher teach) consisting of schools below:

TABLE I  
DATA EDUCATIONAL RESEARCH SITES

No	School	Village
1	SDN No.01	Semanget
2	SDN No.02	Panga
3	SDN No.03	Sontas
4	SDN No.04	Punti Tapau
5	SDN No.05	Suruh Tembawang
6	SDN No.06	Merau
7	SDN No.07	Mangkau
8	SDN No.08	Nekan
9	SDN No.09	Serangkang
10	SDN No.10	Pool
11	SDN No.11	Sekajang
12	SDN No.12	Entikong
13	SDN No.13	Punti Kayan
14	SDN No.14	Badat
15	SDN No.15	Senutul
16	SDN No.16	Gun Jemak
17	SDN No.17	Pala Pasang
18	MIS Istiqamah	Entikong
19	SMPN 1	Semanget
20	SMPN 2	Suruh Tembawang
21	SMPN 3	Sontas
22	SMPN 4	Serangkang
23	SMKN 1	Entikong
24	SMK YLBE	Entikong

Source: Cabdikpora Entikong districts (2015)

Data collection methods used in this research is the study adalaha documentary and direct communication (interview). The data collected was analyzed by descriptive quantitative and percentage of central tendency in accordance with the purpose of research which is then described according to the needs of evaluations conducted as a vehicle for the conclusion of the study.

This research instrument contain indicators of achievement (IP) SPM implementation of Basic Education is used as a guideline when making the observation, documentation and interview by comparing SPM contained in observation sheets, documentation and interviews with SPM implementation of Basic Education. Grating instrument indicators of achievement (IP) SPM Basic Education with reference to 27 Achievement Indicators adapted from [1], which is illustrated as follows:

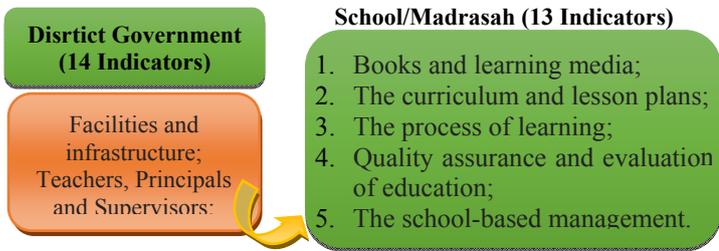


Fig. 1 Minimum Service Standards Indicators

### III. DISCUSSION

The previous section described the status of the SPM under the authority level of education offices and education units. According to the division of authority in Permendiknas 15 In 2010 there is authority for the District/Municipal and authority to level Education Unit. For SPM authority of district/city level there are 14 indicators of achievement, while for the unit level of education there are 13 indicators of achievement.

Please note that the Minimum Service Standards is not an end in education, but is part of the process required for the achievement of national education standards. Besides that, minimum service standards are the basis of the minimum standard of a school quality assessment (accreditation). Therefore, a strong and positive relationship between SPM Accreditation School/Madrasah is not only deserves to be known, but also must be met.

Application of SPM intended to ensure access and quality for people to obtain basic services of Regency/City Government in accordance with the criteria set by the Government. SPM Basic Education prepared with the following principles:

1. Applied to the obligatory functions. Therefore, the SPM is an integral part of the educational development of sustainable, comprehensive, integrated according to the National Medium Term Development Plan;
2. Enforced for all districts/cities. SPM is intended to ensure the availability of services to the public without exception includes the type and quality of services needed by the community;
3. Ensuring public access to obtain basic services without sacrificing quality;
4. Is an indicator of performance, so it can be used to improve the efficiency and effectiveness of resource use;
5. Characteristically dynamic, meaning that it can be adjusted to the level of development in the public service;
6. Set within the framework of the implementation of basic services.

[4] Based on the recapitulation of the evaluation of the minimum service standards to Cabdikpora Entikong and the District 12 School (Education Unit), delivered the following general description of each of the minimum services that are already available or implemented by Cabdikpora and Education Unit for each service indicators:

#### 1. Facilities and infrastructure

Service indicators for aspects of facilities and pre facilities at the Department of Education contained in the IP-1 - IP-4, while for the School entered in the IP-15 - IP-18. The information obtained:

Demographically, provided the school/madrasah within reasonable walking distance is a maximum of 3 km for SD/MI and 6 km road/water for SMP/MTs of a group of permanent settlements in remote areas. However, the distance is still not supported with proper road infrastructure for distance (Fig. 2), so that helped a serious concern by the government to be able to provide better access for people from settlements to the school/madrasah purposes.



Fig. 2 Strip Land Transport (Suruh Tembawang)

In the aspect of learning romobongan (IP-2) provided information that:

1. The number of students in each group learning for SD/MI does not exceed 32; while
2. The number of students in each group learning for SMP/MTs exceed 36 people.
3. Each learning group SD/MI and SMP/MTs not available 1 (one) classroom.
4. While the SD/MI and SMP/MTS in a decent state, but every classroom SD/MI and SMP/MTS is not equipped with enough tables and chairs for students and teachers, as well as the board.



Fig. 3 The condition of classrooms

Further to the science lab space (IP-3) each SMP/MTs provided a space science laboratories, provided enough tables and chairs for 36 students, and include a set of equipment for the practice of science demonstrations and experiments learners. But there was still dioptimalkannya equipment available to the relevance also considering that administer teacher competence.



Fig. 4 Room teachers and school principals

In harmony with the matter in the aspect (IP-4) that provided a space teachers and principals (Figure 4) which is equipped with a table and chairs for every person teachers, principals and other education staff in SD/MTs and SMP/MTs. However, it is still in the category of pretty livable seen from a sense of comfort of the room.

Alternative policies that could be taken would be more appropriate if the first see the general picture ratio of students to study groups, it is necessary to look at the compatibility between the number rombel with the availability of classroom space so no rombel who do not have a classroom. Moreover, it can: 1) build new classrooms, 2) merge school and/or implementing the learning multigrade, 3) provision of additional means, 4) the grant of facilities, 5) renovation/remodeling of buildings classrooms for inadequate conditions, 6) providing support to schools to encourage preventive care classroom conditions that are still viable.

## 2. Teachers and Education Personnel

No matter how good the curriculum, means the pre-infrastructure and management of the school, it is of course just expectations only if it is not supported by the competence of educators, terbih again if the number or ratio of teachers to students is not appropriate, then of course it is very far from expectations associated with improving the quality of a school in an effort to improve the quality of their students. In line with this state that each SD / MI unavailable 1 (one) class teachers for each study group (IP-5).

With regard to the adequacy of classroom teachers, an alternative that can be taken: 1) transfer classroom teachers civil servants from the school / madrasah that excess teachers to schools / madrasah deficiency, 2) provide special incentives for teachers who are willing to be placed in the corners, 3) Conducting the recruitment of teachers new as needed, 4) Merger school for elementary school small shortage of teachers, and 5) Holding multigrade teaching to schools in special areas.

Furthermore, for each SMP / MTs only available subject teachers of Civics, English, Mathematics and Science, while others are not fulfilled for the teachers in each subject Religious Education, Indonesian, Social Sciences, Arts, PE, and ICT (IP-6). In any SD / MI and SMP / MTs provided two (2) teachers who meet the academic qualifications S1 or D-IV as much as 70% or more, but not available two (2) teachers who have a teaching certificate for the SD / MI, whereas in each SMP / MTs provided teachers with qualifications

Akademiks-1 or D-IV and has been certified educator as much as 35% more, especially for science subjects and English, but not for Mathematics and Bahasa Indonesia (IP-7, IP-8 and IP-9).

With regard to the above data there are some things that can be used as an alternative to the policy as an effort to overcome the existing conditions, namely: 1) To increase the qualifications of teachers who have not S1/D-IV, 2) Doing the recruitment of new teachers who are already qualified S1/D-IV, 3) Conducting the removal of teachers from schools with excess teacher S1/D-IV to schools that lack teachers S1/D-IV.

Besides that alternative in prioritizing the improvement of qualification of teachers who have not S1/D-IV would be more on target when priorities are arranged along with the fulfillment of the minimum requirements as contained in the Achievement Indicators-9 is a teacher of math, science, Bahasa Indonesia and Bahasa England must be qualified S1/D-IV and certified educators.

## 3. Qualifying School Principals and Supervisors

All heads of SD / MI has not qualified academic S-1 or D-IV and has a teaching certificate (IP-10), while for all the heads of SMP / MTs and all supervisors already qualified academic S-1 or D-IV, and has a teaching certificate (IP-11 and IP-12).

Associated with the condition, as an alternative policy that can be done to meet minimum service standards, especially for IP-10 can perform the way by: 1) providing scholarships to increase academic qualifications principals especially for the SD/MI, 2) Prioritize the certification of educators to principals, and 3) Conducting the promotion/appointment of new principal that already S1/D-IV that has been certified and meet other eligibility requirements.

## 4. Curriculum and Supervisory Visits

In the aspect of curriculum development that district government has a plan and carry out activities to assist the education unit in developing the curriculum and innovative learning process. But they still lack the activities relating to curriculum development and program evaluation conducted for the implementation of development capable of generating an effective realization of the curriculum.

Visits education unit supervisors to do one every month and every visit was conducted for approximately 3 hours for supervision and coaching. Conditions such as these should be scaled back so that schools that were targeted by inspectors can be built faster in realizing the improvement of the quality of education in schools.

## 5. Linkages SPM Indicators of Basic Education with BOSP, Distribution Master and MBS

The following Table 2 description Minimum Service Standards relating to the three programs PERFORMANCE to assist local government to improve the quality of education, the Unit Cost of education (BOSP) so that schools obtain financial resources sufficient operational, Distribution Master (so that schools have adequate teachers) and Management based school (MBS) so that schools can manage its resources in a professional manner.

TABLE II  
INDICATORS LINKAGES SPM WITH BOSP, DISTRIBUTION MASTER, AND MBS

Disribution Teachers Indicators 5 - 9	MBS Indicators 15-27	BOSP Indicators 15-18 & 21-27
<ol style="list-style-type: none"> <li>5. Each Primary School / not available 1 (one) vote for each teacher study groups;</li> <li>6. There SMP / MTs not available 1 (one) of the teachers of Religion, Indonesian, social studies, arts and culture, PE, and ICT;</li> <li>7. any SD / MI provided two (2) teachers who meet the academic qualifications S1 or D-IV but have not had a teaching certificate;</li> <li>8. Each SMP/MTs provided teachers with academic qualification of S-1 or D-IV by 70% and half of them (35% of total teachers) has been certified educators;</li> <li>9. There SMP / MTs are not available teachers with academic qualification of S-1 or D-IV and educator certificate for Mathematics and Indonesian.</li> </ol>	<ol style="list-style-type: none"> <li>1. any SD / MI provides textbooks that have been defined for feasibility by the Government includes subjects Indonesian Language, Mathematics, Science, Social Studies and Civics, with a ratio of one set for each learner;</li> <li>2. each SMP / MTs provides textbooks that have been defined for feasibility by the Government covering all subjects with a ratio of one set for each participant learners;</li> <li>3. 75% of SD/MI provides a set of teaching science and materials consisting of a human skeleton model, a model of the human body, a globe (globe), examples of optical equipment, science kits for basic experiments and poster IPA;</li> <li>4. Only 50% of SD/MI which has 100 titles enrichment and 10 reference books and each SMP / MTs 200 items of enrichment books and 20 reference books;</li> <li>5. Only 58.33% of permanent teachers work 35 hours per week in unit-face education, including activities in the classroom, estab-learning plan, implement-the learning, assessing learning outcomes, mem-guided and trained learners, as well as carry out additional tasks attached to the implementation of the main activities in accordance with the workload of teachers</li> <li>6. 66.66% educational unit organized a learning process for 34 weeks per year with the learning activities as follows: <ol style="list-style-type: none"> <li>a. Class I – II : 18 hours/week;</li> <li>b. Class III : 24 hours/week;</li> <li>c. Class IV - VI : 27 hours/week; or</li> <li>d. Class VII - IX : 27 hours/week;</li> </ol> </li> </ol>	<p>15-18 &amp; 21-25 = MBS</p> <ol style="list-style-type: none"> <li>7. Unit of education implement education unit level curriculum (SBC) in accordance with applicable regulations;</li> <li>8. any teachers implement lesson plan (RPP) which is based on the syllabus for each subject diampunya;</li> <li>9. each teacher to develop and implement an assessment program to help improve the ability of learners;</li> <li>10. 66.66% Principals supervising lessons and provide feedback to teachers twice in each semester;</li> <li>11. Every teacher submit evaluation reports on subjects as well as the assessment of each learner to the principal at the end of the semester in the form of reports on the achievement of learners.</li> <li>12. The head of the school or madrasah submit a report of a repeat end of the semester (UAS) and Deuteronomy Increase Class (UKK) and final test (US/UN) to the parents of learners and deliver the recap to the District Education Office/ City or the Office of Religious Affairs in the district / cities at the end of each semester.</li> <li>13. Each educational unit has sought to apply the principles of school-based management (SBM).</li> </ol>

The results of an analysis of 14 indicators of SPM for the Department of Education and 13 indicators SPM for Education Unit show that has not been fully met as stipulated in the rules Permendiknas (fig. 5). That is, there are still gaps in the Territory of the SPM Cabdikpora and Education Unit in the District of Entikong.

Thus required no further activity in order to meet a variety of SPM to overcome the existing gaps. Based on the achievements of the existing SPM needs to be further restructuring efforts in order to meet the SPM as well as the maintenance of the achievements of the fulfillment of SPM has been achieved.

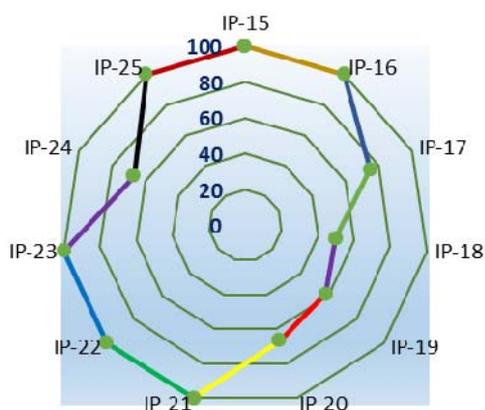


Fig. 5 Indicators of achievement

In this framework, Cabdikpora Entikong and Education Unit require both funding and moral support of all internal elements, committees, supervisors, government and productive synergy between the District Education Office, the Office of Education Districts, as well as the Education Unit.

#### IV. RESULT

Based on the results of research in general standard of basic education services in District Entikong Sanggau when referring to Permendiknas 15 Year 2010 on Minimum Service Standards for Basic Education in general is still far from the expected. The conclusions obtained based on the indicators used to measure the minimum service standards are:

1. Availability of educational unit within reasonable walking distance is a maximum of 3 km for SD/MI and 6 km road/water for SMP/MTs of a group of permanent settlements in remote areas.
2. The number of students in each group learning for SD/ MI does not exceed 32 people, while SMP/MTs exceed 36 people.
3. Each group learn SD/MI and SMP/MTs not available 1 (one) classrooms and there are not furnished with a table and chairs.
4. Each SMP/MTs provided a space science laboratories, provided enough tables and chairs for 36 students, and include a set of equipment for the practice of science demonstrations and experiments learners.
5. There is one space teachers and principals are equipped with tables and chairs for all teachers, principals and other education staff in SD/MTs and SMP/MTs.
6. Each SD/MI unavailable 1 (one) class teachers for each study group.
7. Each SMP/MTs only available subject teachers of Civics, English, Mathematics and Science, while others are not fulfilled for the teachers in each subject Religious Education, Indonesian, Social Sciences, Arts, Culture, and ICT.
8. Each SD/MI and SMP/MTs provided two (2) teachers who meet the academic qualifications S1 or

D-IV as much as 70% or more, but do not have the teaching certificate for the SD/MI. And each SMP/MTs provided teachers with academic qualification of S-1 or D-IV and has been certified educator as much as 35% more, especially for science subjects and English, but not for Mathematics and Bahasa Indonesia.

9. Head of SD/MI has not qualified academic S-1 or D-IV and have a teaching certificate, while for all the heads of SMP/MTs and all supervisors already qualified academic S-1 or D-IV, and has a teaching certificate.
10. Visits education unit supervisors to do once a month for approximately 3 hours/visit, and the district government has a plan and carry out activities to assist in developing the education unit curriculum and innovative learning process, but has not been implemented optimally.
11. any SD / MI provides textbooks that have been defined for feasibility by the Government includes subjects Indonesian Language, Mathematics, Science, Social Studies and Civics, with a ratio of one set for each learner.
12. Each SMP/MTs provides textbooks that have been defined for feasibility by the Government covering all subjects with a ratio of one set for each participant students.
13. 75% SD / MI provides a set of teaching science and materials consisting of a human skeleton model, a model of the human body, a globe (globe), examples of optical equipment, science kits for basic experiments and poster IPA;
14. Only 50% of SD / MI which has 100 titles enrichment and 10 reference books and each SMP / MTs 200 items of enrichment books and 20 reference books;
15. Only 58.33% of permanent teachers work 35 hours per week in unit-face education, including activities in the classroom, estab-learning plan, implement-the learning, assessing learning outcomes, mem-guided and trained learners, as well as carry out the task additional attached to the implementation of the main activities in accordance with the workload of teachers;
16. 66.66% educational unit organized a learning process for 34 weeks per year with the following learning activities:
  - a. Class I – II : 18 hours/week;
  - b. Class III : 24 hours/week;
  - c. Class IV - VI : 27 hours/week; and
  - d. Class VII - IX : 27 hours/week;
17. Unit of education implement education unit level curriculum in accordance with applicable regulations.
18. Each teacher implement the lesson plan which is based on the syllabus for each subject diampunya and develop and implement an assessment program to help improve the ability of learners.
19. 66.66% Principals supervising lessons and provide feedback to teachers twice each semester.
20. Every teacher submit evaluation reports on subjects as well as the assessment of each learner to the

principal at the end of the semester in the form of reports on the achievement of learners.

21. Madrasah principal or submit a report of a repeat end of the semester and Deuteronomy Increase Class and final test (US/UN) to the parents of learners and deliver the recap to the District Education Office/City at the end of each semester.

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# The Development of Social Studies Learning and Assessment Materials Based on Local Potential for Secondary School

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**Abstract.** This research aimed to analyze student needs in social studies classroom in purpose to design learning model using local potential in Banjarmasin area. This research used qualitative approach. Data collected through literature analysis, observation, and interviews through focus group discussion and focused on 7<sup>th</sup> grade materials. Data analyzed with qualitative method. The result showed that those are seven basic competences on 7<sup>th</sup> grade that can be developed for social studies learning with the using of local potential. Learning process can be applied through direct and indirect methods, interactive learning, independent learning, field observation, and discussion. It required supplement books based on local potential, the increasing of MGMP's empowerment for social studies teachers, teachers' training on learning planning, process, and evaluation based on local potential, and the developing of learning media through film documentary with local potential contents. In term of curriculum changing, to increase teachers' competence in assessment it required training about authentic assessment, classroom assessment, character based assessment, and competence based assessment. It is necessary to create local potential roadmap as guidance for social studies learning material in Banjarmasin as the implementation of local excellence and character education for social studies learning..

Keywords: Social Studies Learning, Local Potential, Character Education

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## I. INTRODUCTION

Related to the renewal of education curriculum in Indonesia, the transformation of vision, mission, and purpose of social studies education also already happened. The goal of this process is to increase the quality of education that already slowly getting down. The reforms especially on social studies learning purpose are include knowledge, attitudes, and skills that divide into social skill, study skill and work habits, group work skill, and intellectual skill [1].

The tendency of the learning paradigm conversion requires creative step from teachers as facilitators of learning. Social studies aims to make the students have the basic ability to know the concepts related to people's lives and the environment, to think logically and critically, curiosity, inquiry, problem solving, and skills in social life, commitment and awareness the social values and humanity, and the ability to communicate, cooperate and compete in a pluralistic society, locally, nationally, and globally. Teachers as facilitators must provide the way to help student reach all this basic abilities through social studies learning.

As an integral part of educational programs and teaching, the curriculum implementation is expected to include all subjects in school in accordance with the

applicable rules. Social studies cannot be separated from the implementation of this curriculum. This means that social studies must implement the new curriculum in the implementation of its educational programs and teaching.

NCSS (2010) explains that the powerful social studies has five principles in its application that may have implications for what teachers should know, what to do, and what should be its disposition. The fifth principle is to learn and learning social studies should be meaningful, integrative, value-based, challenging, and active learning [2]. Nowadays, the curriculum of social studies already meet the requirements of the development of powerful learning.

Social studies learning can be categorized as meaningful learning when students can integrate all the knowledge, beliefs, values, attitudes, and social skills and citizenship as the direct benefit for themselves, their life in society, in the nation, and for the sake of continuing education to a higher level. [3]. Therefore, social studies learning should emphasize into the development of important ideas in a range of topics that are essential in learning these important ideas, so as to improve the understanding, appreciation, and the student's ability to apply it in life [4]. Its significance will depends also on how content the lessons learned by the student and how the student activity can be improved. This is not necessary for the artificial material, but quite meaningful essential material

needed more. Teachers need to reflect on an ongoing basis to plan, implement, and assess learning and learning social studies [5].

The integrative learning social studies accomplished when the learning process can be done through the topics with multidiscipline, interdiscipline, and crossdiscipline approach by integrating the knowledge, beliefs, values and attitudes, and social skills into action competence. Social studies material also includes material across time, across space, across values or norms, and across the curriculum [6].

Social studies with value-based will draw attention to the potential for learning in the social policy implications thus train students to think critically and make decisions on some social issues. It also means that the social studies learning does not have to teach the beliefs or views personal, political, or a particular sect, but may sensitize students on the complex and dilemmas value on the issue, considering the advantages and costs that may occur in individuals or groups of potential in taking actions, and develop a reasoned consideration, consistent with the values of social democratic politics. Teachers should encourage the recognition of the existence of the views of the opposition, respect for the rational views with the support of sufficient data, sensitive to cultural similarities and differences, and a commitment to social responsibility [7].

Teaching and learning social studies will be challenging when students provoked curiosity to achieve learning goals both individual, group, and classical; teachers exemplify the spirit to achieve the learning objectives and broad-minded in conducting the inquiry process. Teachers also use learning strategies that can motivate students to demonstrate the same qualities as a teacher, and teachers must show interest and respect for the students' thinking and asking the students reasoned arguments and full commitment.

Social studies learning should be able to make students learning actively where the process of reflective thinking in decision-making is exist. Students develop a new understanding through active knowledge construction where interactive discourse happened that facilitates the construction of meaning that necessary to develop an important social understanding, and gradually the teacher can modify the role from to give an example, explain, and provide information into cooperative learning, participatory, and self-contained role so that students can learn authentically [8].

These kinds of learning process demand the interaction of student and their surrounding environment. The using of local excellence in their environment will help teachers to make meaningful learning for social studies classroom. Local advantage is the potential of an area to be a product or service of value and income generating areas and is unique and has a competitive advantage [9]. Local potential must be developed from the potential of each region. The concept of the developing of local potential include the potential for natural resources, human resources, geographical, cultural and historical potential [10].

The problem of learning process that facing by our school is the lack utilization of local potential by teachers. It gives impact on the less knowing of student about local potential that have multiplier effect on the less developing of local potential for life. Typical potential with a competitive advantage not well explored. According to Asmani (2012), one of the ways to become a developed country is the

utilization of resources, natural resources and its own culture, so as to achieve self-reliance and self-confidence. Therefore, now the government announced a local excellence educational to be implemented in learning process. Education of local excellence is education that utilizes local potential in the aspects of economy, culture, language, information technology, communications, ecology and others that are beneficial to the development of student competence [11]

Based on the results of the previous research about the utilization of local potential for learning founded that: 1) The strengthening social studies learning by using the local potential was not optimal, 2) there are still shortcomings in the implementation of social studies assessment, 3) the attitude of teachers towards the use of local potential is still weak with the lack of teaching materials as the main reason.

The purpose of this research is to analyze student needs in social studies classroom in purpose to design learning model using local potential in Banjarmasin area. The local potential mentioned include culture, entrepreneurship, environmental education and phenomena that exist on the social studies learning process in the classroom. It also analyzed about social studies teacher readiness to using local potential with character based for the implementation of the latest curriculum applied.

## II. METHODS

This research used qualitative approach. Data collected through literature analysis, observation, and interviews. Literature analysis done through related documents that consist of cultural potential data, entrepreneurship potential data, and environmental education data from related government department sources such education and tourism department. Literature analysis also includes some data from Middle Term Development Plan of Banjarmasin City 2004 – 2019 and the mapping of area and local potential in Banjarmasin. Observation done through direct observation into few secondary school in Banjarmasin that focused on social studies learning process at 7<sup>th</sup> grade and local potential around the school that can be used as learning materials. Interviews through focus group discussion involve social studies teacher at 7<sup>th</sup> grade. Data analyzed with qualitative method with descriptive techniques.

## III. RESULT AND DISCUSSION

Social studies intended that students will have the following competences: to know the concepts related to people's lives and the environment, having the basic ability to think logically and critically, curiosity, inquiry, problem solving, and social skills in life, having the commitment and awareness of social values and humanity, and having the ability to communicate, cooperate and compete in a pluralistic society, locally, nationally, and globally. The scope of social studies covering some aspects such as Man, Place, and Environment, Time, Sustainability and Change, Social and Cultural Systems, also Economic Behavior and Welfare. All this competences taught to student through some themes above in social studies classroom with different level in every grade at secondary school.

Geographically, Banjarmasin city area lies in the lowland and marshy area around 0.16 meters above the sea. Alluvial

soil is predominantly clay structure is a type of soil that dominates the area of Banjarmasin. It also cleaved by Martapura River and is influenced by the tide of Java Sea that contributes to the city's drainage and provides distinctive characteristics on people's lives, especially the use of the river as a water transport infrastructure, tourism, fisheries and trading. Few local potential of Banjarmasin include service, industry, trade and tourism potential.

The land utilization in Banjarmasin is generally for trading, offices, and tourism activities. The trading center is located in Pasar Baru, Pasar Antasari, and Pasar Sudimampir which are all located in the city center. The office center is located in Lambung Mangkurat, Pangeran Samudra, Ahmad Yani, and other areas that have access from and to out of the town area. The land for agricultural activities is located in the suburbs such as in East Banjarmasin in Sungai Lulut and South Banjarmasin in Kelayan and Pamurus Regions. This utilization affects to the shape of community settlement pattern in Banjarmasin City. Generally, there are three forms of settlement patterns in Banjarmasin include linear, clustered, and open settlement patterns.

According to Kemendikbud (2013), Competence Standards that must be mastered for social studies subject at secondary school is the understanding of the human effort to fulfill the needs. There are two competence standards that can be described into seven basic competencies:

1. Describe the pattern of economic activity and land utilization (first basic competence).
2. Describe the pattern of settlements based on the physical condition of the earth's surface (first basic competency one).
3. Describe the consumption as the main economic activities (second basic competence).
4. Describe the production as the main economic activities (second basic competence).
5. Describe the distribution of goods and services as the main economic activities (second basic competence).
6. Describe the role of business entities including cooperatives, as a place of production process and their relationship with economic actors.
7. Express creative ideas in economic action to achieve autonomy and prosperity.

Utilization of local potential is very effective to be used in social studies learning activity because all of the competence have real example in various condition and activity of Banjarmasin society. As an illustration, the various forms of settlement patterns and community land use activities as described earlier, affect the pattern of economic activities in Banjarmasin. The typical activities of the local community in the form of various production activities such as furniture production, purun craft, chips craftsmen, sellers of soto banjar, sasirangan home industries, rubber industry, fishery industry around martapura river, and timber industry are few local potential that relevant for social studies learning. Buying and selling activities in floating markets and other traditional markets, the use of seas and rivers for goods distribution, and various food processing industries from agricultural, plantation and fisheries are another form of local potential that can be used in learning activities. Not only as learning resources but this diversity can be directed as a form of life skills learning for students in the future.

Related to life skills and the utilization of local potentials, the results of interviews with social studies teachers indicate that they already applied it all in learning activities. Learning applications have been implemented with various methods including classroom learning with various methods either directly or indirectly, field observation, interactive learning with direct involvement of students with a number of economic activities, independent study through assignment, and discussion in class and outside the classroom along classroom field trip. Various activities have been done such as introducing student to local natural resources and the utilization of waste such as coal and timber (sawdust), trip to Sultan Suriansyah Mosque and local heroes' graveyard from South Kalimantan, five business day activities at school, and environmental management around school for student entrepreneurship activities.

Social studies teachers in Banjarmasin also introduced various activities related to academic skills. Academic skills are a support in the development of student competence [12]. The various skills that support academic skills include the skill to describe the rules in accordance with the field he studied, the skills to seek information about natural phenomena, religion and social culture through a predetermined source of reading, introducing the type, function and also how to use the measuring instrument with the right and safe principles in accordance with the type of skills learned. In pre-vocational skills, the teacher introduces the type of works related with their career expectations, introduces various skills areas, identifies attitudes of an entrepreneur, introduces entrepreneurship planning steps, and chooses and uses the tools that necessary to create the product.

In addition to the development of life skills, the indicators of successful development of potential local utilization in social studies learning also includes the integration of values and character [13]. The characters that developed in the learning process include 18 character values along with indicators at the level of the Secondary School that described by the Curriculum Center (2010), including Religiosity, Honesty, Tolerance, Discipline, Hard Work, Creative, Independent, Democratic, Curiosity, the Spirit of Nationality, Patriotism, Appreciate The Achievement, Friendship/Communicative, Love Peace, Love Reading, Environmental Awareness, and Social and Responsibility Awareness. The integration of values and character formation by social studies teachers has been done in the learning process in accordance with the direction specified by the applicable curriculum subjects. Social teachers in Banjarmasin stated that the integration of value becomes an important factor in addition to the mastery of scientific competence for students. Some forms of activities that reflect the value integration include habituate students with a polite, honest, respectful and responsible.

Some obstacles that faced by teachers in the utilization of local potential for learning include the lack of technology mastery to handle time and learning resources constraints. Teachers still feel the lack of time to introduce students in more detail about the various local potentials that can be used for social studies learning activities. Supporting books are mostly national-minded while local potential integration is limited. Teachers also still face a number of obstacles such as integrating local potential utilization in planning, process, and

learning evaluation. The ability of teacher assessments is also limited. They have not fully understood the appropriate assessment pattern especially when utilizing local potential for classroom learning.

These conditions indicate the need for improvement on several aspects to strengthen the utilization of local potentials in social studies learning, especially in Banjarmasin. It is necessary to prepare supporting books that focus more on the utilization of local potentials, especially for social studies lessons that mapped the types and their use in relation to social studies learning materials in secondary school. Communication between teachers also needs to be incentivized through the strengthening of the MGMP. This needs to be done so that teachers can implement brainstorming activities to enrich their experience in engaging students with the utilization of local potential. Increased teacher competence through training related to planning, implementation, and assessment (authentic assessment, classroom assessment, character-based assessment, and competence-based assessment) should be implemented sustainably. The introduction and mastery of various learning methods, instructional media, and the utilization of technology should also be given to social studies teachers in order to facilitate them to integrate local potentials in their learning activities.

#### IV. CONCLUSIONS

Those are seven basic competences on 7<sup>th</sup> grade that can be developed for social studies learning with the using of local potential. Learning process can be applied through direct and indirect methods, interactive learning, independent learning, field observation, and discussion. It required supplement books based on local potential, the increasing of MGMP's empowerment for social studies teachers, teachers' training on learning planning, process, and evaluation based on local potential, and the developing of learning media through film documentary with local potential contents. In term of curriculum changing, to increase teachers' competence in assessment it required training about authentic assessment, classroom assessment, character based assessment, and competence based assessment. It is necessary to create local potential roadmap as guidance for social studies learning material in Banjarmasin as the implementation of local excellence and character education for social studies learning.

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# Necessity of Education of Culture Values in a Global Perspective

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**Abstract.** One of trends that is clearly visible from the dynamics of human life today is the change caused by human efforts in the fields of science and technology that is going faster. The change immensely affects many aspects of life, including the inevitable impact on the lives of the people in the various aspects. On the other hand is the effect of foreign culture through print and electronic media as an inevitable consequence from the process. This has been given its own color and pattern in the joints of our culture that is in the process of transformation. Consequently, we are faced with various necessities: the penetration of the avantgarde new values that are often in contrast with the conventional old values. The tendency to be pragmatic, materialistic, and hedonic that has become dominant in a society that is increasingly consumerist, ends up in spiritual impoverishment; and a long line of other phenomenons. Therefore, it is important for us now is to think strategically about cultural values. Cultural phenomenon, regardless of its form, is unstable in position. Its instability requires us to not think of it as a fixed thing. Culture is always in a position to change, and continuously change. Moreover, if it is put in the perspective of globalization. The process of globalization provides vast space for anyone to do what is called identity construction. It is said so because through that process, the exchange of objects or symbols become very easy. It is similar with the movement from one place to another. Not to mention the advance of communication technology that has made cross-fertilization between cultures to be easier. That is why, in globalization, the translocal nature becomes nature of culture and identity.

Keywords: Education, Values, Culture, Globalization

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## I. INTRODUCTION

Cultural phenomenon, regardless of its form, is unstable in position. Its instability requires us to not think of it as a fixed thing. Culture is always in a position to change, and continuously change. Moreover, if it is put in perspective of globalization. The process of globalization provides vast space for anyone to do what is called identity construction. It is said so because through that process, the exchange of objects or symbols become very easy. It is similar with the movement from one place to another. Not to mention the advance of communication technology that has made cross-fertilization between cultures to be easier. That is why, in globalization, the trans local nature becomes nature of culture and identity.

The situation of our lives today hints of the terminology of place as a horseback for the understanding of culture and identity is not enough. Achievement of a good understanding of it will be done if it's positioned in the terminology of "wayfaring." This terminology includes culture and people that are always in Odyssey from one place to another. As a result, the spaces of culture are also the "field" where the wayfarers become back and forth travelers, and those spaces even necessitate themselves as "a home together".

## II. DISCUSSION

The dignity a society is determined by its own culture. Culture will grow and flourish if it is supported by the society. It is said so because the society is the "heir" as well as actor on creating and achieving a situation called "cultural

awareness," that it awareness or understanding among the society that an individual is living in the midst of social order, his position is never singular but plural. In addition, a society will not be able to maintain its existence if it does not interact with other societies, or if it does not live its own culture. This substantial issue has become essential and inevitable thing for local cultures. Therefore, it is not enough to be discoursed, but must be actualized in any way that is considered good.

Until today, we have two kinds of cultural system, i.e. local system and trans-cultural (read: national) system, both of which must remain to be preserved and developed. Consequently, dialectical cross between the "other" and the urge to create and re-create an independent local identity in a continuous process of transformation – called: re-actualization, revitalization, reinterpretation – becomes imperative to be implemented. The goal is to prepare a habitat so that the figures involved in it can live the local values, and also able to open rooms for greets with its other half: to become local, at the same time become trans-local and global. Prioritization of scholarly and cultural enrichment is a matter that should not be ignored.

In a global constellation, local culture and potential essentially can be considered as an alternative cultural reality because we do have and are between two kinds of cultural systems that must be preserved and developed: national cultural system and local ethnic cultural system. National cultural values are valid generally for the whole nation, and at the same time they are outside any local ethnic cultural ties.

Local culture and potential will have image of Indonesia because they are combined with other values derived from the old cultural values contained in the various local ethnic

cultural values. Local culture and potential basically can be viewed as the foundation for the formation of national identity. Such culture makes the culture of society and nation to have roots.

Local culture and potential in the form of a whole regional or ethnic culture that had lived and developed for a long time, should remain a cultural element that is preserved and sought to integrate into a new culture as a whole. The case of Indonesian as national language upheld is a clear example. This national language is a form of national culture, because its growth and development actually comes from local culture, i.e. Malay language used by our brothers in Riau and surrounding areas. As the national language, it has been accepted by other ethnicities and it has enriched from other local languages. Certain local language in the Archipelago (as part of local culture) is rich with expression of emotional atmosphere, and it necessitates a certain meaningfulness potential in enriching national language.

### **1. Multicultural Education as a Civilizing Process**

When the state of cultural awareness is sought through education, the provision of education should give space and opportunity for the subjects involved within and in certain dynamic processes. That is, it becomes a process that allows change of humans of Indonesia into cultural awareness as idealized. In the broadest meaning, education must be interpreted as a process of acculturation.

Next implication is that any policy made in the name of public interest must always be based on cultural insight. The attitude rejecting plurality and polyphony, and pursuing power to be centered in one hand which is monophony, must be resisted; and counter with injection of multiculturalism. Healthy habitat of civic culture should be prepared, which is a habitat that necessitates the availability of space and opportunity for full participation and open interaction to all diverse elements of society.

In this context, local culture and potential as well as its embodiments can be positioned strategically, both in expressive and appreciative perspectives. For example, when local culture and potential shape artistic texts. Various forms of artistic communication can be empowered in the context of development of cultural awareness. Multicultural approach is one way that can be taken. Through multicultural approach, the understanding of these values is collaboratively sought to address problems. Hopefully, ethnic conflicts, separatism, and disintegration of the nation can be prevented because this approach puts the value of tolerance as the main basis.

### **2. Several Strategic Options**

Essentially, the efforts in developing local culture and potential, including the category of composition action, i.e. a constitutive action in the development of local culture and potential, or in a broader framework, relate to "the other" for the sake of greater importance. Therefore, the action presupposes the action of choosing-rejecting, raising-lowering, and combining-separating various ideas of local culture and potential. Thus, understanding that each local ethnic has its own cultural theme becomes important. This understanding is not impossible for the cultural theme within certain ethnic communities is organized in an understandable pattern, and cultural patterns or shapes are derived from objective mind.

Because cultural themes are expressions of cultural idea or value, these themes are sometimes not different between one and another, even they are potentially influencing each other. That is why, acceptance of one theme often leads to rejection of another, and the realization of such rejection can demand subsequent acceptance. Different cultural themes can be complement each other, but can also be contradictory. In various different forms, cultural themes are able to play themselves to fight against the others.

#### **a. Dualistic Strategy**

The two local cultures and potentials competing each other have three categories of dualistic strategy. Firstly, strategy with balance, i.e. placement of two local cultures and potentials in a balance. Secondly, strategy with repression, i.e. abandonment or repression of one local culture and potential for the sake of the other one. Thirdly, strategy with subordination, i.e. subordination of one local culture and potential to the other one.

Strategy with balance treats two cultural themes that compete equally and maintain its balance. For example, the conflict between personal interest and public interest can be solved with this strategy. Both interests can be considered equally important, and the conflict can be solved by maintaining a precise balance between them. Claude Levi-Strauss (1966) considers binary opposition as a standard method to achieve and maintain social balance within society. Competition of two local cultures and potentials take the forms of binary opposition, and so does its balance. Thus, the binary opposition that directs the actions of mind and society can be understood as a version of strategy with balance.

Strategy with repression and subordination can be illustrated with selection of orientation of certain local culture and potential. When the orientation towards something is totally repressed for the sake of giving attention to anything else, it is including strategy with repression. However, when the orientation or attention is not fully repressed, rather be subordinated to other thing, this strategy is classified as strategy with subordination.

#### **b. Monistic Strategy**

Category of monistic strategy includes following strategies:

- 1) Strategy with fusion, i.e. when two local cultures and potential competing each other can be merged or fused into one. The doctrine is univocity: two things are tied in one universe of discourse. In this strategy, the two competing cultures are treated equally, that both lose each of their identity in the fusion process, then they reach a common identity.
- 2) Strategy with exclusion, i.e. exclusion of one of the two local cultures and potentials competing.
- 3) Strategy with absorption, i.e. absorption of one of the two local cultures and potentials that competing into the other one. In the strategy of absorption, relationship between individuals and communities can be reversed: individual interests can be absorbed into the communal interest. Strategy with absorption should not be confused with strategy of exclusion. Both are creating monistic results, but they differ in one important aspect.

Each monistic strategy can be paired with one of the three dualistic strategies. Strategy with fusion is related to strategy with balance: in both, the local cultures competing are treated

equally. Strategy with exclusion is similar to strategy with repression: no intrinsic value recognized, both from the excluded culture and the repressed culture. Strategy with absorption is associated with strategy with subordination: in both of them, one of the competing cultures is dominated by the other, even though the positive values are recognized for both of them.

### III. CONCLUSSION

Why is the idea of the instability of culture and identity in the global discourse must be measured when we discuss the development of local culture and potential? It is because this situation brings us to the understanding that culture and identity, as stated by the experts in this field, are always meeting and mixing of different cultures and identities through the process of hybridization, which result in the degradation of the well-established boundaries of culture due to the instability by the hybrid processes.

As a cultural wealth, ethnicity should always be understood as a cultural concept centered on the sharing of norms, values, beliefs, symbols, and cultural practices that are potentially *shared*. Thus, ethnicity will always presupposes the existence of relationship, namely a relationship with self and social identification. In this context, dealing (read: developing) local culture and potential will find its significance and relevance.

Culture is a fundamental part of every person and of society, and therefore the development, of which ultimate objective is led to the interests of human beings, should have a cultural dimension. Digging and instilling local knowledge inherently through education can be regarded as a movement to return to the basis of their own local cultural values, as part of efforts to build a national identity, and as a kind of filter in selecting the influence of "the other" culture. The values of local knowledge necessitates strategic function for the formation of national character and identity. Education that has concern for it will lead to, as mentioned above, the emergence of an independent, full of initiative, and creative attitude. If the values of the culture are successfully instilled through education that functions to serve the nation, it would result in useful, efficient individuals in human life: people who are "culture aware".

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# TEACHING COMPETENCE OF TEACHER AS AN INTERVENING VARIABLE IN INTELLIGENCE SPIRITUAL, INTELLECTUAL, AND PSYCHOMOTOR OF THE RELIGIOUS HUMAN RESOURCES IN SMPN 42 BATAM

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**Abstract.** Teachers are the main actors in the school to form students into human resources faithful and devoted to God Almighty, good personality, has extensive knowledge and insight, physically and mentally healthy and has a civic responsibility and nationality, in a brief sense of the role of teachers religious people. Collecting data by distributing questionnaires to 232 respondents with the status as a student. Once the data is obtained then the next data is tested by using the Path Analysis. The survey results revealed that the direct effect of variables Spiritual Intelligence, and Psychomotor significant effect, whereas Intellectual variables no significant effect on Teachers Teaching Competence. Overall the direct influence of variables Spiritual Intelligence, Intellectual, Psychomotor to variable Teacher Teaching Competence 23.2%. While the direct effect of variable Spiritual Intelligence, Intellectual, Psychomotor against religious people indicates that the variable Spiritual Intelligence and Intellectual significant effect. While variable Psychomotor and Master Teaching Competence no significant effect on the human variable sisters. Overall the percentage of variables influence Spiritual Intelligence, Intellectual, Psychomotor Religious people variable of 85.9 %. Indirectly variable competence Teachers Teaching is not an intervening variable that affects indirectly variable Spiritual Intelligence, Intellectual, and Psychomotor against religious people actual effect is the direct effect.

Keywords: Spiritual Intelligence, Intellectual, Psychomotor, Teachers and Teaching Competence Religious People

## I. INTRODUCTION

### Background

Become an advanced nation is certainly an ideal to be achieved by each country in the world and it is common knowledge that advance whether or not a country is affected by educational factors, where the teacher is the one component that occupies a central position and very strategic in building and also human resources religious forming through the education system.

Considering the importance of the role and position of the teacher in the learning process, then it is natural that the phenomenon of the low quality of education will appoint a teacher as a pedestal error or teacher suspected as the cause.

One of the intelligence in order to form human resources religious is spiritual intelligence that comes from human nature itself, this intelligence helps people to make it meaningful for the activities carried out, moreover intellectual intelligence related to the strategy in solving problems using logic, while intelligence psychomotor includes the ability involves physical skill in doing or getting things done.

The development of spiritual intelligence, intellectual and psychomotor equally in today's education is important and should be taken care of earnest and serious handling of all parties, both in the family, society and the State.

A number of setbacks in the world of education today is considered as a result of a malfunction of the system of education in developing the personalities that are reliable, the output of education only a capacity of skills and intellectual,

the result can be guessed then, a lot of problems that appear on a national scale in the form of moral depravity and criminality as criminal activity by "robber or Motorcycle Gang" which involve students, fighting between students, drug abuse, promiscuity and so forth is a result of the fragility of the character and moral education that do not have the spiritual base foundation.

Problems often arise in schools, especially in SMPN 42 Batam is a timeless problem that occurs in most higher education institutions, this problem did not just come from the learners but also of educators themselves, problems often arise from the learners such as the level of "skipping" of the students, the use of dialing-answering poor as well as the language to peers is the most often heard even in front of the teacher, another issue that also appears not uncommon to many students play cat and mouse with the teacher when told to pray in mosques, courtesy and politeness students who lack the teachers are also part of the problem is often the case. According to the Master BK violations that occur are still in the category of light, violations that often occur include violations in the aspect of discipline of students, such as communication devices (Hp) to school recorded 101, students late, did not go without explanation, to Internet cafes during school hours (absenteeism ) 26, bring the vehicle to school 9. On the social aspects such as semi-permanent tattoos 5, not polite social dijejaring 29 fights 7. While on one aspect of the association such as courtship 3, bet the ball 18, and the students were caught deviated well as watching porn 7. Offense committed by students, although still relatively light

and the natural phenomenon of juvenile delinquency, it will still be a negative impact on students.

From the educators, the problem that arises is miss communication among the teachers, the teachers level of activity in solving personal affairs sometimes take time teaching hours, do not infrequently teachers are leaving the task to the students.

According to observations of investigators while describing the background of the problems mentioned above, this research takes the title: Teaching Competency of Teachers as an Intervening Variable in Spiritual Intelligence, Intellectual, and Psychomotor on Religious Human Resource in SMPN 42 Batam.

#### Formulation of The Problem

Based on the background of then formulation of the problem in this research as follows:

1. Does the spiritual intelligence directly affect on the teaching competency of teachers in SMPN 42 Batam?
2. Does the intellectual directly affect on the teaching competence of teachers in SMPN 42 Batam?
3. Does psychomotor directly affect on the teaching competence of teachers in SMPN 42 Batam?
4. Does spiritual intelligence directly affect on the religious human resources in SMPN 42 Batam?
5. Does intellectual directly affect on religious human resources in SMPN 42 Batam?
6. Does psychomotor directly affect on the religious human resources in SMPN 42 Batam?
7. Does teaching competency of teachers directly affect on the religious human resources in SMPN 42 Batam?
8. Does spiritual intelligence indirectly affect on religious human resources through teaching competency of teachers in SMPN 42 Batam?
9. Does intellectual indirectly affect on religious human resources through teaching competency of teachers in SMPN 42 Batam?
10. Does psychomotor indirectly affect on religious human resources through teaching competency of teachers in SMPN 42 Batam?

## LITERATURE REVIEW

### Teaching Competence of Teacher

According to Yamin and Maisah (2010: 1), "... the term competencies, competence, and competent translated as competencies, skills, and empowerment refers to the state or quality capable and suitable", while according to [1], "the competence of an amalgamation of knowledge (cognitive), attitudes (power heart), and skills (physical power) are realized in the form of deeds ". According to the researchers is the set of knowledge, skills, and attitudes that must be owned by a teacher, in an effort to create a conducive learning conditions.

#### 1. Personality Competence

According [1], "includes all elements of personality, both physically and psychologically, so it can be seen that every action and behavior is a reflection of one's personality". According to the researcher is the personal ability of teachers are reflected in an action, appearance, and speech.

#### 2. Pedagogic Competence

According Sagala [1], "... paedagogik competence is the ability in the management of learners". Meanwhile, according

to Yamin and Maisah (2010: 9) "paedagogik competence includes understanding of the learners, planning and implementation, evaluation of learning outcomes, and develop learners to actualize their potential". According to the researcher is the ability of teachers to manage students' learning and understanding, so that the potential of students to develop optimally.

#### 3. Professional Competence

According to Yamin and Maisah (2010: 11), states that professional competence is the mastery of learning materials is broad and deep, which includes mastery of curriculum subjects at school and substance of knowledge that overshadow his material, as well as mastery of the structure and methodology of science. According to the researcher is the ability of teachers to apply the concepts, methodologies, and approaches which make learning interesting.

#### 4. Social Competence

According to Yamin and Maisah (2010: 12), "social competence is the ability of teachers to communicate and interact effectively with students, fellow teachers, staff, parents / guardians of students and the surrounding community". According to researcher of social competence is the ability of teachers to interact with students, fellow teachers, staff, parents / guardians of students, and the community around.

### Spiritual Intelligence

Spiritual intelligence is based on a large dictionary Indonesian intelligence that spiritual intelligence relating to heart and concern among humans, other creatures, and natural surroundings based on belief in God Almighty.

According to Zohar and Marshall, translator Mustafa (2005: 25). Spiritual intelligence is the intelligence used to create goodness, truth, beauty, and compassion in our daily lives, families, organizations, and institutions.

Spiritual intelligence in essence, is the intelligence to face and solve the problem of meaning and value of human life behavior and put in the context of a broader meaning and rich. Spiritual intelligence is resting on the inside of us associated with wisdom beyond ego or soul is conscious, spiritual intelligence makes man truly intact intellectually, emotionally and spiritually.

### Intellectual Intelligence

Intellectual Intelligence is the intelligence that demands empowerment of the brain, heart, body, and the activation of a functional human being to interact with others. Intellectual Quotient or IQ commonly referred to as a term of the grouping of human intelligence which was first introduced by the Alfred Binet, a psychologist from the French in the early 20th century.

Intellectual intelligence is the single intellect of any individual who is basically just a link to the cognitive aspects of each individual [2] in which thinking is a medium to increase the vocabulary of the human brain.

### Psychomotor Intelligence

Psychomotor intelligence includes the ability involving physical skill in doing or getting things done. In this realm divided into a number of aspects, including the perception of the senses, readiness to perform a physical movement, a

response guided or movement made by trial and error or by the knowledge they already had, mechanism or skills to do something, motor response that looked or seen, adjustments or adaptations, as well as aspects of the creation of the new movement as a result of its skill.

Psychomotor according to [2] is something related to aspects of skills that involve the function of the nervous system and muscles (neuronmuscular system) and psychological functioning. This realm consists of readiness (sets), imitation (imitation), adapt (habitual), adjusting (adaptation), and create (origination).

### Religious Human Resources

Religion comes from the Latin word "religio", meaning "tie-up". In the English language, religion can be interpreted "having engaged 'God' or 'The Sacred Power'". The religious is a set of religious values that underlie behavior, traditions, everyday habits, and symbols that practiced by the principal, teachers, administrators, students, and school community. Therefore, culture is not only a symbolic form as reflected in the above, but the inside is filled with values. Embodiment culture does not just appear out of nowhere, but through the process of acculturation (Sahlan, 2009: 116).

Thus, religion has rules and obligations that must be complied with and implemented by its adherents, all of which appear to function bind a person or group of persons in relation to God, fellow human beings and the natural surroundings.

Line with this Allah says in the Qur'an. Al Isro: 36.

وَلَا تَقْفُ مَا لَيْسَ لَكَ بِهِ عِلْمٌ إِنَّ السَّمْعَ وَالْبَصَرَ وَالْفُؤَادَ كُلُّ أُولَئِكَ كَانَ عَنْهُ مَسْئُولًا

“And do not follow what you do not have knowledge about it. Truly hearing, sight and hearts, everything will be questioned”.

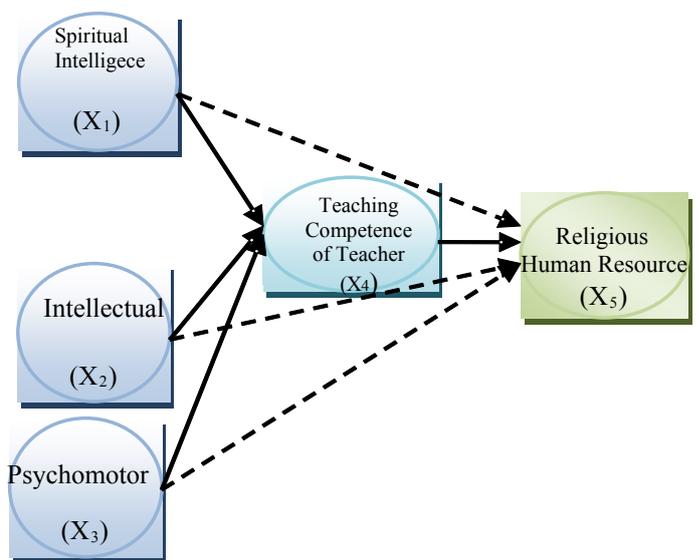
All the activities of education, learning and so on are included in the category of worship. This is in accordance with the words of the Prophet SAW:

طلب العلم فريضة على كل مسلم و مسلمة (رواه ابن عبد البر)

“Seeking knowledge is fardlu for every people Muslim men and women” (H.H Ibn Abdulbari).

من خرج في طلب العلم فهو في سبيل الله حتى يرجع (رواه الترمذی)

“Anyone who goes to study, then he has belonged Fisabilillah (those who uphold God's religion) until he came home again”. (H.H. Turmudzi).



### Research Method

#### Hypothesis

From the research model, the hypothesis of this research can be explained as follows:

1. There is a directly effect of spiritual intelligence on teaching competency of teachers in SMPN 42 Batam.
2. There is a directly effect of intellectual on the teaching competence of teachers in SMPN 42 Batam.
3. There is a directly effect of psychomotor on the teaching competence of teachers in SMPN 42 Batam.
4. There is a directly effect of spiritual intelligence on religious human resources in SMPN 42 Batam.
5. There is a directly effect of intellectual on religious human resources in SMPN 42 Batam.
6. There is a directly effect of psychomotor on religious human resources in SMPN 42 Batam.
7. There is a directly effect of teaching competence of teachers on religious human resources in SMPN 42 Batam.
8. There is an indirectly effect of spiritual intelligence religious human resources through teaching competence of teachers in SMPN 42 Batam.
9. There is an indirectly effect of intellectual religious human resources through teaching competence of teachers in SMPN 42 Batam.
10. There is an indirectly effect of psychomotor on religious human resources through teaching competence of teachers in SMPN 42 Batam.

### II. METHOD

In this research, the method used is descriptive and quantitative approach. Descriptive method is to describe the problem (the state) to determine the existence of a problem, the magnitude of the problem, the extent of the problem, and the importance of the problem (Rumengan, 2010: 35).

A quantitative approach according Rumengan (2010: 9) emphasizes the theory test through the measurement of research variables with numbers and perform statistical data analysis procedures. The purpose of the quantitative method that systematically make a description of the factors and

properties of object observed then combines between variables involved.

### III. Result and Discussion

This research is a result of field research using primary data in the form of answers to a questionnaire that measures five principal variables, namely X1 Spiritual Intelligence, Intellectual X2, X3 Psychomotor, X4 Teaching Competence of Teachers and X5 Religious Human Resources.

In this research all respondents are students of Class VII as many as 119 people, students of class VIII as many as 60 people, as well as students of class IX as many as 91 people, the total respondents as many as 232 people, and of these respondents male 91 and female respondents as many as 141 people, the education level of parents are very varied, it can be known only 5 people to the level of primary education or approximately 2.16%. 20 junior high school or 8.62%, and which dominates is the level of parental education until high school education by 129 or 55.60%, while the education level of respondents parents until Diploma level as many as 18 people or 7.76%. S1 as many as 46 people or 19.83%, as well as to S2 as many as 14 people or 6.03%.

#### DISCUSSION

Directly Effect of Spiritual Intelligence, Intellectual, Psychomotor on Teaching Competency of Teachers

##### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	13.876	1.913		7.254	.000
Spiritual Intelligence	.345	.080	.318	4.327	.000
Intellectual	-.048	.081	-.043	-.595	.552
Psychomotor	.331	.093	.260	3.576	.000

a. Dependent Variable: Kompetensi Mengajar Guru

Source: Research Data Results 2015

Directly Effect of Spiritual Intelligence, Intellectual, Psychomotor on Religious Human Resources

##### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.554	.643		2.418	.016
Spiritual Intelligence	.755	.025	.983	30.010	.000
Intellectual	-.095	.025	-.120	-3.853	.000
Psychomotor	-.034	.029	-.038	-1.188	.236
Teaching Competence of Teachers	.033	.020	.047	1.653	.100

a. Dependent Variable: Religious Human Resources

Source: Research Data Results 2015

Coefficien t Line	t count		(α=0,05)		Sig.	Conclusion
P1	0.318	T1	4.327	0.05	0.000	Significant
P2	-0.043	T2	-.595	0.05	0.552	Not Significant
P3	0.260	T3	3.576	0.05	0.000	Significant
P4	0.983	T4	30.010	0.05	0.000	Significant
P5	-0.120	T5	-3.853	0.05	0.000	Significant
P6	-0.038	T6	-1.188	0.05	0.236	Not Significant
P7	0.047	T7	1.653	0.05	0.100	Not Significant

Source: Research Data Results 2015

From Table 4:21 Coefficientsa above (column Standardized Coefficients) visible regression coefficient Spiritual Intelligence is  $P_1 = 0.318$ . Intellectual coefficient is  $P_2 = -0.043$ . Psychomotor coefficient is  $P_3 = 0,260$ . While in Table 4:22 Coefficientsa above (column Standardized Coefficients) looks coefficient regression coefficient Spiritual Intelligence is  $P_4 = 0.983$ . Intellectual coefficient is  $P_5 = -0.120$ . Psychomotor coefficient is  $P_6 = -0.038$ . Teaching Competency of Teachers coefficient is  $P_7 = 0.047$ . Furthermore, all values (P) are included in the line analysis diagram.

Based on Table 4:23 is known that the results of the calculation of path analysis and significance of direct effect between variables can be explained as follows:

1. The result of Spiritual Intelligence line analysis ( $X_1$ ) of the Teaching Competence of Teachers ( $X_4$ ) obtained the line coefficient of 0.318 with Sig.  $0.000 > 0.05$ . So we can conclude that the path coefficient is significant.
2. Result of Intellectual path analysis ( $X_2$ ) of the Teaching Competence of Teachers ( $X_4$ ) obtained the line coefficient of -0.043 with Sig. for  $0552 > 0.05$ . So we can conclude that the path coefficient is not significant.
3. The result of path analysis Psychomotor ( $X_3$ ) of the Teaching Competence of Teachers ( $X_4$ ) obtained the line coefficient of 0.260 with Sig.  $0.000 > 0.05$ . So we can conclude that the line coefficient is significant.
4. The result of line analysis Spiritual Intelligence ( $X_1$ ) to Religious Human Resources ( $X_5$ ) obtained the line coefficient of 0.983 with Sig.  $0.000 > 0.05$ . So we can conclude that the line coefficient is significant.
5. Results of Intellectual line analysis ( $X_2$ ) towards Religious Human Resources ( $X_5$ ) obtained the line coefficient of -0120 with Sig.  $0.000 > 0.05$ . So we can conclude that the line coefficient is significant.
6. The results of line analysis Psychomotor ( $X_3$ ) towards Religious Human Resources ( $X_5$ ) obtained the line coefficient of -0.038 with Sig. amounting to  $0.236 > 0.05$ . So we can conclude that the line coefficient is not significant.
7. The results of path analysis Teaching Competence of Teachers ( $X_4$ ) towards Religious Human Resources ( $X_5$ ) obtained the line coefficient of 0.047 with Sig. amounting to  $0.100 > 0.05$ . So we can conclude that the line coefficient is not significant.

Furthermore, to calculate the indirect effect of exogenous variables on endogenous variables through an intervening variable was calculated as follows:

1. The result of Spiritual Intelligence line analysis ( $X_1$ ) to Religious Human Resources ( $X_5$ ) through Teaching Competence of Teachers ( $X_4$ ), is obtained by multiplying the regression coefficient  $X_1$  to  $X_4$  regression coefficients.

$$(P_1 X_1 \times P_4 X_4) = (0.318 \times 0.983) = 0.312594.$$

2. Result of Intellectual line analysis ( $X_2$ ) to Religious Human Resources ( $X_5$ ) through Competence Teaching of Teachers ( $X_4$ ), is obtained by multiplying the regression coefficient  $X_2$  to  $X_4$  regression coefficient.

$$(P_2 X_2 \times P_4 X_4) = (-0,043 \times 0.983) = -0.04227.$$

3. The result of psychomotor line analysis ( $P_3$ ) to Religious Human Resources ( $P_5$ ) through Competence Teaching of Teachers ( $P_4$ ), is obtained by multiplying the regression coefficient  $P_3$  to  $P_4$  regression coefficient.

$$(P_3 X_1 \times P_4 X_4) = (0,260 \times 0.983) = 0.25558.$$

Furthermore, to determine the significance of the indirect effect first, conducted a search *error 1* ( $e_1$ ) and *error 2* ( $e_2$ ) with the help of the value of *Adjusted-R Square* for structural equation 1 and equation 2 Structure.

The result of the calculation of the value of *Adjusted-R Square* for structural equation 1 can be seen in the table below 4:32:

**Structural Equation 1  
(Spiritual Intelligence, Intellectual, Psychomotor,  
To Teaching Competence of Teachers)**

**Summary Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.482 <sup>a</sup>	.232	.222	3.182

a. Predictors: (Constant), Psychomotor, Intellectual, Spiritual Intelligence

Source: Research Data Results 2015

From Table. 4:24 above the value of Adjusted-R Square is 0.222. This value can be used to determine the value of the residual the line coefficient, namely:  $\varepsilon_1 = \sqrt{(1 - R^2)} = \sqrt{(1 - 0,232)} = 0,882$ . Furthermore, this value is inserted into line analysis diagram.

Based on Table 4:24 above figures obtained R Square of 0.232 is a significant percentage of the effect of variable Spiritual Intelligence, Intellectual, Psychomotor to variable Teaching Competency of Teachers of 23.2% or exogenous variables used in the model is able to explain 23.2% of endogenous variables, while the remaining balance of 76.8% is influenced by other variables not included in this research model.

**Directly Effect of Spiritual Intelligence, Intellectual,  
Psychomotor, to Religious Human Resources**

**Summary Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926 <sup>a</sup>	.858	.856	.967

a. Predictors: (Constant), Psychomotor, Intellectual, Spiritual Intelligence

Based on Table above figures obtained R Square of 0.858 is a significant percentage of the effect of variable Spiritual Intelligence, Intellectual, Psychomotor to Religious Human Resources variable by 85.8% or exogenous variables used in the model is able to explain the endogenous variables by 85.8%, while the remaining 14.5% is affected by other variables not included in this research model.

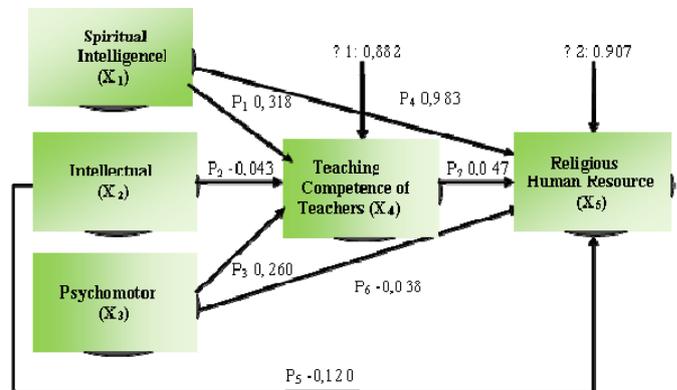
**Structural Equation 2  
(Teaching Competence of Teachers to Religious  
Human Resources)**

**Summary Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.427 <sup>a</sup>	.182	.178	2.309

a. Predictors: (Constant), Teaching Competence of Teachers

Source: Research Data Results 2015



Source: Research Data Results 2015

**Gambar 4.3  
Model Analisis Jalur Hasil Pengujian Hipotesis**

From Table. above the value of Adjusted R Square is 0.178. This value can be used to determine the value of the residual the path coefficient, namely:  $\varepsilon_2 = \sqrt{(1 - R^2)} = \sqrt{(1 - 0,178)} = 0,907$ . Furthermore, this value is inserted into line analysis diagram.

Based on Table above figures obtained R Square of 0.182 is a significant percentage of Teachers Teaching Competency the effect of variable to Religious Human Resources variable of 18.2% or exogenous variables in the model is able to explain the endogenous variables by 18.2%, while the remaining 81.8 % affected by other variables not included in this research model.

#### IV. CONCLUSIONS

The result of line analysis calculation and significance of directly effect between variables can be explained as follows:

1. The result of of Spiritual Intelligence line analysis ( $X_1$ ) of the Teaching Competence of Teachers ( $X_4$ ) obtained line coefficient of 0.318 with Sig. 0.000 > 0.05. So we can conclude that the path coefficient is significant.
2. The result of Intellectual line analysis ( $X_2$ ) of the Teaching Competence of Teachers ( $X_4$ ) obtained line coefficient of -0.043 with Sig. for 0552 > 0.05. So we can conclude that the line coefficient is not significant.
3. The result of Psychomotor line analysis ( $X_3$ ) of the Teaching Competence of Teachers ( $X_4$ ) obtained line coefficient of 0.260 with Sig. 0.000 > 0.05. So we can conclude that the line coefficient is significant.
4. The result of Spiritual Intelligence line analysis ( $X_1$ ) to Religious Human Resources ( $X_5$ ) obtained line coefficient of 0.983 with Sig. 0.000 > 0.05. So we can conclude that the line coefficient is significant.
5. The result of Intellectual line analysis ( $X_2$ ) to Religious Human Resources ( $X_5$ ) obtained line coefficient of -0.0120 with Sig. 0.000 > 0.05. So we can conclude that the line coefficient is significant.
6. The result of Psychomotor line analysis ( $X_3$ ) to Religious Human Resources ( $X_5$ ) obtained line coefficient of -0.038 with Sig. amounting to 0.236 > 0.05. So we can conclude that the line coefficient is not significant.
7. The result of Teaching Competence of Teachers line analysis ( $X_4$ ) to Religious Human Resources ( $X_5$ ) obtained line coefficient of 0.047 with Sig. amounting to 0.100 > 0.05. So we can conclude that the line coefficient is not significant.

Based on the results of path analysis and significance of indirectly effect, it can be explained as follows:

1. The result of Spiritual Intelligence line analysis ( $X_1$ ) to Religious Human Resources ( $X_5$ ) through the Teaching Competence of Teachers ( $X_4$ ) obtained line coefficient of .014946 to .018683 whereas  $t = t_{table}$  value of 1.97 ( $\alpha = 0.05$ ) and 2.60 ( $\alpha = 0.01$ ). Therefore  $t_{count} < t_{table}$ , it can be concluded that the line coefficient is not significant.
2. The result of Intellectual line analysis ( $X_2$ ) to Religious Human Resources ( $X_5$ ) through the Teaching Competence of Teachers ( $X_4$ ) obtained by the line coefficients with  $t = -0.00253$  -0.00202 while  $t_{table}$  value of 1.97 ( $\alpha = 0, 05$ ) and 2.60 ( $\alpha = 0.01$ ). Therefore  $t_{count} < t_{table}$ , it can be concluded that the line coefficient is not significant.

The result of Psychomotor line analysis ( $X_3$ ) to Religious Human Resources ( $X_5$ ) through the Teaching Competence of Teachers ( $X_4$ ) obtained by the line coefficient with  $t = -0.00253$  -0.00202 while  $t_{table}$  value of 1.97 ( $\alpha = 0, 05$ ) and 2.60 ( $\alpha = 0.01$ ). Therefore  $t_{count} < t_{table}$ , it can be concluded that the line coefficient is not significant

Based on data analysis and findings of the research it can be concluded as follows:

1. The test results showed that Spiritual Intelligence to Teaching Competence of Teachers are significant effect.
2. The test results showed that the Intellectual to Teaching Competence of Teachers are not significant effect.
3. The test results showed that the Psychomotor to Teaching Competence of Teachers are significant effect.
4. The test results showed that The Spiritual Intelligence to Religious Human Resources are significant effect.
5. The test results showed that The Intellectual to Religious Human Resources are significant effect.
6. The test results showed that The Psychomotor to Religious Human Resources are not significant effect.
7. The test results showed that the Teaching Competence of Teachers to Religious Human Resources are not significant effect.
8. The test results showed that The Spiritual Intelligence to Religious Human Resources through Teaching Competence of Teachers are not significant effect. Spiritual Intelligence Indirectly effect to Religious Human Resources through Teaching Competence of Teachers, where Teaching Competence of Teachers is not an intervening variable, the actual effect between Spiritual Intelligence to Religious Human Resources are directly effect.
9. The test results showed that The Intellectual to Religious Human Resources through the Teaching Competence of Teachers are not significant effect. The indirectly effect of Intellectual to Religious Human Resource through the Teaching Competence of Teachers, where Teaching Competence of Teachers are intervening variable, the actual effect between The Intellectual to Religious Human Resources are directly effect.
- 10.10. Test results showed that The Psychomotor to Religious Human Resources through Teaching Competence of Teachers are not significant effect. The indirectly effect of Psychomotor to Religious Human Resources through Teaching Competence of Teachers, where Teaching Competence of Teachers are intervening variable, the actual effect between The Psychomotor to Religious Human Resources are directly effect.

#### SUGGESTION

1. To the Teachers of SMPN 42 Batam to pay more attention to the problem of Spiritual Intelligence, Intellectual, Psychomotor and Teaching Competence of Teachers, it is seen from the results showed that these variables in terms of the variables are not optimal. The survey results revealed that the direct effect of variables Spiritual Intelligence, and Psychomotor have a significant effect, whereas the Intellectual variables did not significantly affect Teaching Competence of Teachers.

2. To the principal of SMPN 42 Batam expected to be more active in evaluating the Teaching Competence of Teachers, this is done to improve the ability of students in achieving the learning objectives more leverage
3. For continued researcher need to be followed up other problems in SMPN 42 Batam, outside of the research variables that also contribute to the increased Teacher Competence and are expected to use the interview method in getting valid data and describe the real condition.

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# STUDENT'S LEARNING OBSTACLE OF PERIMETER AND AREA CONCEPT OF PARALLELOGRAM IN LEARNING MATHEMATICS AT JUNIOR HIGH SCHOOL

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**Abstract.** The purpose of this research was to find and analyze students' learning obstacle of the perimeter and area of parallelogram concept. This research is an early study of a didactical design at SMPN I Cisayong Tasikmalaya. The research subject was determined based on purposive sampling graders 8A and 8G. The method used is Think Out Aloud. Data collection techniques: identify materials that predictable students experiencing learning obstacle, generate grillwork and questions about learning obstacle, judged by two experts math education, revised based on advice from experts, then revalued until it is declared fit for use, test learning obstacle, analyze the results of tests, interviews with students who did not answer or the wrong answer. The research instrument used test questions learning obstacle and interview guidelines. The study found some students' learning obstacles are grouped into: understanding the concept of parallel sides parallelogram namely the difficulty in differentiating and explaining parallelogram and not a parallelogram, the students do not understand the features of parallelogram that distinguish the other forms of geometry, mean of learning obstacle on this type of 65.0% medium criteria; understanding the concept of base and height parallelogram that students do not understand that the parallelogram base and height is always perpendicular to each other, mean learning obstacle on this type of 95.0% very high criteria; understanding area concept of parallelogram, mean learning obstacle on this type of 81.8% very high criteria; understanding the concept perimeter the parallelogram, mean learning obstacle on this type of 91.7% very high criteria.

Keywords: Learning Obstacle; Perimeter and Area, Parallelogram.

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## I. INTRODUCTION

Mathematics is one of the sciences that has been introduced to students from the basic level to the higher level, mathematics has an important role in everyday life. Many problems in everyday life that solving using mathematics, so that math needs to be understood and well controlled by all levels of society, especially by students [1], [2]. In addition, mathematics also functions in developing one's thinking ability, as argued by [3] mathematics is a way and thinking tool developed using consistent and accurate reasoning rules so that mathematics can be used as a very effective thinking tool to view various problems Including outside mathematics. Success in learning mathematics depends on how mathematics is given by teachers in learning. If the concepts of mathematics are given directly in the form of the end result, then the functions will not be optimal, because only by knowing the end result of a concept can lead to students' understanding of the mathematical context to be limited, even can cause students experiencing difficulties in learning mathematics [4], [5]. The focus of mathematics learning is not only on the end result but also in the process of forming mathematical concepts.

Students find it difficult to understand a concept when learning is a natural thing, the difficulties students experience when learning varies, this is influenced by the different initial knowledge possessed by each [3]. On the answers of various students, the teacher should be able to explore the difficulties or obstacles in learning, then conditioned the learning process

that can involve students actively, pay attention to the pre-knowledge of students, as well as develop an appropriate learning environment because teachers should be able to guide students overcome learning difficulties so that students can understand the concept being taught.

Geometry is one of the mathematics subject matter given at junior high school level that is difficult for students to understand [6]. According to [6], geometry occupies a special position in the curriculum of mathematics, because many concepts contained in it. From a psychological point of view, geometry is the presentation of abstractions from visual and spatial experiences, such as fields, patterns, measurements, and mappings. Moreover, from a mathematical point of view, geometry provides approaches to problem-solving, such as drawings, diagrams, coordinate systems, vectors, and transformations [6]. Geometry is also an environment for studying mathematical structures. Geometric concepts include flat planes and three-dimensional planes. The flat plan includes triangle, rectangle, parallelogram, rhombus, and kite. At a glance the concept of geometry in learning mathematics looks easy, students just draw and count what is asked. In fact, many students have difficulties in understanding the geometrical concepts they are studying, so that student learning outcomes on geometry are still low [6].

Research [7] on the difficulties of student learning in terms of epistemology on the concept of quadrilateral in grade 7 of SMPN 3 Gorontalo, the result of the research shows that learning obstacle students on epistemology include: applying the concept, visualization of a quadrilateral, determining

formula, problem-solving, and understanding problem. In addition, research [8] on the didactic design of the concept of rhombus area in grade 7 students of SMPN I Bandung, the results of the study showed that students' obstacle learning includes: rhombus understanding, concept of rhombus area, problem-solving that requires imagination to be constructed first, and connection concept of rhombus area with another concept. The results of the study [9] conducted in 7th-grade students in Bandung stated that in studying geometry on the concept of parallelogram area found some learning obstacle on epistemology that is: conceptual, visualization, construction, structural, and connection.

Taking into account the results of the research, it is inspiring to be interested in conducting research at the junior high school level in Tasikmalaya City about the epistemological learning obstacle on the concept of parallelogram but exploring other aspects. Based on interviews with mathematics teachers at SMPN 1 Cisayong Tasikmalaya City, it is found that students still have difficulty in understanding the concept of the base, height, and area of a parallelogram. The results of the interviews have not been sufficient to obtain information about learning obstacles of students on the concept of a parallelogram, need to be explored further through research on other indicators that are different from the previous research include two pairs of parallel sides, base, height, area, and perimeter. Teachers need to know the learning obstacle on certain concepts experienced by students, in order to prepare the learning process so as to overcome the obstacle learning experienced by students.

As [10] states that the goal of mathematics learning is that students actualize learning at the highest level, but the facts show that most students have difficulty actualizing themselves in learning. Learning obstacles of these students include inadequate basic concept learning, inability to attempt to formulate mathematical problems orally, lack of algebra skills, geometry and trigonometry. This research is a preliminary study of Didactical Design Research study on parallelogram concept, with the research question, is: on which indicator students experience learning obstacles on the concept of the parallelogram? The purpose of this research is to explore and analyze student learning obstacles on the concept of the parallelogram.

## II. THEORETICAL REVIEW

Learning obstacle is the things that happen in the learning that resulted in students experiencing barriers in understanding the concept or one in making perceptions about a concept. One effort that can be done by teachers in preparing a learning process is to consider the existence of learning obstacle, so it can be anticipated to avoid the occurrence of learning obstacles that appear in the future. Learning obstacle is a condition in the learning process characterized by the presence of certain obstacles to achieve learning outcomes [11]. Furthermore [12] reveals that learning obstacle in mathematical content can be interpreted as a student difficulty that can be expressed from the pattern of mistakes made by students in answering questions. Furthermore, according to [12], that obstacle learning in mathematics has certain characteristics that are difficulty in processing information, difficulties related to the ability of language and reading, and math anxiety. Learning obstacle occurs due to several factors,

such as [13], [14] suggesting that in practice students may naturally experience a situation called learning obstacle. There are three factors that cause learning obstacle is the ontogeny barrier (the mental readiness of learning), didactic (due to the way the teacher gives the concept), and epistemology (knowledge of students who have limited application context).

According to the [15] - [17], the epistemological obstacle is essentially a person's knowledge which is limited to a particular context, if the person is confronted with a different context, his knowledge becomes unusable or he has difficulty using it. In the learning process, there may be differences in concepts received by one student to another. This is due to differences in perceptions about the concept conveyed by the teacher with the concept formed in the minds of students. There are several concepts as suggested by [18] are concept image and concept definition. Concept image is a description of a concept that each individual received based on both observation, experience and both. Therefore, each individual is able to have a different concept image though with the same term. While concept definition is an individual understanding of concept image. Concept definition can be made by individuals with their own language, so it is slightly different from the formal definition of a concept.

## III. RESEARCH METHOD

This research was conducted on 8A and 8G students of SMPN I Cisayong Tasikmalaya City based on purposive sampling that students in that class have received perimeter and area concept of parallelogram, and enabling the various obstacle learning that is identified. The research method is Think Out Louds or Think Alouds: students are asked to solve the obstacle learning test questions as well as telling what he is thinking. The research phase includes: determining the mathematical concept will be explored learning obstacle is the perimeter and area concept of parallelogram, making the instrument test learning obstacle, evaluated by two experts math education, the revision of the test instrument based on the evaluation of two experts, re-evaluated by two experts math education, after being approved by two experts conducted tests of mathematics education further learning obstacle, analyzing test results learning obstacle, interviews with students the answer is wrong or does not answer, make inferences about learning obstacle on the perimeter and area concept of parallelogram. Techniques of collecting data through obstacle learning tests and interviews of students who did not answer or wrong answers. The research instrument is about obstacle learning test and interview guide. Grid about obstacle learning test as follows:

TABLE 1  
GRID PROBLEM LEARNING OBSTACLE TEST

Indicator Concept	Learning Obstacle	Indicator Problem	Number Problem
Explains the parallelogram properties.	The Concept side parallel to parallelogram	Students are able to differentiate and explain parallelogram and not parallelogram	1

Indicator Concept	Learning Obstacle	Indicator Problem	Number Problem
Solve problems related to calculating the perimeter and the area of the parallelogram.	The concept of the base and the height of the parallelogram	Students are able to define, draw and explain the base and height of the parallelogram	2
	The concept of the area of parallelogram	Students are able to explain and calculate the area of parallelogram	3, 4, 5
	The concept of the area of the parallelogram in the context	Students are able to understand the context of the sentence, change into the mathematical model and be able to calculate the area of parallelogram	6
	The concept of a perimeter of parallelogram	Students are able to calculate the perimeter of parallelogram	7

Students' answers to learning obstacle test questions are assessed using Rubric Score ranges from 0 to 4 as shown in the following table:

TABLE 2  
RUBRIC SCORE STUDENT'S ANSWER

Learning Obstacle	Student's Answer	Score
The Concept side parallel to parallelogram	No answer	0
	Answer but wrong	1
	Differentiate the parallelogram and not the parallelogram but there are errors	2
	Distinguish parallelogram and not parallelogram but not complete	3
The concept of the base and the height of the parallelogram	Distinguish parallelogram and not parallelogram complete and true	4
	No answer	0
	Answer but wrong	1
	Draw the base and the height of the parallelogram but give no explanation	2
The concept of the area of parallelogram	Draw the base and the height of the parallelogram and provide explanation but there are errors	3
	Draw the base and height of the parallelogram and give the explanation correctly	4
	No answer	0
	Answer but wrong	1
The concept of the area of parallelogram in the context	Applying the concept but wrong calculation process	2
	Applying the concept but the calculation process is a mistake	3
	Applying the concept and the calculation process is correct	4
	No answer	0
The concept of the area of parallelogram in the context	Answer but wrong	1
	Converts from context to mathematical model correctly but the area calculation process is wrong	2
	Converts from context to mathematical model correctly but the area calculation process there is an error	3

Learning Obstacle	Student's Answer	Score
The concept of a perimeter of parallelogram	Converts from context to mathematical model correctly but the area calculation process there is an error	3
	Converts from context to mathematical model correctly and the area calculation process is correct	4
	No answer	0
	Answer but wrong	1
	Implemented the perimeter concept but incorrect in the calculation process	2
	Apply perimeter concept but wrong in final result	3
	Apply the perimeter concept correctly and the results are correct	4

Students are said to experience learning obstacle on each item, if able to answer the problem correctly less than 75% or get score less 3 or no answer. The learning obstacle criteria are modified from [19] as shown in the following table:

TABLE 3  
LEARNING OBSTACLE CRITERIA

Learning Obstacle Percentage	Criteria
$0\% \leq - < 20\%$	Very low
$20\% \leq - < 40\%$	Low
$40\% \leq - < 60\%$	Medium
$60\% \leq - < 80\%$	High
$80\% \leq - \leq 100\%$	Very High

#### IV. RESEARCH FINDINGS AND DISCUSSION

Learning obstacle test of the perimeter and area of parallelogram concept was carried out for students of SMPN I Cisayong Tasikmalaya City, 8A class as many as 31 people and 8G as many as 29 people. To explore the learning obstacle students on the concept, given 7 items about learning obstacle test in the form of a description that must be answered for 120 minutes. The question of learning obstacle test has been declared valid and fit for use by 2 experts mathematics education. To the students who do not answer or answer wrongly done an interview to explore deeper about student learning obstacle. Problem number 1 to explore obstacle learning about the concept of the parallelogram and the properties of the parallelogram, the question is as follows:

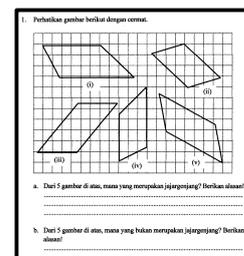


Fig. 1 Problem Number 1

Based on the results of the analysis to students answer to the number 1, only 35% of students able to answer correctly, the student's difficulties in distinguishing and explaining the parallelogram and not the parallelogram, students are fooled by the parallelogram depicted with different positions. In addition, students have not understood the characteristics of

the parallelogram that distinguish it from the other flat builds. Based on the results of interviews with students, the mistake is caused by students' understanding of the parallelogram in previous learning is always described with a horizontal position. The characteristics of the parallelogram are only memorable only to understand from the packaged book without gaining experience in directly identifying the parallelogram characteristics. Thus, the students do not understand the concept of the parallel side of the parallelogram. Learning obstacle about the number 1 is an average of 65.0%, so students are still having difficulty with high criteria.

Problem number 2 to explore obstacle learning about the base and height of parallelogram, the question is as follows:

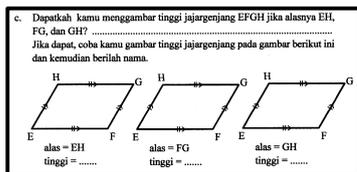


Fig. 2 Problem Number 2

The result of analysis to student answer about number 2, only 5% student able to answer correctly. In general, students mistakenly determine the base and height of the parallelogram, the students' understanding that the height of the Parallelogram is always vertical, is a diagonal line, and there are also students who think that the height of the parallelogram is the side of the Parallelogram. Based on the results of interviews with students, this is because students have not understood that the base and height of the parallelogram are always perpendicular to each other. Students do not understand the concept of base and height parallelogram, so confused in answering questions. Thus indicating that students have difficulty learning about the concept of base and height of parallelogram. Learning obstacle determines the base and the average parallelogram of 95.0%, thus the students have difficulty with very high criteria.

Problems 3, 4, and 5 to explore learning obstacle about the concept of parallelogram area, one of them as follows:

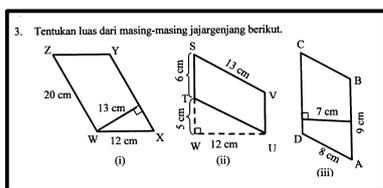


Fig. 3 Examples problems of Parallelogram Area

The results of the analysis of students' answers to questions 3, 4, and 5, students are able to answer correctly only 16.4%, most students answered wrong. This is because in general students are not able to determine the base and height of the parallelogram with the position of the image is vertical and tilted. Based on the results of interviews, this is because students only recognize the concept of the base and height of the parallelogram horizontal image position, students are not accustomed to given the problem of the area of the

parallelogram varying image positions. It becomes a challenge for teachers to provide experience to the students giving the concept of the area of the parallelogram with different image positions, as recommended by [20]. Learning obstacle students on the concept of area parallelogram average of 83.6%, thus students have difficulty with very high criteria.

Problem number 6, to explore learning obstacle about the concept of parallelogram area in context. To answer the problem, students must first change the context into the mathematical model. Based on the results of the analysis of the answers to the question, only 20% of students are able to answer the problem correctly. This is because students have not been able to change from context into a mathematical model. Based on the results of interviews, students are less understanding of the context, what is known and what is asked, so wrong in answering. This is because, in the previous learning process, students are accustomed to given the problem of parallelogram area directly in the form of images, rarely given in the form of context. As stated by [21] students should be given problems in real word problems then convert them into mathematical symbols. Thus the students have difficulty in solving parallelogram area problem in the form of context. Learning obstacle on the concept of parallelogram area in the context of 80.0%, so students have difficulty with very high criteria.

Problem number 7 to explore learning obstacle about perimeter parallelogram concept with the following problem:

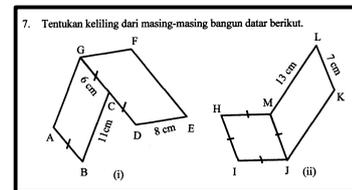


Fig. 4 Problem Number 7

In problem number 7 the picture of the parallelogram has been combined with another flat plane. To determine the perimeter of the parallelogram must understand the basic concepts of the parallelogram perimeter. Based on the results of the analysis of students' answers to the problem, only 8.3% of students are able to answer correctly. Student's answer to problem 7, in determining the perimeter parallelogram calculated the perimeter of each plane first and then for the perimeter by summing. Based on the results of interviews obtained information that students are rarely given the concept of determining the perimeter of the parallelogram whose image is combined with another flat plane. In everyday learning, it usually determines the perimeter of a parallelogram from a single image. Thus the students are not accustomed to being given a concept of which the parallelogram image is combined with another plane. Learning obstacle on the concept determines the average parallelogram perimeter of 91.7%, so students have difficulty with very high criteria.

The findings that have been described, complemented by other findings are summarized in the following table:

TABLE 4  
NUMBER OF STUDENTS EXPERIENCING LEARNING OBSTACLE  
ON EVERY PROBLEM

Class	Number of Students Learning Obstacle						
	1	2	3	4	5	6	7
8A	10	28	17	18	28	19	27
8G	29	29	29	29	29	29	28
Sum	39	57	46	47	57	48	55

The percentage of students experiencing obstacle learning on each question is presented in the following table:

TABLE 5  
PERCENTAGE OF LEARNING OBSTACLE STUDENTS ON EVERY PROBLEM

Learning Obstacle of Concept	Problem	Sum	%	Criteria	Average (%)	Criteria
The Side parallel to parallelogram	1	39	65,0	High	65,0	High
The base and the height of the parallelogram	2	57	95,0	Very High	95,0	Very High
The area of parallelogram	3	46	77,6	High	83,6	Very High
	4	47	78,3	High		
	5	57	95,0	Very High		
The area of parallelogram in the context	6	48	80,0	Very High	80,0	Very High
The perimeter of parallelogram	7	55	91,7	Very High	91,7	Very High

Analyzing the findings of the study, the learning obstacle sequence experienced by students starting from the most experienced lies in the concepts: height and base of the parallelogram, parallelogram perimeter, parallelogram area, parallelogram area in the context, and parallelogram whose picture is varied.

## V. CONCLUSIONS

Based on the results of data analysis and processing research concluded that the ability to think creatively math students by using Problem Based Learning is better than the Discovery Learning, it is seen from the results of their mean. Students experienced the biggest mistake lies in flexibility and originality indicator for the use of Problem Based Learning, while those using Discovery Learning students' mistakes lies in the indicator flexibility, sensitivity and originality. Self-efficacy of students who use the Problem Based Learning and Discovery Learning both at medium qualification.

Based on the results of data analysis and findings of students' learning obstacle of the perimeter and area of parallelogram concept obtained the conclusions that:

1. Learning obstacle students on understanding the concept of the properties of the parallelogram: students difficulty in distinguishing and explaining parallelogram and not the

parallelogram, students do not understand the forms of parallelogram presented in different positions. This is due to the students' limited understanding that the parallelogram is only described horizontally. Furthermore, the student has not understood the special features that distinguish the parallelogram with the other flat plane of having two pairs of opposite sides, parallel, and the same length. Learning obstacle shows an average of 65.0%, thus students have difficulty with high criteria.

2. Learning obstacle on understanding the concept of the base and the height of the parallelogram that students have not understood that the base and height of the parallelogram are mutually perpendicular. Learning obstacle shows an average of 95.0%, thus students have difficulty with very high criteria.
3. Learning obstacle on understanding the concept of the area of the parallelogram is the students have difficulty in understanding the image of the parallelogram whose position is varied or not horizontal. Learning obstacle shows the average percentage of 83.6%, thus students have difficulty with very high criteria.
4. Learning obstacle on understanding the concept of the area of parallelogram presented in context, the student has not been able to change the context into the mathematical model, this is because students are accustomed to receiving directly in the form of images not presented in context. Learning obstacle shows an average of 80.0%, so students have difficulty with very high criteria.
5. Learning obstacle on the understanding of the concept of the parallelogram is that students have not yet understood the concept of the parallelogram whose image is combined with another plane shape, the student assumes that the parallelogram is the sum of the length of each segment in each flat field plane. Learning obstacle shows an average of 91.7%, thus students have difficulty with very high criteria.

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# The Effectiveness of Reading, Responding, & Writing Model in Teaching Writing Hortatory Exposition Text in Bahasa Indonesia

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**Abstract.** The senior high school students' ability in writing Bahasa Indonesia, especially writing hortatory exposition text, is still categorised low. In accordance with the solution for the issue, Genre-based approach (GBA) in terms of reading, responding and writing (2RW) model would be applied. Mixed method in terms of quasi-experiment and descriptive study related to content analysis was employed. Quasi-experimental was utilised to examine the effectiveness of 2RW usage in teaching writing hortatory exposition text. Hence, the qualitative research design in form of descriptive analysis was utilised to analyse the students' writing improvement instigated by the use of the 2RW model in three different school locations; rural, half, and urban area. Moreover, this study reveals that 1) the 2RW model is categorised as effective model in teaching writing hortatory exposition text since the students' score is growing in a post-test, 2) based on the learning output, 2RW is more effectively used in urban area since the highest scores are gained in that site and 3) the improvements of students' capacity are shown by the genre moves used in their texts involving generic structure and linguistic features of hortatory exposition.

Keywords: Reading, Responding, Writing (2RW), Genre-based approach, Hortatory exposition text

## I. INTRODUCTION

Writing is categorized as a hard skill to master since [1], Lindastorm (2007), dan Sturm and Kopenhapper (2000) stated that writing is the complex skill that need three aspects; cognitive, linguistics, and psychomotor. Indisputably, number of studies in Indonesia find students' difficult in writing. [2] found two difficulties caught by Indonesian students; intrinsic and extrinsic factors. As the main concern, the intrinsic factor, Fajriah & Nurjamin (2014) revealed that 73% Indonesian senior high school difficulty is in choosing and developing the idea into a written form.

Choosing and developing idea, particularly expressing the idea, are the common problem that is faced by students. It is supported by [3], Richard dan Renandya (2013), Heong (2013), and [3] that expressing the idea into written form is relatively trickier than presenting orally since the difficulties in writing not only on how to express the idea but also how the idea be understood by readers. This means, the writer need to put the target reader who may have different background knowledge into account.

In relation to the phenomenon above, some difficulties are triggered by many factors, one of them is the learning model given to the students in supporting students choosing and developing their idea. In relation to this, Genre-based approach (GBA) has become trend in teaching writing in many countries. As instance, GBA has been effectively utilized by [4] in one of university in Vietnam and [5] in Thailand, Elshirbini & Elashri (2013) in one senior high school in Saudi Arabia, and [6] in one of junior high school in Indonesia.

In this study, GBA has been built become Reading, Responding, and Writing (2RW) model. This model is assumed as alternative model to overcome the problem in writing. In this teaching model, the students are guided to have reading activity, and then they are invited to response the text they read in terms of giving opinion, critic, or suggestion which is followed by writing or expressing their response into written form as the goal of this model.

One of genre that is prevalently utilized to express idea or response is hortatory exposition. This text is categorized as Genre which provide the language acquisition process by involving such ability; giving strong opinion, criticizing, evaluating, and persuading ([7]; and [3]). By this text, students are directed to response one phenomenon that happened. Students' response is led to be connected to their background knowledge which is based on the evidence and ended by suggestion as the solution of the issue.

In accordance with the explanation above, this study was experimented the effectiveness of Reading, Responding, and Writing (2RW) model in writing hortatory exposition text of Bahasa Indonesia in Senior High School Level.

## II. METHOD

Both quantitative and qualitative in form of case study was employed to gain the data. More specifically, quasi-experimental design was used to examine whether 2RW is effective to teach hortatory exposition in Bahasa Indonesia. Additionally, a case study was chosen to investigate the improvement resulted from 2RW model in students' hortatory exposition. This study is categorized as a case study since the study took place in natural setting (see [8]), the data were

analyzed in descriptive approach (see Grimes and Shchulz, 2002), and the study was conducted in a small case (see Bogdan & Biklen, 1992).

In this study, there were 40 students who served as the sample. Moreover, there were six students serving as the focus participants which were purposively selected based on the level of achievement in the pre-test result.

To collect the data, observation, tests and semi structured interview were undertaken in this study. In observation, the data were collected through field-note and observation checklist in which the researcher acted as participant-observer. Additionally, the tests were done twice; pre-test and post test. In the tests, students were asked to construct a written hortatory exposition in Bahasa Indonesia with the theme of 'the centralization of Indonesian education'. Semi-structured interview was undertaken to support the findings gained in the students' text.

Moreover, the data in this study were analyzed using dependent t-test (SPSS) and genre analysis as adapted from [9], and [10]. Dependent t-test functioned to examine the effectiveness of 2RW statistically; meanwhile, genre analysis functioned to analyze the improvement of students in writing a hortatory exposition in terms of three aspects; social function, text organization, and lexicogrammatical features of the text.

### III. RESULTS AND DISCUSSION

The effectiveness of 2RW model in teaching students' writing of hortatory exposition text in Bahasa Indonesia

As the first findings, the data gained in this study show that GBA is effective to be used in teaching students' written text of hortatory exposition in Bahasa Indonesia. It is in line with the result of the statistical calculation using t-test formula. Below is the visualization of the data showing that GBA is effective to teach students' writing of hortatory exposition in Bahasa Indonesia.

Paired Samples Statistics

	Mean	N	SD	Std. Error Mean
Pair 1 Pre	71.2375	40	4.88192	.77190
Pos	79.5875	40	5.33360	.84332

Paired Samples Test

	Paired Differences					T	df	Sig.(2-tailed)
	Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
				Low	Up			
Pair 1 Pre Pos	-8.35	5.42	.856	-10.08	-6.62	-9.75	399	.0000

From the tables above, it is shown that the value of pre-test and post test is different. Specifically, the result shows that  $t_{observed} = -9.75$  is lower than the critical value meaning that it lies out of the accepted area of  $H_0$ ; therefore,  $H_0$  is

rejected and  $H_a$  is accepted. By this, it can be concluded that there is a difference of the students' writing performance between the students' pre-test and their post-test score. Therefore, this hypothesis testing shows that genre-based approach is effective to be applied in the teaching written hortatory exposition in Bahasa Indonesia. Moreover, the details of the students' improvement in writing hortatory exposition will be discussed in the next section.

The improvement of students' written text of hortatory exposition in Bahasa Indonesia

	AG (high achievement)	RH (high achievement)	MA (medium achievement)	DT (medium achievement)	SN (low achievement)	ZT (low achievement)
	Pre-Post	Pre-Post	Pre-Post	Pre-Post	Pre-Post	Pre-Post
Social purpose	√-√	√-√	-√	-√	-√	-√
Text organization						
1. Thesis statement	√-√	-√	√-√	-√	-√	-√
2. Arguments	√-√	√-√	√-√	√-√	√-√	√-√
3. Suggestions	√-√	√-√	√-√	√-√	-√	-√
Linguistic features						
1. Lexical chain	√-√	√-√	√-√	√-√	√-√	√-√
2. Passive voice	-√	-√	-√	-√	-√	-√
3. Impersonal statement	-√	√-√	-√	-√	-√	-√
4. Conjunction	√-√	√-√	√-√	√-√	√-√	√-√
5. Mental process	√-√	√-√	√-√	√-√	√-√	√-√
6. Modality	√-√	√-√	√-√	√-√	√-√	√-√
7. Experts' opinion	-√	-√	-√	-√	-√	-√
8. Evaluating statement	-√	-√	-√	-√	-√	-√
10. General noun	√-√	√-√	√-√	√-√	√-√	√-√

The data gained in this study indicate that there is a significant improvement as shown in the students' hortatory exposition texts. First, students are able to illustrate the social function of their writing; to persuade audiences to do something. Second one, students are also able to organize their text as indicated by the use of thesis statement, arguments and suggestions. Third, the improvement is clearly confirmed by the lexicogrammatical features in their composition involving passive voice, conjunction, impersonal statements, experts' opinions, modality, etc. The further explanation about the improvement is provided below.

#### a. Social function

Related to this aspect, all six respondents were successful to demonstrate the social function of the text with the topic 'sentralisasi pendidikan dalam kurikulum 2013'. Two students wrote that they persuaded readers to support this system, while the others considered it in the different way of thinking. As an example, AG clearly stated that the policy makers should obliterate this system because it could obstruct the teachers' creativity to design the classroom. In the last stage of his writing, he said, 'maka dari itu para pembuat kebijakan pendidikan sebaiknya menghentikan sistem sentralisasi karena itu jelas dapat mematikan kreatifitas guru dalam mengajar.' In the contrary, RH also could illustrate the social function of her text; to persuade readers to support this centralization system as cited in her text, 'para guru sebaiknya mendukung penuh atas sistem sentralisasi ini karena mereka sangat terbantu untuk dapat mencapai target pengajaran.'

#### b. Text organization

In this point, the development of students' ability is reflected by the organization of the texts in the post test. As an instance, MA as a medium achiever could not organize the text in the pre-test. More specifically, there are no thesis statements and strong arguments in her text. In contrast, her post test shows the betterment in which she wrote the thesis statements and the contentful argument. One example of her argument is 'adanya sentralisasi pendidikan justru bertentangan dengan nilai demokrasi yang selama ini kita junjung karena setiap daerah tidak mempunyai wewenang untuk menentukan komponen komponen apa yang menurut mereka cocok dan layak ada dalam kurikulum sekolah (Ginjar, 2012). It is far different from her argument in the pre test stating that, 'sentralisasi pendidikan akan merugikan pihak sekolah sekolah terutama yang berada di daerah.' Another evidence is about the recommendation as the last stage in the hortatory exposition. DT successfully wrote a suggestion in the last part of his writing; 'maka dari itu sentralisasi pendidikan harus segera dihentikan.' Previously, he mentioned the suggestion in the first part of his writing without stating the issue as well as the thesis statement.

#### c. Linguistic Features

The data in this study reflect that students had an advancement in putting the lexicogrammatical aspects in their hortatory exposition texts. As an illustration, a low achiever (SN) could show the enrichment of lexical chains related to the topic (silabus, kurikulum, guru, otonomi, sekolah, materi ajar, standar kelulusan). This furtherance is clearly seen because in the text produced in the pre-test, she only could mention three lexical chains (sekolah, guru, murid). Additionally, another linguistic feature (passive voice) is also used by all participants in the post test. As a specimen, ZT as a low achiever could compose three passive clauses in his text. One of them is 'kreatifitas para guru dapat diaktualisasikan dari bagaimana mereka mendesain pengajaran yang beragam.' Other elements like impersonal statements, modals, experts' opinions, material process, and mental process are also shown in the students' final texts. In other words, reading, responding and writing technique is able to help students in understanding the lexicogrammatical features of the test; in this case, hortatory exposition.

## IV. CONCLUSIONS

The data of this study as shown above result in a main conclusion and an additional inference. The main conclusion is that Reading, Responding, and Writing technique is effective for students in constructing hortatory exposition. It is reflected by the fulfillment of the criteria as a good hortatory exposition. As additional conclusion, the ability of reading and responding influence to the process of writing. 2) Based on the learning output, 2RW is more effectively used in urban area since the highest scores are gained in that site and 3) the improvements of students' capacity are shown by the genre moves used in their texts involving generic structure and linguistic features of hortatory exposition (see [11; [12]; and [10]).

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# THE INFLUENCE OF COOPERATIVE LEARNING MODEL TYPE STUDENT TEAMS ACHIEVEMENT DIVISION (STAD) TOWARD LEARNING MOTIVATION AND STUDENT LEARNING OUTCOMES (Experimental studies in Entrepreneurship Learning Concepts At Class X SMK BINASWASTA Kuningan Regency)

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**Abstract.** The problem in this research is the low learning outcomes achieved in Concept: Entrepreneurship- Vocational Subjects. The purpose of this study to know: (1) is there any differences between learning motivation and learning outcomes in the pretest and posttest (experimental class)? (2) is there any differences between learning motivation and learning outcomes in pretest and posttest (control class)? And (3) Is there difference in learning motivation and learning outcomes in posttest in experimental class and control class? The results showed that: There were significant differences between learning motivation and learning outcomes in the pretest and posttest in the experimental classroom. There is no significant difference between learning motivation and learning outcomes in the classroom pretest and posttest control. There were significant differences learning motivation and learning outcomes in the posttest in the experimental class and control class. There were increasing differences learning motivation and learning outcomes in the classroom experiments using STAD higher than the lecture method (control grade) using conventional method.

Keywords: Cooperative Learning, Student Achievement Division (STAD), Learning Motivation, Learning outcomes.

## I. INTRODUCTION

There are some problems were found at school, some teachers during the learning process took place that causes of low learning outcomes, The problems include the level of students' ability to analyze a problem remains low, there was still a lack of ability to interact between students during the learning, there was still a lack of attention of students to the delivery of content from the teacher when learning took place, the lack of courage of students in asking questions, learning and curiosity out low. In the learning process there were difficult for teachers to engage students actively. This is due to the methods or models used by teachers is very monotonous. Most teachers just use the lecture method, but various models have been developed such as cooperative learning, STAD, and the others that can be used are varied. In addition, most students class XI of SMK considers Entrepreneurship in Vocational Subjects are difficult to understand and memorized. Such problems can be solved either by cooperative learning model. This model can be used for all levels of education in various fields of science. Cooperative learning model is a model of learning in which students learn in small groups that have different levels of ability. In completing the task group, each member of the mutual cooperation and help to understand the learning materials. Cooperative learning model is very different from direct teaching. The cooperative learning model was developed to achieve academic learning,

cooperative learning model is also effective to develop the social skills of students that can not be found in conventional methods.

Cooperative learning is favourable to students in working together completing academic assignments with peers, that requires thinking more deeply about the relationship of the ideas contained in a particular material. According Trianto (2009: 67), cooperative learning has some variations among types that should be a part of a collection of strategies teachers in implementing cooperative learning model, namely STAD, jigsaw, Team Games Tournaments (TGT), Think Pair Share (TPS), and Numbered Head Together (NHT).

Entrepreneurship in Vocational Subjects requires active participation of students. Due to economic subjects requires reasoning and logical way of thinking based on the factors that support and cooperative way of thinking to solve problems in learning. Based on the above, then in the learning economy needs to implement cooperative learning model.

Cooperative learning is a teaching strategy that involves a group of students worked in collaboration to achieve a common goal (Eggen and Kauchak, 1996: 279). Cooperative learning is an educational approach aimed to organize classroom activities into academic and social learning experiences. There is much more to cooperative learning than merely arranging students into groups, and it has been described as "structuring positive interdependence". Students must work in groups to complete tasks collectively toward academic goals. Unlike individual learning, which can be

competitive in nature, students learning cooperatively can capitalize on one another's resources and skills (asking one another for information, evaluating one another's ideas, monitoring one another's work, etc).

Cooperative learning is arranged in an effort to increase student participation, to facilitate students to experience leadership attitudes and make decisions within the group, as well as provide an opportunity for students to interact and learn together students of diverse backgrounds. So in cooperative learning, students have dual role, in one role as a student or in another one as a teacher. By working collaboratively to achieve a common goal, students will develop skills associated with their fellow human beings that will be very useful for life outside of school.

Cooperative learning is ruled by the constructivist theory. This learning comes from the concept that students will more easily find and understand difficult concepts when they discuss with friends. Students regularly work in groups to help each other to solve complex problems. Thus, the social nature and the use of peer groups become a major aspect of cooperative learning. In the classroom students learn together cooperatively in small groups consisting of 4-6 students are equal, but heterogeneous ability, gender, ethnicity or race and help each other. Purpose of the establishment of the group is to provide opportunities for all students to be actively involved in the process of thinking and learning. During his work in the group, task group members is to achieve mastery of the material presented by the teacher, and each group of their friends help to achieve mastery learning.

In cooperative learning students remain in the group for a few meetings. They are taught specific skills to be able to work well together in the group, such as being an active listener, explaining to the group of their friends well, discussions and so on. To be done well, students are given an activity sheet with questions or tasks that are planned to be taught. During his work in the group, task group members is to achieve mastery of the material presented teachers and mutual help among friends group to achieve mastery of the material. Learning not finished if one of the group members there who have not mastered the subject matter.

Cooperative Learning, sometimes called small-group learning, is an instructional strategy in which small groups of students work together on a common task. The task can be as simple as solving a multi-step math problem together, or as complex as developing a design for a new kind of school. In some cases, each group member is individually accountable for part of the task; in other cases, group members work together without formal role assignments.

According to David Johnson and Roger Johnson (1999), there are five basic elements that allow successful small-group learning:

- Positive interdependence: Students feel responsible for their own and the group's effort.
- Face-to-face interaction: Students encourage and support one another; the environment encourages discussion and eye contact.
- Individual and group accountability: Each student is responsible for doing their part; the group is accountable for meeting its goal.

- Group behaviors: Group members gain direct instruction in the interpersonal, social, and collaborative skills needed to work with others occurs.
- Group processing: Group members analyze their own and the group's ability to work together.

Cooperative learning changes students' and teachers' roles in classrooms. The ownership of teaching and learning is shared by groups of students, and is no longer the sole responsibility of the teacher. The authority of setting goals, assessing learning, and facilitating learning is shared by all. Students have more opportunities to actively participate in their learning, question and challenge each other, share and discuss their ideas, and internalize their learning. Along with improving academic learning, cooperative learning helps students engage in thoughtful discourse and examine different perspectives, and it has been proven to increase students' self-esteem, motivation, and empathy.

Some challenges of using cooperative learning include releasing the control of learning, managing noise levels, resolving conflicts, and assessing student learning. Carefully structured activities can help students learn the skills to work together successfully, and structured discussion and reflection on group process can help avoid some problems.

The description above is similar with [1] in Trianto (2009: 57) who argued that cooperative learning more emphasis on goals and success of the group, which can only be achieved if all members of the group reaches the destination or the mastery of the material. Besides Johnson & Johnson (1994) in Trianto (2009: 57) states that the main objective is to maximize cooperative learning for the students' academic achievement and understanding both individually and in groups. Because students work in a team, then by itself can improve the relationship between students of various ethnic backgrounds and abilities, develop skills and problem-solving process group.

Johnson & Johnson (1994) and Sutton (1992) explains that the cooperative learning there are five essential elements, namely: (1) interdependence that will make positive among students; (2) the interaction between students mutually increase; (3) individual responsibility; (4) interpersonal skills and small groups; and (5) the group (Trianto, 2009: 60). In addition [1] in Trianto (2009: 62) says the main concept of cooperative learning are as follows: (1) the award of the group, which will be given if the group reaches the specified criteria; (2) the responsibility of the individual, meaning that the success of the group depends on the individual learning of all group members. These responsibilities are focused in an effort to help others and make sure every member of the group was ready for evaluation without the help of others; (3) the same opportunity for success, means that students have helped the group by improving their own learning. This ensures that students are capable of high, medium and low equally challenged to do their best and that the contribution of all members of the group are very valuable.

When observed closely, cooperative learning has certain characteristics compared to other models. states that the use of cooperative learning lessons that can be characterized as follows: (1) students work in cooperative groups to complete [2] the study materials; group of students formed with high ability, medium and low; (2) if possible, the group members

are from racial, cultural, ethnic, gender diverse; and (3) the award is more oriented to groups rather than individuals.

From the description of this cooperative learning, it can be concluded that the cooperative learning requires cooperation among students and interdependence in the structure of task achievement, goals, and rewards. The success of this study depends on the success of each individual in the group, where success is very meaningful to achieve a positive goal in the study group.

Although the basic principles of cooperative learning has not changed, there are several variations of this model, there are at least four approaches that should be part of a collection of teachers in implementing the strategy of cooperative learning model. The fourth approach is STAD, Jigsaw, Investigation Group (Team Games Tournament or TGT) and structural approach. The structural approach covering Numbered Heads Together (NHT) and Think Pair Share (TPS).

### Learning Motivation

Motivation is defined as an impulse arises in a person consciously or unconsciously to perform an action with specific goal. Sondang P. Siagian (2004: 138), said, "motivation as the impetus that resulted in someone willing and willing to exert the ability, energy and time in order to achieve predetermined objectives". According to Mc. Donald in Oemar Hamalik (2002: 1973), motivation is "a change of energy in one's personal self is characterized by the onset of the affective, and the reaction to achieve the objectives, as well as encouragement from within oneself and this encouragement as a driving force". Therefore, the motivation as a process of inner or psychological processes that occur in a person is influenced by external factors (environment) and internal factors inherent to each person (carriage), level of education, past experience, desire or hope for the future. Based on the above understanding, it can be concluded that motivation is a process of change within the individual power that gives him a power to act (with active learning) in an effort to achieve learning goals. While learning is the basic process of development of human life. The study of human conduct qualitative changes in individual behavior so as to develop. All the activities and achievements of human life is nothing but the result of the study, for a person to live and work according to what has been learned. It is not just a learning experience, learning is a process, not an outcome. Therefore, active and integrative learning takes place by using various forms of action to achieve results.

Winkel (1996: 53) said that "learning is a mental activity or psychic that takes place in an active interaction with the environment, which resulted in changes, knowledge, understanding, skills and value attitudes, as well as the change is relatively constant and fixed". So learning motivation is defined the desire to enable, promote, distribute and direct the attitudes and behavior of individuals to learn.

### Learning Outcomes

Learning problem is an issue for every human, Through learning we'll acquire skills, attitudes, abilities and sciences. So learning outcomes is a tangible result achieved by students in an effort to master the physical and spiritual prowess at school are realized in the form of report cards in each

semester. To know the progress of the extent results have been achieved by someone in studying, it should be evaluated. To determine the progress achieved, there must be criteria (benchmarks) in reference to its intended purpose so that it can be seen how much the influence of teaching and learning strategies to the success of students learning. According to Winkel in Teaching Psychology (1989: 82) Learning outcomes is "the success achieved by the students, learning achievements of students at the school who embody in the form of numbers". According to Winarno Surakhmad (1980: 25) "student learning outcomes for most people means repetition, examination or test. The purpose of the quiz is to obtain an index in determining the success of students.

From the above definition, it can be concluded that the learning outcomes are achieved academic achievement of students in the process of teaching and learning activities to bring about a change and the formation of a person's behavior. To suggest that a learning process can be said to be successful, every teacher has a view of each line with his philosophy. But to make the perception we should be guided by the current curriculum has been enhanced, among others, that a learning process on an otherwise successful if the learning materials in particular learning objectives can be achieved.

To determine whether specific learning objectives achieved, teachers need to conduct formative tests on each serving a discussion to students. This formative assessment to determine the extent to which students have mastered specific learning objectives to be achieved. The function of this study is to provide feedback to teachers in order to improve the learning process and implement remedial programs for students who have not succeeded. Therefore, a learning process is considered successful if the results meet specific learning objectives of these materials. From the definition above we can conclude that learning outcomes is academic achievement of students in the process of teaching and learning activities which can bring about a change and the formation of a person's behavior. To suggest that a learning process can be said to be successful, every teacher has a view of each line with his philosophy. But to make the perception we should be guided by the current curriculum has been enhanced, among others, that a learning process on an otherwise successful if the learning materials in particular learning objectives can be achieved. To determine learning objectives, teachers need to conduct formative tests on each serving a discussion to students. This formative assessment to determine the extent to which students have mastered specific learning objectives to be achieved. The function of this study is to provide feedback to teachers in order to improve the learning process and implement remedial programs for students who have not succeeded. Therefore, a learning process is considered successful if the results meet specific learning objectives of these materials.

As for the main indicator of student learning outcomes are: (1) Absorption achievement of the learning materials are taught, either individually or in groups. Absorption measurement of achievement is usually done by setting minimum criteria for Mastery Learning (we call KKM=Kreteria Ketuntasan Minimal in Indonesian language); (2) The behavior outlined in the learning objectives have been achieved by the students, either individually or in groups; (3) Some factors affecting student Learning outcomes can be

influenced by many things namely: (a) internal factors (b) external factors (c) learning approach factors.

## II. METHOD

The method used in this research is experimental study. The population in this study were students of first Semester Class XI of SMK considers Entrepreneurship in Vocational Subjects Year 2015/20116 which amounted to two classes. Of the two classes were selected by random cluster sampling method and test matching the pairs of sample group.

## III. RESULTS AND DISCUSSION

1) The difference in the ability of comprehension concept of the initial measurement (pre-test) and the final measurement (post-test) in the class using cooperative learning model type STAD.

Results of testing the first hypothesis by using Paired Samples Test acquired a significance of  $\alpha = 0.000$  it means that  $\alpha < 0,05$  hence  $H_0$  (there are differences in the ability of comprehension the concept of the initial measurement (pre-test) and the final measurement (post-test) in class using cooperative learning model type STAD is accepted, therefore  $H_1$  (there are no differences in the ability of understanding the concept of the initial measurement (pre-test) and the final measurement (post-test) in the class using cooperative learning model type STAD) was rejected. Meanwhile, based on the average between the measurement pre test and post test experimental class by using cooperative learning model type STAD) the difference is very significant.

2) Cooperative learning model type STAD is a learning model that is characterized by the formation of a group of between 4 or 5 members of the group. In group discussions must occur that essentially giving and receiving knowledge among members of the group. But when members of the group who have specific numbers presented the results of their discussion should actualize the capabilities and knowledge own without the help of other members of the group. This is possible as they are implemented this model learning process with each student in the group will portray themselves seriously in exploring knowledge that must be mastered. Thus it could be that all the members of each group about the material he taught well and almost evenly. This is evident from the results of the final measurement of learning outcomes post-test gain understanding of the concept in the management of material increased from the comparison of their mean, when compared with the average time of the initial measurement (pre-test).

Cooperative learning model type STAD) is method that perfectly seen from the number of members in the group so that the discussion can be productive as many opinions so that there will be enrichment of knowledge, then of the responsibilities of each member must construct pengetahuanya completely and in conclude knowledge gained ground by members who have the same number to the same topic from the other groups.

3) The difference in ability of the concept comprehension at the first measurement (pre test) and the final measurement (post test) on the classroom using conventional model.

The results of testing the second hypothesis by using Paired Samples Test acquired a significance of  $\alpha = 0.000$  this means  $\alpha < 0.05$  thus  $H_0$  (there are differences in the ability of the concept comprehension at the first measurement (pre test) and the last measurement (post test) on the classroom using conventional model is received, thus  $H_1$  (there are no differences in the ability of the concept comprehension the first measurement (pre-test) and last measurement (post test) on the class using conventional model was rejected.

4) Increasing the capability of the concept comprehension of using cooperative learning model type STAD higher compared to using Conventional Model at the last of the measurement.

The third hypothesis testing results by using Independent Sample T Test acquired a significance of  $\alpha = 0.002$  this means  $\alpha < 0.05$  hence  $H_0$  (increased ability of understanding the concept of using cooperative learning model type STAD higher compared to using Conventional model the final measurement) is received, thus  $H_1$  (there is no increase in the ability of understanding the concept of using cooperative learning model type STAD higher compared to using cooperative learning conventional model at the end of the measurement) is rejected. Furthermore, based on the average test turns post test measurement results for an experimental class STAD and post test (experimen class) of Conventional Model, there is an increasing and improving referred to STAD higher than at polling stations.

As outlined in the discussion of the first and second hypothesis, that cooperative learning model type STAD has opportunities for sharing knowledge among many members of the group so it is possible that the interaction of giving and taking that is more intense and complete. It is evident that the acquisition mean for the experimen classroom learning model type STAD is higher than Conventional Method. Actually, the results of post test for cooperative learning model type STAD is higher than Conventional Method is logical because in the interaction and cooperation of some groups in classroom, STAD is more varied and a lot of resources, while Conventional Method is very limited in the pair. Furthermore, in a reflection of what the learning outcomes for STAD class focused because his opinion is almost ripe discussed by groups, while for class Conventional Model still reconstructing its opinion on the various opinions of each partner. Of the various advantages and disadvantages of the STAD is more effective for learning materials.

#### IV. CONCLUSIONS

1. Based on the research, concluded that there are differences in the ability of the concept comprehension in the first measurement (pre-test) and the last measurement (post-test) in the class using cooperative learning model type STAD. While the average test of concepts comprehension through the initial measurement (pre-test) and the final measurement (post-test) acquired the difference is very significant.

It means that cooperative learning model type STAD is very effective used in learning process for increasing the concept comprehension of the entrepreneurship concept. Based on research findings, it was concluded that there are differences in the ability of the concept comprehension in the first measurement (pre-test) and the last measurement (post-test) in the classroom using Conventional Model. While the average test of concepts comprehension through the first measurement (pre-test) and the last measurement (post-test) turned out that post test results have not shown significant results. It can be interpreted that Conventional Model is still not effective to be used in the learning entrepreneurship, but they can be given the choice in the learning entrepreneurship still shows the results of study show improvement.

2. Based on the research findings, it was concluded that the increasing ability of the concept comprehension of the use of cooperative learning model type STAD is higher if it compared with Conventional Model at the last measurement (post-test).

#### Suggestion

Referring to the conclusions outlined above as well as the implications of this research, the suggestions to the researcher as follows:

- 1) For official decision makers
  - a. The results of this study should be used as a reference and referral to adopt policies and decisions in the learning process.
  - b. The headmaster of SMK BINASWASTA should give priority to the achievement of student learning through the implementation of policy learning models that creatively and effectively.
- 2) For Teachers

All teachers of Enterpreneship or Economic should always implement cooperative learning models in teaching.

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# Increasing Teacher Ability Through Learning Process On Lesson Study Implementation Based Elementary School Teacher Group In Pontianak

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**Abstract.** The aims of this study are analyze the ability of teachers through learning process and develop the quality of learning process to be active, creative and interactive at Elementary School as well as developing the ability of teachers to design, implement, and evaluate student learning that encourages active learning, creative, effective and fun. The subject of this research are elementary school teacher who involve at teacher group discussion in south and southwest Pontianak. Lesson Study implemented at mathematics and social science subject. The data collection was done by direct observation of observing students and teachers activity during the learning process Lesson Study using observation sheet teachers and students as well as through video recording. Besides direct communication is done by interviewing the teacher models, two observations and some learners. The results showed that the lesson study is one of the effective measures to analyze the ability of teachers in the learning process in primary school, develop the quality of the learning process that is active, creative and fun at the elementary school, as well as developing the ability of teachers to design, implement, and evaluate learning that encourages students to learn actively, creative, effective and fun. Through lesson study teachers can develop the profession in collaboration and sustainable.

Keywords: Lesson Study, teacher professional development, learning process

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## I. INTRODUCTION

Improving the quality of education, especially in primary school is the focus of attention in a move to improve the quality of human empowerment. This is because the elementary school is the first formal education unit which has the responsibility to develop the attitudes and abilities as well as provide basic knowledge and skills.

Therefore, improvement and enhancement of the quality of education through the Professional Development System strategy outlined in its implementation in the field by establishing school clusters consisting of one school as core SD and SD as SD Induced other, so that one school cluster at most consists of eight elementary schools. At the core formed SD Teacher Activity Centre (PKG). Inside the PKG do activities such as Working Group Educational Assessors (KKPS), the Working Group Principal (PSC), the Working Group of Supervisors Schools (KKPS). This working group serves as a forum for professional quality improvement of teachers and education personnel.

[1] states that the professional abilities of teachers (professional capacity) consists of the ability of intelligence, attitude and performance in work. In various studies, the professional ability of teachers to be frequently reviewed by high and low results of measurements of the ability to master the material taught. One of the efforts may be through the Teachers Group (KKG).

But the problems that teachers are assumed to have highly qualified and competent because it has been certified, in the long term it is difficult to be justified academically. Evidence tersertifikasinya teacher is the current state is generally a quality teacher resources when the certification process takes place. As well as closely related to the actual certification of the learning process, so that certification can not be used as a reflection assumption featured lifelong competence. Based on the information received from the executing agencies PLPG there are 222 elementary school teachers in the city of Pontianak already certified on in 2012 so as to contribute to the quality of learning in primary school education.

To facilitate the understanding and professionalism of teachers increases, the needed synergies between personal commitment and management systems. The synergy between the commitment of teachers and management system is expected to give birth to an effective collaboration process to improve teacher competence. Through a coaching approach to the study of learning that lesson study.

Lesson Study is a school-based education development strategy and continuing through the assessment of collaborative learning and collegiality to build a learning community. Lesson Study is a form of training for all teachers without leaving the task of learning. Increased teaching in schools with the approach Lesson Study provides an atmosphere of learning that involves the activity between teachers and students. Additionally Lesson Study will improve learning skills and fostering kekollegaan between teachers in teaching students through

exchange of experience. Application of Lesson Study memidahkan students understand the concepts of knowledge so that knowledge gained can be applied in the future. Lesson Study as one of the program of activities to improve the competence of teachers and the quality of learning can be developed in the school as a study for the analysis of a learning practices implemented in the form of research based learning to determine the specific learning innovation

Lesson Study is a form of professional development activities that characterized collaboration colleague teachers, provide opportunities for teachers to a teacher working groups as an observer. Lesson Study is the process of teacher training in cycles, beginning with a teacher: 1) plan lessons through the exploration of the partners of the teaching materials and tools students: 2) do the learning plan based on the tools and lessons are made, invite colleagues to observe: 3) to reflect on the last lesson through the exchange of views, reviews and discussion with the observer. Therefore, the implementation of Lesson Study program needs to be monitored and evaluated so they will know how the effectiveness, keefesien and acquisition of the parties involved.

Lesson Study is one of the alternative activities that are believed or improve the quality of classroom learning as well as a strategy for improvement of professional skills of teachers carried out in the form of experiences between teachers shering models with other models. Lesson study is an assessment of the learning activities undertaken collaboratively by a group of teachers. In development in Indonesia Lesson Study is used as a model educator professional guidance through the study of collaborative and continuous learning based on the principles of collegiality and mutual learning to build a learning community. Through Lesson Study developed instructional activities to encourage students to learn actively, creative, effective and interactive.

The principle of collegiality and mutual learning (learn) implemented in collaboration when implementing Lesson Study activities. Participants who already know or have more knowledge must be willing to share with the participants who do not understand, otherwise participants who do not understand must be willing to ask the participants who already understand. Resource persons or mentors in Lesson Study forum should act as a facilitator, not an instructor. The facilitator should be able to motivate participants to develop their potential so that the participants can move forward together. Therefore, researchers try to analyze and develop a pattern of guidance to teachers of primary schools through the implementation of lesson study so as to form a learning community with colleagues fellow teachers to develop the professionalism of teachers.

## II. METHODS

This research is an action research (action research), because the research is done to solve the problem pembelajaran in class. The study also included a descriptive study, for describing a learning technique is applied and the desired results can be achieved from the implementation of Lesson Study.

In this research using the help of two teachers as a model, which is one teacher who has been certified in South Pontianak and one teacher who has not been certified in South Pontianak. Moreover aided by some teachers as an observation. The main objective of this

research is to improve the learning outcomes in the classroom where teachers are deeply involved in research ranging from planning, action, observation and refleksi. Pelaksanaan Lesson Study will be conducted twice each observation and does not depend on mastery learning.

Lesson Study, starting from planning (plan) aims to design learning that can encourage students to learn in a fun atmosphere. The second step in Lesson Study is the implementation (do) learning to apply the lesson plan formulated together. This step is aimed to test the

### Overview Implementation of Lesson Study

Plan learning based on the objectives and progress of students	Improve knowledge of teaching materials
Observing study to collect data on students' learning activities	Improving knowledge of learning
Using data from observation to reflect in depth and extensive study	Improve the ability to observe the activities of students
Melakukan <i>re-planning</i> untuk topik yang sama pada pembelajaran di kelas lain	Re-planning to the same topic on other classroom learning
	Improving the quality of learning plans
	Strengthening the linkages collegiality
	Increases the motivation to always be creative

QUALITY IMPROVEMENT OF LEARNING

effectiveness of the learning model that has been planned. The third step in the Lesson Study is a reflection (see). For more details, Lesson Study stages can be described as follows

TABLE I  
LESSON STUDY STAGES

The draft implementing Lesson Study can be described as follows:

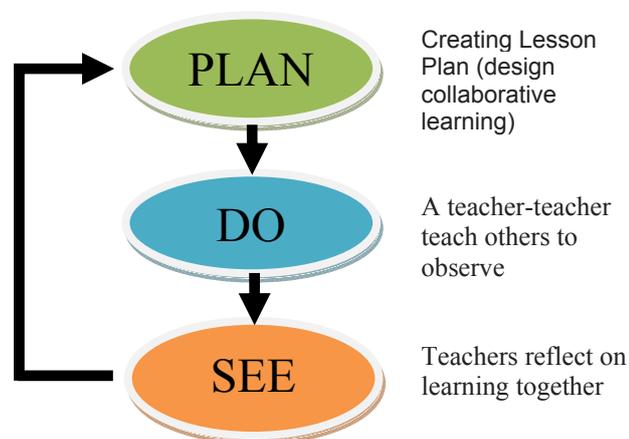


Fig. 1 The draft implementing lesson study

5) Students guess the image of the king of kings who spread Islam in Indonesia

### III. RESULT AND DISCUSSION

a. The ability of elementary school teachers in the learning process

#### 1. Students' motivation

- a. Teachers at the beginning of class to motivate students like a father to his son, friendly, lively
- b. The motivation given about discipline, responsibility, and self-employment.
- c. At the beginning of pembelajaran guru motivate the importance menguasai materi and tasks individually with a friendly and vibrant.
- d. students seem to understand and be motivated to work independently.
- e. students in groups or individu bertanya actively working on the assignment of teachers is to answer questions about the history of Islam in Indonesia

#### 2. Class Situation

- 1) Working in groups interspersed with laughter and quite fun discussion.
- 2) students eager in doing the task group. Working in a compact, lots of smiles, helping each other.
- 3) Students are quite relaxed, there are only a few students who are less active in the group since the sitting position daam group that extends not circular, or face to face.
- 4) The students seemed excited presented the group's work.

b. Implementation of the learning is done elementary school teachers

#### 1. Classroom Management by Teacher

- a. At the beginning of the learning, the teacher asked about the topic of discussion last week and provide a review
- b. Next, the teacher explained about the outline outline of the material to be learned. All serious students listen to the teacher uses group and individual approach.
- c. Teachers use media technologies (LCD, laptop, ppt, visual)
- d. Teachers can manage time well for delivery of materials and exercises in the classroom, so that students can finish the job
- e. Teachers open to students in consultation if mendapatkesulitan.
- f. The relation of students and teachers are quite familiar

#### 2. How effective teachers achieving goals

- 1) The teacher explains learning materials by using power point and held a question and answer.
- 2) The teacher divides the students into groups (5 students) to examine the material together bekerja bersama History of Islam in Indonesia in the first half of the 5th grade
- 3) The teacher asks the students to work in groups doing puzzles a king / prince pioneer Islamic empire were distributed to each group
- 4) Students are looking for a partner to mention the name of the king and his kingdom

#### 3. Use Media

- 1) The teacher uses in class media LCD / laptop.
  - 2) Setting up of the necessary media: drawings of the kingdom and the king of kings through the LCD, image card card, puzzle Islamic empire
  - 3) All serious students listen to the material, and do secaramandiri exercises given
4. Teacher Improvement in the process of learning in the classroom through Lesson Study
- 1) From the observations above, the model teacher collaborators hold discussions to find solutions and the problems found. Based on discussions between researchers / lecturers, school principals, teachers, agreed that in general the Lesson Study program running properly. Master model of managed foster a positive attitude so that students are happy to follow the lesson and complete the assigned task independently. Some of the issues agreed upon teachers to be addressed are as follows:
  - 2) There are still some students who are less active due to the very end his position in the group. Master's students pay less attention to the student. Lesson Study after teachers agreed that setting a sitting position in the group face to face can have an impact on students activity in working in groups
  - 3) Students need to learn from others not just focus on the task group only remember each group discusses Islamic empire different.
  - 4) Students still need to be motivated to think critically to want to ask and express opinions or give his opinion when each group presented their work.

### Implementation of Lesson Study Cycle 2

Implementation of the second cycle is conducted in accordance with the concepts and strategies that have been planned and input the results of observation and reflection (See) in siklus1. Implementation of the action on the second cycle of this action include, as follows

#### a. Planning (Plan)

Lesson Study team is composed of researchers lecturers and teachers as collaborators discuss lesson plans in the form of Learning Implementation Plan (RPP), learning materials, instructional media, the task of group exercises and individual as well as the assessment of learning that has been made by the teacher models with inputs from the first cycle . for the purposes of this study, discussion RPP tables relating to the material specifications, manufacturing kisikisi, manufacture matter, preferably.

#### b. Learning Implementation (Do)

Learning held Saturday morning at 7:00 to 8:10, in elementary school classrooms Private Mujahidin A Yani South Pontianak road on September 28, 3013 with the subject matter topic Math Measurement (time, angle, area, volume, and its unit)

Learning begins greetings and recitation, checking student attendance, as well as information appersepsi learning objectives. Submission of material is done with a classical approach and individualized. Teacher seeks the creation of a classroom atmosphere pleasant,

relaxed, but serious by asking the students showed that they wear watches that day and asked questions about the problem hours, whatever there is on the clock. After the students were asked to create hours of paperboard which has been prepared by the teacher. After the students were asked to answer the question of hours.

c. Observation and reflection (See)

The teachers as collaborators along with faculty researchers conducted observations from start to finish learning. Observation activities are guided by the observation sheets, and more focused on the response and the activity of students in the classroom.

**1. Observation**

a. The ability of elementary school teachers in the learning process

From the observation of the learning process discovered the following things:

1) Students' motivation

a. The teacher at the beginning of class to motivate students by force a mother to her child, affectionate, friendly, and eager. The teacher's voice is clear and soft.

b. The motivation is given about the accuracy, communication, and self-employment.

c. All the students looked on.

d. At the beginning of learning to motivate teachers about the importance of reading and doing hours of exercise determines the time, differentiate hours, minutes, seconds correctly.

e. The students seem to understand and be motivated to work independently.

2) Situation class

a. students may work in cooperation among group members as well as vibrant in the task group: work in a compact, lots of smiles, helping each other.

b. All students relaxed enough daam group

c. The students seemed able to communicate well in presenting the group's work.

d. Interaction between students look familiar.

a. Implementation of the learning is done elementary school teachers

1) Classroom management by teachers

a. At the beginning of the learning, the teacher asked about the topic of weeks ago and provide a review

b. Next, the teacher explained about the outline outline of the material to be learned. All serious students listen

c. The teacher has to divide into groups based on student characteristics (good, moderate, and low as well as gender, silent or inactive) as well as the correct sitting position (face to face)

d. The teacher made the FAQ on group and individual

e. The teacher uses the visual medium that is drawing a picture clock

f. Teachers open to students in the consultation.

g. The relation of students and teachers are quite familiar

2) How effective teachers achieving goals

In general, learning objectives designed has been reached and that all students really have learned

to determine and write down the time (hours, minutes, seconds) which can be evidenced by the following:

1) The teacher has to explain learning materials by using the picture image clock and holding a question and answer session.

2) The teacher divides the students into groups (5 people) to work together to discuss about the determination of the time (hours, minutes, seconds) in the first semester grade 5

3) The teacher asks the students to work in groups watchmaking toys from cardboard to be demonstrated in determining the hours, minutes and seconds.

4) Students work on the problems a matter of hours from LKS

3) Utilization of media

1) Students are given tasks in groups and individually.

2) Students discuss the question answer that is given to each group.

3) Students are given examples of questions and how to answer them in each group

4) Students are given the opportunity to ask questions if you do not understand

b. Improving the Quality of teachers in the classroom learning process through Lesson Study

Master model of managed foster a positive attitude so that students are happy to follow the lesson and complete the assigned task independently. The teacher as an observer can see firsthand the advantages and disadvantages of activities do by the teacher models and can apply good things in the classroom each and avoid the things that a weakness in activity do not do in their class. Some of the issues agreed upon teachers to overcome in lesson 2 study are as follows:

a. Teachers need to provide introductory material before asking the students to learn daam group.

b. Time is too widely used to make toys hour clock which makes the toy is supposed to be on the craft lesson (KBK).

**DISCUSSION**

Learning on the first and second cycles have differences and similarities. On learning of the cycle, the students are still not all active in doing the exercises in class as a group. It is influenced by the position of the students who do not sit face to face in the group so that the communication between group members become less smooth. In the second cycle are correct arrangement of groups and group members can share their thoughts.

Both in cycle 1 and 2 students were active and vibrant is proof that the Plan has managed to make learning active scenario. In other words if a learning scenarios created with collaboration among peers, the more ideas that appear as compared to when the teacher made it himself.

From the result of reflection cycles 1 and 2 that all teachers initially found work in a group for elementary students is less effective but the approach of the model teacher, motivation given model teacher on their students, and interaction that exists either / warm between teachers and students a positive impact, so that tasks that once were heavy into feels exciting and challenging. The positive impact of the activities carried out in the group's activities is to raise awareness of the students to be disciplined in doing the task on time in the classroom.

The change of opinion about mathematics previously considered sulitmenjadi considered exciting and challenging, and Social Sciences boring into subjects of interest so as change of attitude shows that the model Lesson Study is implemented on social subjects and mathematics effectively to instill kemandirian dan positive attitude more on students and also on teachers such as discipline, confidence, passion and determination.

In addition, the stages of learning undertaken in collaboration with colleagues from the planning, implementation of learning, observation, and reflection is effective in improving the abilities and skills of teachers. In other words, it can be concluded that the purpose of this study can be achieved with good.

#### IV. CONCLUSIONS

Stages of learning is done from the planning, implementation of learning, observation, and reflection is effective in improving teachers' abilities and skills to plan, create, test, analyze learning in collaboration with colleagues themes.

1. Establishment of a positive attitude on students, namely:

- a. independence in learning and doing their jobs. to the challenge.
- b. eager and confident to complete the task independently dengan hasil optimal.
- c. discipline, which is actualized in attendance in class on time dan dalam task completion.

2. Improve the teachers in teaching skills, knowledge, and experience, namely:

- a. improve skills related to the duties of educators, especially in managing the class, students face, and mengadakan evaluasi.
- b. got a provision to implement KKG.
- c. acquire additional knowledge and experience in how to teach fun, relax, unique, and communicative.

- d. got the knowledge to make the provision of classroom action research for promotion of teachers.
  - e. got the knowledge and skills to plan, create, test, analyze learning.
3. All students complete a collection of individual tasks well

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# What Makes A Successful Entrepreneur? A Comparative Study Between Students Who Succeed And Failed In Entrepreneurship Educational Program At University

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**Abstract.** There is a growing movement to build entrepreneurs for the future. Higher levels of entrepreneurship education achievement lead to higher earnings and reduce the level of unemployment. In university, there a entrepreneurial program to help college students to build business planning, market research, finance management, and also build student's confidence to start their entrepreneurship activity. There are funding to their entrepreneurship activity and they will be monitoring and evaluating to ensure their entrepreneurship activity will be succeed. The purpose of this study was to determine the psychological capital in two group students who succeed and failed in entrepreneurship activity after entrepreneurial building program in university. The main objective is to compare the impact of different learning activity and experience in shaping their future. Psychological capital refers to one's positive psychological resources, which consist of self-efficacy, hope, optimism, and resilience. The study design used was comparative study and the sample consisted of the students from university entrepreneurial program that have been grouped for the purpose of analysis by their succeed and their failure at their entrepreneurship activity. There are 60 person in succeed group and 50 person in failed group. Independent variables in the study include demographic factors and individual background, personality traits and attitudes, and contextual elements such as access to capital and information. Frequencies and binary logistic regression was used to analyze the impact of different factors, including participation in entrepreneurship education. Results indicate that both of their psychological capital was found to exert positive level to do entrepreneurship activity. But there is a different level in their resiliency. Succeed students have a more sufficient positive psychology in terms of confidence in their ability, predict many good things with reasons to support it, have a positive motivation and able to work out ways to solve it when encountering problem, and rise and hold on through a negative or positive event in reaching a particular goal.

**Keywords:** Psychological Capital, Self-Efficacy, Hope, Optimism, Resiliency, Entrepreneurship Educational Program

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## I. INTRODUCTION

Indonesia as a big country has a very large labor force. Unfortunately, this is not matched by an adequate number of jobs. It's made an unemployment in Indonesia. Based on Central Bureau of Statistics, the number of unemployed in Indonesia reach 7.56 million people out of a population [1].

According to the Minister of Cooperatives and SMEs, Agung Gede Ngurah Puspayoga reported by Halim Alamsyah [2], the number of entrepreneurs in Indonesia reached 1.65 percent of the total population of Indonesia. That means, we are far behind if compared to the neighboring countries such as Malaysia, Thailand, and Singapore that have reached above 4%. Meanwhile, according to experts of Social Psychology, David McClelland, to become a prosperous country a country must have a minimum of 2% of the total population of entrepreneurs [3].

College as a higher education has obligation to make their students growth and fullfill their destiny to make better Indonesia as the next generation. One of the solution to these problem is to expand students number who will graduate as entrepreneurship. Directorate General of Higher Education

from Indonesia Ministry of Education and Culture also have expectations for students as educated human resources, as well as the ability of science and technology and innovation for the nation's competitive advantage will improving their ability to become entrepreneurs. It's make university develop their entrepreneurship educational program to make students understand and foster an entrepreneurial attitude for their future.

Due to the influence that entrepreneurship educational program in university could have on the attitudes and aspirations of youth as the next generation, there ia a need to understand how to develop and nurture potential entrepreneurs even while they are still students in university. Few empirical studies have examined the entrepreneurial propensity of university students as a source of future entrepreneurs. The impact of entrepreneurship education has been recognized as one of the crucial factors that helps youths to understand and foster an entrepreneurial attitude [4]; [5]; [6].

Universitas Padjadjaran develop suitable educational program to promote entrepreneurship. It will take a year to develop and running their business with foundation support from university to develop their product or service with

coaching from lecturer. They will have information how to make product, packaging, evaluating, financial management, marketing management, and so on to develop their ability in running their business and also to improve their attitude toward entrepreneurship.

Obviously, not all member of entrepreneurship educational program is succeed. Almost 50% form the member is failed and develop their attitude about entrepreneurship. It will have ceertain policy implications in inducing more university graduates to start their own businesses.

Based on survey, there are psychological differences between students who succeed in their entrepreneurial activity and students who failed. This paper examines their psychological capital in entrepreneurship and the key factors affecting their interest. Though there have been study in entrepreneurial attitude at students, but there is still afew number of research which comparing two category students based on their entrepreneurial activity and their entrepreneurial intention in the future.

## II. LITERATURE REVIEW

### A. Entrepreneurship Educational Program

Entrepreneurship Educational Programs at University in accordance with the direction of the government through the Directorate General of Higher Education and Culture has a goal to equip the knowledge, skills, and attitude or spirit of entrepreneurship based on science and technology to students in order to change the mindset of job seekers to be a job creators and become an entrepreneur candidate that have resiliency and successful in facing global competition. The program also encourage institutional or entrepreneurial units in universities in order to support the development of entrepreneurship programs. As a final result, it is expected a decrease in the unemployment level of higher education graduates.

The key performance success indicators from this program at least judging by three things:

1. Students who successfully run a business (entrepreneurial activity)
2. Establishment of a model of entrepreneurship education in colleges
3. The formation of a coordinating development of entrepreneurship education related activities of entrepreneurship in universities.

This program facilitates students to develop interest in entrepreneurship and starting a business on the basis of science, technology and art. Entrepreneurship program include education and training for entrepreneurship, internships, preparation of business plans, capital support & assistance, and business sustainability.

### B. Psychological Capital

Psychological Capital (psycap) is defined as “an individual’s positive psychological state of development and is characterized by :

1. Having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks;
2. making a positive attribution (optimism) about succeeding now and in the future;

3. persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and
4. when beset by problems and adversity, sustaining and bounding back and even beyond (resiliency) to attain success” [7].

PsyCap is based in Positive Organizational Behavior (POB) and positive psychology, which focus on strengths and shift attention away from “What can go wrong with people” to “What can go right for people.” POB comprises self-efficacy, confidence, hope, and resiliency related to one’s motivation and positive attitude in a specific context [8]. PsyCap recognizes moving from “who you are” or actual self to “who you are becoming” or possible self [9]. Because PsyCap is a state rather than trait, it can be learned and developed (Luthans et al., in press). Therefore, if PsyCap is found to be related to entrepreneurship and entrepreneurship can be taught, then adding training in PsyCap could benefit aspiring entrepreneurs.

## III. RESEARCH METHODS

The survey covered undergraduates in social fields and technical fields who entering Entrepreneurship Educational Program at Universitas Padjadjaran, Sumedang Indonesia. Data of this research were collected from 60 college students who entering Entrepreneurship Educational Program and succeed to continuing their business (succesfull students), and 50 college students who entering Entrepreneurship Educational Program but failed to continuing their business (failure students) in Universitas Padjadjaran, Sumedang Indonesia. Participants were 70 percent female and 30 percent male. Participant age ranged from 18 to 23 years, the average of the participant was 21.4 years old.

Demography of study can be seen from table below :

TABLE I  
DESCRIPTIVE STATISTICS

Demography	Aspects	Total	All students	Successfull students	Failure students
gender	male	33	30%	70%	30%
	female	77	70%	30%	70%
age	18	3	2,7%	3,3%	2%
	19	2	1,8%	1,7%	2%
	20	16	14,5%	10,0%	20%
	21	28	25,5%	25,0%	26%
	22	47	42,7%	41,7%	44%
	23	14	12,7%	18,3%	6%
Future goal	entrepreneur	73	66,4%	50%	72%
	employee	37	33,6%	50%	28%
parent's job	entrepreneur	30	27,3%	33,3%	36%
	employee	80	72,7%	66,7%	64%
entrepreneur duration	< 6 months	27	24,5%	3,3%	40%
	6-12 months	30	27,3%	8,3%	22%
	12-24	36	32,7%	10,0%	36%

Demography	Aspects	Total	All students	Successful students	Failure students
	months				
	> 24 months	17	15,5%	78,3%	2%
Type of entrepreneurial groups	personal	50	45,5%	41,7%	50%
	groups	60	54,5%	58,3%	50%
ethnicity	ambon	1	0,9%	1,7%	-
	bali	1	0,9%	1,7%	-
	batak	7	6,4%	5,0%	8%
	betawi	2	1,8%	1,7%	2%
	china	4	3,6%	3,3%	4%
	jawa	26	23,6%	23,3%	24%
	melayu	7	6,4%	6,7%	6%
	minang	8	7,3%	5,0%	10%
	minahasa	1	0,9%	1,7%	-
	sunda	53	48,2%	50,0%	46%

This research method is applied of non-experimental approach with descriptive method. The verification method to test the hypothesis by using statistical tests. In this research, data collection is conducted by using a questionnaire. Retrieving data using questionnaires, 24 items of measurement tools that was adopted from Psychological Capital Questionnaire (PCQ) from [7] and modified by researcher. Reliability of the questionnaire is 9.59 which is very high degree of reliability.

#### IV. RESULTS AND DISCUSSION

Based on the calculation to determine whether there are differences of Psychological Capital on a group of students who successfully perform entrepreneurial activity (Successful Students) and the group of students who fail to carry out entrepreneurial activity (failure Students), obtained the following results:

TABLE III  
DIFFERENTIAL TEST

Variable	Asym p sign	Information $\alpha = 0,05$	Status		
Psychological Capital		0,000	$\alpha_{sign} < \alpha$	Horejected	

Based on the measurement results using the Mann-Whitney test, it is known that  $H_0$  is rejected. This means that there is a difference between the Psychological Capital Unpad students who successfully perform entrepreneurial activity (Successful Students) and the group of students who fail to carry out entrepreneurial activity (failure Students).

Psychological Capital has four dimensions contained self-efficacy, hope, optimism, and resiliency. To see how

differences in each dimension between Unpad students successfully perform entrepreneurial activity (Successful Students) and the group of students who fail to carry out entrepreneurial activity (failure Students), the researchers conducted a Mann-Whitney test for each of the following dimensions:

TABLE IIIII  
U MANN-WHITNEY TEST

Psychological Capital Dimensions	Asym p sign	Information	Status
Self-Efficacy	0,000	$\alpha_{sign} < \alpha$ , Horejected	H <sub>0</sub> rejected
Hope	0,000	$\alpha_{sign} < \alpha$ , H <sub>0</sub> rejected	H <sub>0</sub> rejected
Optimism	0,001	$\alpha_{sign} < \alpha$ , H <sub>0</sub> rejected	Horejected
Resiliency	0,001	$\alpha_{sign} < \alpha$ H <sub>0</sub> rejected	H <sub>0</sub> rejected

Based on the Mann-Whitney test seen that in every dimension of Psychological Capital  $H_0$  is rejected. This means that there are differences in each dimension of Psychological Capital between a group of students who successfully perform entrepreneurial activity (Successful Students) and the group of students who fail to carry out entrepreneurial activity (failure Students). The Rank of each dimension, can be seen from table below :

TABLE IVV  
PSYCHOLOGICAL CAPITAL MEAN RANK

		Ranks		
	Groups	N	Mean Rank	Sum of Ranks
Total_SE	Failure	50	41.38	2110.50
	Succesfull	60	69.14	4217.50
	Total	110		
Total_HO	Failure	50	42.20	2152.00
	Succesfull	60	68.46	4176.00
	Total	110		
Total_OP	Failure	50	45.13	2301.50
	Succesfull	60	66.01	4026.50
	Total	110		
Total_RE	Failure	50	45.04	2297.00
	Succesfull	60	66.08	4031.00
	Total	110		

Psychological Capital differences between two groups can be seen as figure below :

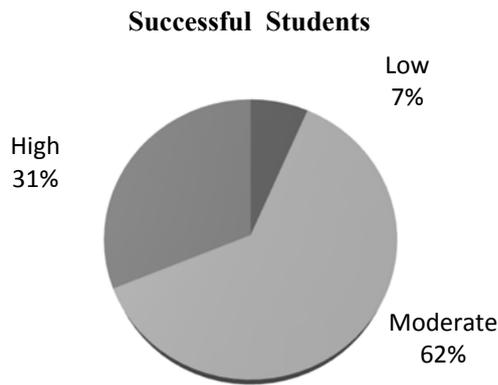


Fig. 1 Psychological Capital Students who succeed to carry out entrepreneurial activity

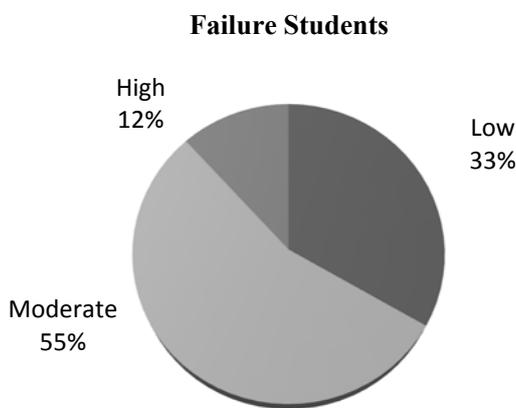


Fig. 2 Psychological Capital Dimension from Students who failed to carry out entrepreneurial activity

From these results, it can be seen that in population, the most dominant Psychological Capital entered into moderate high category. However, there is differences between two groups. Students who are successfully perform entrepreneurial activity (Successful Students) have a higher psychological capital than the other students who fail to carry out entrepreneurial activity (Failure Students). It's mean, students who succeed have more confidence in their capabilities, have a prediction of a good thing is accompanied by good reasons underlying it, have ability to bounce back from something negative happen to them, and has motivation and the ability to develop a variety of ways when experiencing difficulties to achieve their objectives in entrepreneurship.

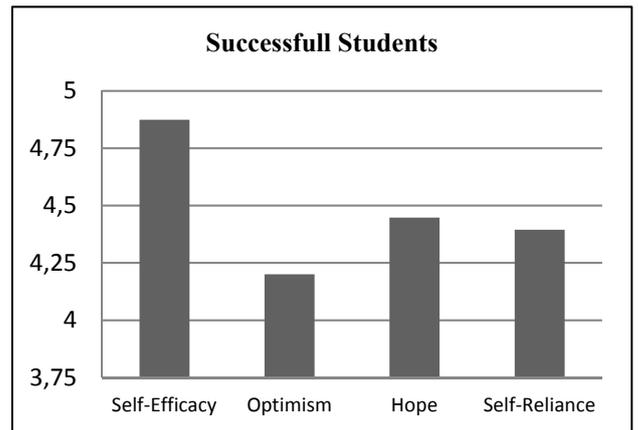
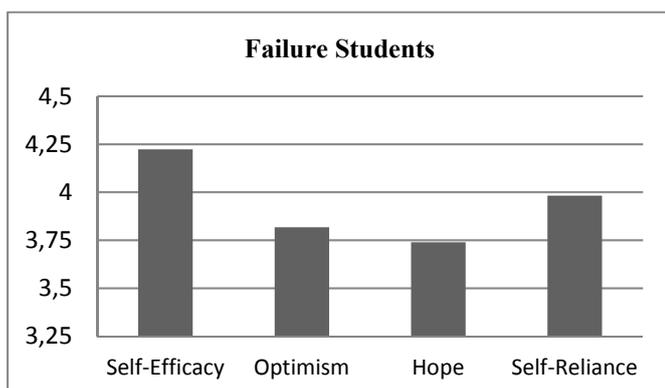


Fig. 3 Psychological Capital Dimension from Students who succeed and failed to carry out entrepreneurial activity

## DISCUSSION

One's propensity or inclination towards entrepreneurship can be influenced by formal education [4]; [10]; [11] demonstrated that a formal enterprise education program significantly and positively influences an individual's perceptions of the desirability and feasibility of starting a business. Kuratko [12] argues that these distinctive components can be developed in individuals through appropriate education.

Based on the data, it is known that psychological capital from successful students group in their role as entrepreneurs is higher than group of students who failed, although still at the level of the same category. This suggests that successful experience in running entrepreneurial activity is determined by the different psychological capital owned by students.

In the group of student who success in their entrepreneur activity, there are differences in the dimensions of Hope compared to students who failed. According to Snyder et al [13], hope is "a positive motivational state that is based on an interactively derived sense of successful : (1) agency (goal-directed energy) and (2) pathways (planning to meet goals). According to Snyder, hope = willpower + waypower, where willpower signifies an individual's conviction that goals can be achieved and that one can formulate a plan to attain the goals [13] and waypower signifies one's perceived capabilities to devise doable paths to attain desired goals [14].

The Hope Dimension, turned out to be an important role to distinguish the two groups of samples. Hope will distinguishes individual behavior when running entrepreneurship. It must be considered in entrepreneurial education program at university. How to develop students hope when running their business will improve student success in entrepreneurship.

Shapero [15] proposes that the choice of behavior is depend upon the relative credibility of the alternative behaviors, in addition to a propensity to act. In this case, credibility refers to the degree of desirability and feasibility associated with the behavior(s) in question. While it is an opportunity in the environment that thrusts an individual into a new decision-situation, the evaluation of opportunities is

influenced via perceptions of desirability and feasibility (Krueger & Brazeal, 1994). Metcalfe [16] suggests “entrepreneurs believe something that nobody else believes, and do so with sufficient strength of mind to act upon the belief and commit economic resources to a business plan.” They have to face and cope with uncertainty and unpredictable situations. Entrepreneurs believe they can make a new business happen (willpower) and pursue their belief by acting to achieve their goal (waypower).

In this research, there is a reverse ratio between male and female who divided in two groups. Despite the dominance of the study sample are dominated by female, but in the categories of students who succeed in entrepreneurship, it is dominated by male. But with differential test, then it’s found out that there is no difference of gender respondents. This can be seen in the following table:

TABLE V  
GENDER DIFFERENTIAL TEST

Gender	<i>P</i> value	Information
Male	0,889	H <sub>0</sub> accepted
Female		

Based on the results obtained, it is known *p*-value = 0.889 which means greater than  $\alpha$  (0.05). This means that H<sub>0</sub> is accepted and there is no difference Psychological Capital students who are succeed or failed in Entrepreneur Educational Program.

Based on ethnic groups, there is no difference psychological capital in two group. It is reinforced by the results of research [17] explained that the culture does not affect the entrepreneur but affect how the reaction and the number of entrepreneurs who will start a business.

TABLE VI  
COLABORATION TYPE DIFFERENTIAL TEST

Variable	<i>P</i> value	Information
Psychological Capital – Colaboration Type	0,02	H <sub>0</sub> rejected

Psychological Capital differences between two groups can be seen in figures below :

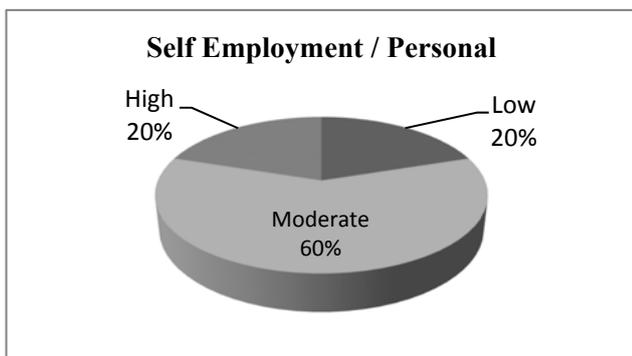


Fig. 4 Psychological Capital from self employment student / personal

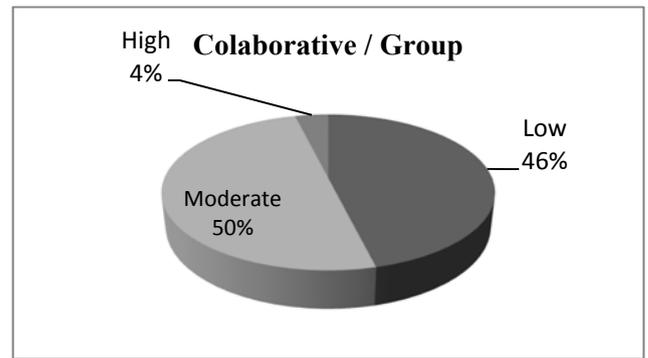


Fig. 5 Psychological Capital from Collaborative Entrepreneur student / Group

Based on the table above, it is known that *p*-value less than  $\alpha$  (0.05). This shows that H<sub>0</sub> is rejected and there is a difference Psychological Capital in students who running their entrepreneurship activity based on collaborative effort. With self employment or personal effort, they tends to have higher psychological capital.

This is reinforced by the results of further research in qualitative study by adding questions about what they think about what aspect that caused their failed in running their entrepreneurship activity. It can be smmarizing, that they collaboration with their friend canbe a factor who motivated them to running a business but also the source why they failed in entrepreneurship activity. This needs to be followed up in entrepreneurship educational program at university. Knowledge and ability to cooperate, team building, understanding about delegating and teamwork will raising their psychological capital dan will improving their entrepreneurship activity.

Duration to do their entrepreneurship activity also improving their psychological capital. By doing entrepreneurship activity, they will have more ability and expertise to do their role as entrepreneur. Based on data, students who run the business more than 12 months are likely to have higher psychological capital. This is because students will have many experiences to facing barrier and difficulty when running their business. It will improve their self-resilience when facing problem and will improve their psychological capital.

Meanwhile, based on their future goal, the students in two groups had aspirations as a successful entrepreneur. The percentage is higher than their family background who running a business as entrepreneur. This study shows there is no difference at family background as an entrepreneur to their entrepreneur activity. This is a positive signal that a career as an entrepreneur has become one option for students in the future.

## V. CONCLUSIONS

This study provides information that entrepreneurship educational program for students is needed to increase the number of young entrepreneur in the future. In practice, not only they have to heve money as capital, ideas, or relations, but also they need motivation and psychological capacity to be entrepreneur. It is neededwhen facing challenges and obstacles in entrepreneurship activity.

It's found out that Hope is one psychological capacity that will distinguish a successful entrepreneurial student groups and failed students at entrepreneurial activity. The ability to establish a positive collaboration, mature relationship, and teamwork will also contributes to their success in keeping the business running. This shows that entrepreneurship educational program should develop students capacity in collaborating and maintaing hope in their activity as entrepreneur.

Demographic factors such as gender, age, ethnicity, occupation of parents, and their future goal do not have an influence in shapping the psychological capital. However, the gap in entrepreneurship can be measured by their psychological capital. In the span of 12 months, the students become more mature and able to face the challenges so at this point it is also psychological capital owned by students is higher than the range of other duration. This shows that mentoring by students in entrepreneurship educational program should also be carried out within 12 months to cultivate psychological capital and will ultimately improve student success in entrepreneurship.

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# The Impact Of Application Of Value Clarification Technique (Vct) Towards Ecoliteracy And Critical Thinking Skill Student Of Social Science In Primary School

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**Abstract.** The purpose of this study was to determine the effect of the application of Value Clarification Technique (VCT) to ecoliteracy and critical thinking skills of elementary school students in learning Social Science. The method used in this study is a quasi experimental design with non-equivalent control group design, using the two study groups. Subjects in this study were students of class IVSDN Cijerah Indah, Bandung Kulon District Bandung City. The experimental group was given the treatment of learning Value Clarification Technique (VCT) and the control group was given conventional learning. The results showed that in general there is a difference between learners ecoliteracy experimental class and control class and critical thinking skills among learners experimental class and control class after each class has been getting treatment that has been set.

Keywords: value clarification technique (VCT), critical thinking skill, ecoliteracy

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## I. INTRODUCTION

Human life on earth is not alone, but to live with other creatures, ie plants, animals and micro organisms [1]. All other living things it is not just friends that live together in a neutral or passive toward people [2]. The space occupied by a living thing along with a living and not live called the environment [3]. Humans and other living beings occupy a certain space where they overlap and influence each other [4]. These resources not only to be used only and forever will continue to be used, but also must do careful planning and management by considering a variety of issues related to sustainability [5].

Man must be able to coexist with other creatures around him, because humans are not the only elements in an environment that determine the state of an environment. According Soemarwoto [3] the nature of the environment is determined by several things, namely: 1) the type and amount of each type of element of the living environment; 2) the relationship or interaction between elements in the environment; 3) conduct or condition of environmental elements; and 4) non-material factors, temperature, light and noise. So an environment will be good or bad depending on the quantity and quality of the elements that exist in the environment and quality of interaction. Of the various elements in the environment, the human element is the most influential on other elements. Everyday human life can

never be separated from the environment [6]. This happens because human beings are given intellect and instinct to be able to manage the environment so that human beings have a more active role than other creatures, according Odum terms mentioned [6] that human beings can be regarded as the *controlling program* ecosystems.

The interrelationship between humans and the surrounding environment (biophysical systems) or ecosystem is influenced by its culture, so that the cultural factor is very important for people to make the process of adaptation to the environment (Ingold in [6]). In accordance with the opinion of [3] that human beings have great adaptability, both biologically and culturally. Humans grow and develop in society by adjusting to the environment, the human ability not only influenced but also capable of providing remarkable influence on the environment [5]. Mulyadi [7] states that humans have culture, social institutions, knowledge and technology that is growing. This relationship certainly must be nurtured properly in order to create harmony among the various elements in the environment so the expectations on the sustainability of life for the generations really an issue that can be realized.

In this globalization era, along with the development of science and technology human life is growing in various aspects, including social and cultural life [8]. These changes not only have a positive impact but also adversely affect the surrounding environment and the various elements that are in

it. [7] states that the environmental experts the world meeting in Ratvich (Sweden) in 1982, identified 10 environmental problems on various scope recognized by almost all countries, among others: 1) the reduction of clean water for various needs of the population, due to disruption of the cycle hydrological and water resources and management is not appropriate in the watershed; 2) the extent of degraded soils due to declining soil stability, and the transfer function of agricultural land into non-agricultural, and declining soil due to erosion of fertile soil layer; 3) reduction of tropical land area is estimated globally; 4) memunahnya genetic diversity is also associated with decline in tropical forest cover; 5) the destruction of marine aquatic ecosystems, due to the removal of marine products that exceed the carrying capacity of ecosystems, and habitats for coastal and littoral regions, as well as the pollution of sea water; 6) climate warming of the earth due to the depletion of the ozone layer and the increasing levels of CO<sub>2</sub>; 7) the increasing threat of B3 waste; 8) the increasing threat of acid rain due to contamination of SO<sub>2</sub> and NO<sub>2</sub> resulting from the burning of oil and gas and forest fire; 9) the threat of pathogens in domestic waste as well as aquatic vector; and 10) the still high rate of population growth and urbanization.

The environmental problems we have to deal with serious, because it concerns our survival on this earth [9]. The above description clearly states that humans have a very big role for the sustainability and environmental sustainability in the vicinity. Humans are intelligent and have a good knowledge and thinking skills will certainly be able to manage the environment and natural surroundings wisely so that it can provide a great benefit for the man himself [10]. This is consistent with the statement of the World Commission on Environment and Development (WCED) in 1984 in Stockholm Sweden in the program "Sustainable development" or "*Sustainable Development*" [11] which states unequivocally that: "*man in principle have the ability to make sustainable development so as to guarantee the fulfillment of human needs of today without compromising the right of future generations to meet their needs for natural resources*".

In realizing this sustainable development, should start from growing the awareness on human beings themselves, because it relates to the behavior of everyday human life [10]. The literature on environmental awareness is outlined very clearly by an educator from the American who works at the Center for *Ecoliteracy* in Berkeley, California, and focus on environmental education disciplines, namely David W. Orr and physicist Fritjof Capra in the 1990s. They both bring new value in education, the value is considered to be "the welfare of the earth" [12]. According to Capra [13], one of the solutions to overcome the crisis and catastrophic global environment it is to build a human society that is sustainable based on what he describes as the ecological literacy, ie our ability to understand the organizing principles that apply to all living systems and use them as a guide in creating sustainable

societies. Environmental awareness in schools is a miniature of the wider society in which there is interaction between living things with their environment including subsystems that make up a life. This awareness can be nurtured through organized learning in school [14].

Process interactions are formed in schools through education or learning is expected to give birth to a human or human-educated learners who have concern and awareness of the environment [15]. Resolving environmental problems that occur in the school became one of our concern for environmental problems that occur in the world. This ecological literacy learning focus emphasizes the understanding of the principles of the organization of ecosystems and their potential application to understand how to build a sustainable human society [16]. By understanding *ecoliteracy* will change the perception of the need to protect the ecosystem is not just a belief held by a person in caring for the environment, but is a necessity in an effort to survive over time [17].

*Ecoliteracy* is to be instilled in everyone, without exception of children. This *ecoliteracy* be instilled from an early age, in order to grow and develop into a good lifestyle, so that the activities of protecting the environment becomes an awareness of sustainability that can save us from generation to generation [18]. The family as a child's first environmental education center should be a primary, because in a family environment first of all children get the education, guidance, care, habituation and training. Schools as the successor of sustainability education in the family is more formal, hierarchical and have a curriculum as a plan of education and teaching, there are teachers more professional as well as infrastructure and education facilities can support all educational processes that occur in it [19].

Education as an effort to humanize human beings should be able to be used as a small laboratory students to develop awareness, behavior, knowledge and skills of students in a nurturing environment. Starting from the smallest neighborhood students that families, schools up to the community in which students interact with the wider environment [20].

The education process is always happening in an environment, the physical environment, social, intellectual, and values ... physical .Lingkungan consists of the natural environment and the built environment ... social .Lingkungan an interaction between the human environment, relationshSocial Science between educators and students and parents people involved in education ... .Lingkungan intellectual interaction is the climatic conditions and around which encourage and support the development of thinking skills ... .Lingkungan value of a life order value, good social values, economic, social, political, aesthetic, ethical and religious values espoused in a region or a specific kelompok [21].

Through a process of education that has been mentioned above, the education helps development potential, abilities and personal characteristics of students through various forms of administration consciously. In the implementation of an education have a goal to be achieved, the goal of National Education of Indonesia as stated in Law No. 20 of 2003 on National Education System Chapter II Article 3 that aims at developing students' potential to become a man of faith and fear of God Almighty, noble, healthy, knowledgeable, skilled, creative, independent, and become citizens of a democratic and to be responsible. Then lowered into educational purposes at school level, in this case the elementary school educational purposes listed in the Indonesian Government Regulation No. 19 of 2005 on National Education Standards Article 26, paragraph 1. Primary education aims to lay the basis of intelligence, knowledge, personality, character, skills to live independently, to follow further education.

Very clearly mentioned in the educational objectives of education both nationally and primary school education that education is not only to provide a stock of knowledge only to students, but other aspects, too, is the target to be built in the implementation of an education, the attitude and skills. These objectives could involve students' own interests, the interests of society and the demands of jobs or all three are students, the community and the work at once. The education process directed at increasing mastery of the knowledge, abilities, skills, development of attitudes and values in the context of the establishment and development of the student [21].

In fact, the purpose of education is often limited to the acquisition of knowledge, skills and abilities alone, while the development of attitudes and values are often completely ignored. Though this is the attitudes and values that determine how a person can use the knowledge, skills and abilities he had in things that are right and positive [22]. Similarly to how the students were able to have awareness of the environment that lead to sustainability is to save the earth. However, efforts to build a sustainable society can not succeed unless future generations want to learn how to cooperate with the natural systems to their mutual benefit [23].

Many students know the result of littering, he was also unable to name the behavior that should be skilled in taking out the trash and dispose of waste in place [24]. But often they are indifferent and do not feel guilty when storing waste in places that are not supposed to be, this is where the lack of development of attitudes and values in students. Therefore, it is important planting of attitudes and values in students from elementary, because, in principle, children at primary school age are at a stage of psychological attitude formation. Marzano and Bruner [25], that the elementary realm of *attitude* or demeanor should get more servings or more dominant introduced, taught or exemplified in the students, followed by the realm of *skill*, and the realm of *knowledge* that is less taught to elementary students.

All subjects were there and studied, either integrated or partially (separate) basically is not only concerned with the development aspects of knowledge or the students' cognitive, but also related to the development of attitudes and values and skills [26]. The link between the value of the education is indeed very closely. When we speak of truth, goodness, honesty, decency, beauty, or responsibility, though unfinished if not up on how the actions of education needs to be done so that the values that are owned by someone [27]. It strikes the human values education to be more humane to have the primary mission is to realize the value of life to the students, both to achieve the educational goals of short-term and long-term [28].

Planting a good mental attitude or through teaching Social Science can not be separated from teaching values and systems of values prevailing in the society with the aim to foster and develop a good mental attitude [29]. Educational value according Mulyana [28] covers all aspects as teaching or guidance to the students to realize the values of truth, goodness, and beauty, through the process of consideration of the proper value and habituation to act consistently. With *terbinanya* values are good and focused on them, the mental attitude will be positive to stimuli from the environment, so that the behavior and actions do not deviate from the noble values. Thus the behavior and actions are always guided by responsibility towards themselves and towards their environment.

In Indonesia, the value of education is taught exclusively through Religious Education, Citizenship Education and Social Sciences (Social Science) as a separate subject or partially. In accordance with the principle of the Learning Social Science according [30]: a) *social studies teaching and learning are powerful when they are meaningful*, b) *social studies teaching and learning are powerful when they are integrative*, c) *social studies teaching and learning are powerful when they are value-based*, d) *social studies teaching and learning are powerful when they are challenging*, and e) *social studies teaching and learning are powerful when they are active*.

[28] mentions that the development of value in Social Science always involves three distinct stages, the first stage revolves around the introduction of the facts of the environment, the second stage is the stage of the formation of concepts, and the third stage is the stage of consideration of the integrated value. Therefore, Social Science is a subject that has a major concern in helping students become good citizens. This is consistent with the primary purpose of Social Science by [30] "*to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world.*" This means that Social Science aims to help young people develop the ability to make an intelligent decision and reason for the public good as citizens of a pluralistic society and a democratic culture in a world of

mutual dependency. In this case, Social Science should be able to help students develop the knowledge, understanding, skills, and values that are essential for citizens in a democratic nation.

Social Science is not sufficiently studied revolves around the concept, identify a number of phenomena, it is necessary sharpness of an analysis of the value in a number of social issues that arise today. Values are integrated in social studies learning can be an intrinsic value such as objectivity, rationality, and scientific honesty or can be basic moral values like concern for others, empathy and other social good (Mulyana, [28]). The importance of the Social Science evident when children will make decisions or solve problems. The ability to make decisions should be developed and practiced in schools, particularly through the Social Science. Savage and Armstrong (in Effendi [31]) stated that the consideration for making a decision is made as a result of the interplay between evidence (*evidence*) and personal values.

Naylor and Diem (in [31]) states that the primary purpose of education value in the program Social Science must have two aspects: to provide ample opportunities for students to identify the attitudes, beliefs, and values BAUK private or public, and to familiarize them with the process of testing various attitudes, beliefs and values. In accordance with the primary goal of education in the Social Science value, then the value of learning from some choice in the corresponding Social Science is through learning by *Value Clarification Technique (VCT)*. Raths et al. (1978) suggested that the *Value Clarification Technique (VCT)* is one of the values or moral education approach that does not directly focus on helping students clarify values or clarify their own values. Raths, et al (in Komalasari, [32]) states there are seven stages in the process of assessing the *Value Clarification Technique (VCT)*, which are summarized as follows: a) to choose freely; b) selecting from a variety of alternatives; c) choosing after holding a consideration of the various consequences; d) feel happy or happy with her choice; e) to admit his choice in public; f) act in accordance with his choice; and g) act repeatedly as a pattern of behavior in life.

Based on the above, the authors are interested in doing further research with the title "The Effect of Implementation of *Value Clarification Technique (VCT)* to the attitude *Ecoliteracy* and Critical Thinking Skills Elementary students in the Learning Social Science". This study is expected to be a positive impact on the success of the learning activities in social studies, especially in the learning value that is often overlooked in school. Indeed the value of learning by using *Value Clarification Technique (VCT)* This not only helps the students to re-examine his personal values, but also can train students' critical thinking skills to be able to develop values *ecoliteracy* students in himself through clarification and self-awareness.

## II. METHODS

The research design used in this study is a quasi-experimental design with *Nonequivalent Control Group Design*. In this design, the experimental group (A) and the control group (B) were selected without random placement procedure. In both groups performed equally *pretest* and *posttest*. Only the experimental group who were given *treatment* [33].

### 1. *ecoliteracy*

Based on t-test results on the score obtained results *ecoliteracy sig (2-tailed) = 0.000*, which means value *sig (2-tailed) 0.000 < 0.05*. Then the hypothesis  $H_0$  is rejected and  $H_1$  accepted, so it can be stated that there is a difference *ecoliteracy* experimental class control class. This proves that learning VCT (*Value Clarification Technique*) to give effect to *ecoliteracy* students. In addition *ecoliteracy gain* test results showed the experimental class of *n gain* of 0.21 with the interpretation that the *n-gain* the experimental class is included in the criteria of "Low". While the test results *ecoliteracy gain* on gain control class *n gain* of 0.09. Then the *n-gain* the control class was included in the criteria of "Low". Based on the comparison results of *n-Gain* experimental class and control class, we can conclude that *ecoliteracy* experimental class and control class there is an increase, but not too big. When compared to the increase, the experimental class had greater increases 12% greater than the increase in the control class. In addition to the results of the data obtained, it should also be submitted descriptions of treatment and matters arising in connection with *ecoliteracy*. In the implementation of student learning is done *ecoliteracy* appear when presented pictures of the garbage and the environment. When given questions with regard to the learning of *Value Clarification technique (VCT)*, seen the enthusiasm of the students in conveying its value. Students have a positive argument when presented pictures of garbage that are in the wrong place, and they were able to deliver a solution that is in accordance with the values contained in *ecoliteracy*.

When presented the wrong image of waste management, ie without separation and segregation. Students can give the opinion that, when this happens in the environment around them is the same thing as in the picture. They argue that good waste management means it can not be done by one party alone, but must be done by all parties with full awareness. From some of the findings and research results, then we can see that the results of calculations of data *ecoliteracy* accordance with the findings in the form of changes *ecoliteracy* students when learning *Value Clarification Technique* treatment (VCT) is given.

### 2. Critical Thinking Skills

Based on the results uji-*Mann Whitney U* on critical thinking skills scores obtained results *sig (2-tailed) = 0.000*, which means value *sig (2-tailed) 0.000 < 0.05*. Then the hypothesis  $H_0$  is rejected and  $H_1$  accepted, so it can be stated that there is a difference in the critical thinking skills of experimental class control class. This proves that learning VCT (*Value Clarification Technique*) give effect to the critical thinking skills students. In addition the test results *gain* critical thinking skills of classroom experiments show *n gain* of 0.36 with the interpretation that the *n-gain* the experimental class is included in the criteria of "Medium". While the test results

on the class *gain* attitude control *ecoliteracy* obtain N- *gain* of 0.14. Then the *n-gain* the control class is included in the criteria of "Low".

Based on the comparison of the *N-Gain* experimental class and control class, we can conclude that the critical thinking skills experimental class is better than the control class. This shows that VCT (*Value Clarification Technique*) can stimulate students' critical thinking skills, because the VCT students learning students can be helped to assess their own feelings and actions. In this lesson students are required to be able to have their own values or attitudes appropriate to the assessment and argument alone. Whatever values and attitudes which they choose must have reasons and considerations that can be for accounted.

### III. RESULT AND DISCUSSION

In the discussion of this study, will be described on the discussion of the analysis of research that has been done then linked to the theories that support the research. The discussion in this study is the learning effect of *Value Clarification Technique (VCT)* to *ecoliteracy* and critical thinking skills of elementary school students in social studies learning.

#### 1. The influence VCT

##### *(Value Clarification Technique)* against *Ecology* student

Based on the analysis of research that has been done, the results obtained average *pretest ecoliteracy* students in the experimental class that is equal to 79.86 with an average of 88.97 *posttest*. While the average value *posttest ecoliteracy* students in the control class that is equal to 71.89 with an average of 76.19 *posttest*. From the results of the *pretest* and *posttest* we can observe that the experimental class and the control class has increased *ecoliteracy*, which amounted to 9.11 at 4.31 in the experimental class and control class. Average increase in the experimental class is greater than the control class. To determine the criteria for the increase and the difference it can be observed by looking at the test results *gain*. The experimental class score of N- *gain* is equal to 0.21 and when seen in the criteria *gain* these results demonstrate the criteria of "low". In the control group obtained a score of *n gain* of 0.09, a low value indicates criteria anyway. This proves that learning by using VCT (*Value Clarification Technique*) can improve student *ecoliteracy*.

*Ecology* proof that there is a difference between the experimental class that implements VCT (*Value Clarification Technique*) the control class that implements conventional learning can be seen on t-test results. This test is performed for the normality test turns all the data were normally distributed and homogeneous. Before giving *posttest* to determine the final test results, conducted in advance of initial tests (*pretest*). Having obtained the results of initial tests and then in the test, it turns on *pretest* scores experimental class and control class there is a difference, however small. This shows that the *pretest* results are less good, because according [34] that the *pretest* good results when the value of the experimental group was not significantly different from the control group. After the t-test was performed on the data *posttest* between the experimental class control class. The data is interpreted that there is a difference between

experimental class control class. In the t-test results showed *sig (2-tailed)* = 0.000, which means value *sig (2-tailed)* 0.000 < 0.05. Then the hypothesis  $H_0$  is rejected  $H_1$  accepted. It is proved that there are significant differences regarding *ecoliteracy* among students in the experimental class that implements VCT (*Value Clarification Technique*) the control class that implements conventional learning.

Based on the description of the above results, it is consistent with the theory mentioned by [35], about the purpose of VCT (*Value Clarification Technique*) that VCT helps students so that they use jointly the ability to think rationally and emotional awareness, to understand the feelings, values, attitudes and behavior patterns of their own and finally compelled to live it. This is in accordance with what is mentioned by Hardin (in Orr [36]), that "*ecological literacy is the ability to ask what then?*". The purpose of this description that through learning the VCT students honed thinking skills to be able to understand the value in itself in order to have an attitude and solutions for environmental problems. VCT and *ecoliteracy* is reflective thinking process, so that if VCT is done in the classroom, it will help clarify the existing *ecoliteracy* back in her students.

*Ecology* inseparable from the cultivation of values, as expressed Callenbach [37] "*at the center for ecoliteracy we believe that at their heart, the ecological problems we face are problem of values*". The point is that every human being who lives in a neighborhood have a rule in behavior daily, in *bertingka* is certainly very concerned about the values that should-have for all that we do is based on the truth at a good value system. Then, according to Woolover (1988) *Value Clarification is a process for examining personal values*. Where students know that its value is affected by the surrounding environment. As the authors expect that through VCT learning, students are expected to *terbina ecoliteracy*- her well where the actual values *ecoliteracy* it has existed in students.

The test results showed the experimental class *ecoliteracy gain* of N- *gain* of 0.21 with the interpretation that the N- *gain* the experimental class is included in the criteria of "Low". While the test results on the class *ecoliteracy gain* control *gain* of N- *gain* of 0.09. Then N- *gain* the control class was included in the criteria of "Low". Based on the comparison of the *N-Gain* experimental class and control class, we can conclude that *ecoliteracy* experimental class and control class there is an increase, but not too big. Achievement of N-*Gain* is the experimental class is similar to the control class, and both are included in the low category. This happens can occur because of the implementation of VCT rudimentary. If the seven processes in VCT is not implemented yet actually produce real value of a person, as [35] pointed out that: seven processes in VCT is seen as a criterion for determining whether something is a real value (*true value*) for the remarkable and innovative. If anything is missing, then it is not yet a real value, it is only the indicator value (*a true value*).

In accordance with the opinion of [32] that the role of teachers in values clarification approach is to encourage students with questions relevant to develop students' skills in the process of judging. This factor can be one of the low

acquisition N-Gain, the preparation of a more mature should really be done in this VCT learning.

## 2. The influence VCT (*Value Clarification Technique*) Critical Thinking Skills Students

In the study not only measured the effect of learning VCT (*Value Clarification Technique*) to AA *ecoliteracy* alone, but also measured the effect of learning VCT (*Value Clarification Technique*) to the students' critical thinking skills. The results of data processing and analysis the average *pretest* critical thinking skills of students in the experimental class is 59.72 with an average *posttest* at 73.69. While the average value *posttest* critical thinking skills of students in the control class that is equal to 52.00 with an average *posttest* at 61.97. From the results of the *pretest* and *posttest* that we can observe that the experimental class and control class increased critical thinking skills, which amounted to 13.97 in the experimental class and the control class 9.97. Average increase in the experimental class is greater than the control class.

To determine the criteria for the increase and the difference it can be observed by looking at the test results *gain*. The experimental class score of N- *gain* is equal to 0.36 and when seen in the criteria *gain* these results demonstrate the criteria of "being". In the control group obtained a score of N *gain* of 0.14 value indicates the criteria of "low". This proves that learning by using VCT (*Value Clarification Technique*) can improve students' critical thinking skills are better than conventional pembelajaran.

Proof that there is a difference between the critical thinking skills of experimental classes that implement VCT (*Value Clarification Technique*) with a control class that implements conventional learning can be seen in the results uji- *Mann Whitney*. Uji- *Mann Whitney* was done because the normality test turned out to be one of the data, ie data *posttest* that distribution is not normal. Before giving *posttest* to determine the final test results, the test of critical thinking skills to do well early tests (*pretest*) beforehand). Having obtained the results of initial tests and then in the test, it turns on the score *pretest* experimental class and control class there is a difference, it indicates that there has been no difference in the beginning of students' critical thinking skills. Once it is done uji- *Mann Whitney* on the data *posttest* between the experimental class control class. The data is interpreted that there is a difference between experimental class control class. In the t-test results show the value *sig* (2-tailed) = 0.000, which means value *sig* (2-tailed) 0.000 <0.05. Then the hypothesis  $H_0$  is rejected  $H_1$  accepted. It is proved that there are significant differences regarding critical thinking skills among students in the experimental class that implements VCT (*Value Clarification Technique*) with a control class that implements conventional learning.

Differences in the level of critical thinking skills of students using the experimental class learning VCT (*Value Clarification Technique*) with grade control using conventional learning can be caused by several factors. In essence, there is no model or technique that is bad or good, but what happens is the fitness model or learning techniques that are used with the objective to be achieved. In this study the theory presented in the previous chapter, has been proven in accordance with the hypothesis made prior to the

research. The definition of critical thinking by Dewey is a process of "active" (*reflective thinking*) and define it as the active consideration, and caution against the belief or knowledge that should form the grounds for and the further conclusion that leads to him. Based on the definition of VCT (*Value Clarification Technique*) according [35] is an educational approach in which the value of students are trained to find, select, analyze, decide, take a stand alone life values that will be fought. Seen the same activities occur in the VCT (*Value Clarification Technique*) and critical thinking. So learning VCT (*Value Clarification Technique*) can facilitate the students hone their critical thinking skills.

The learning objectives learning VCT (*Value Clarification Technique*) assist students in practice the skills of thinking, as expressed by [35], which helps the students so that they are able to use the jointly kemampuan rational thinking and emotional awareness, to understand the feelings, values, attitudes, and behavior patterns of their own and eventually compelled to live it. This is evidenced by the test results *gain* critical thinking skills experimental class larger than the control class, which amounted to 0.36 with the interpretation that the N- *gain* the experimental class is included in the criteria of "Medium". While the test results *gain* critical thinking skills in the classroom control gain of N- *gain* of 0.14 and included in the criteria for "Low". In the implementation of learning VCT (*Value Clarification Technique*) performed in this study, which when the teacher gives some social problem picture environment. Visible expression of very serious students pay attention to the images before they write the assessment of the rendered image. It is used as (*entry behaviour*) students in learning VCT (*Value Clarification Technique*). Student learning is so closely followed because of the VCT (*Value Clarification Technique*) which dutamakan is to develop the student's skills in the process of judging. In learning VCT (*Value Clarification Technique*) students are given the trust and not be pressed to answer as set by the teacher, so that they are so eager to show his personal assessment with confidence. In contrast to the control class is still in doubt because it is tied to the specified standard of truth.

## IV. CONCLUSIONS

Based on the research that has been described, then a number of conclusions that presents the interpretation and meaning of researchers on the analysis of research findings. As has been mentioned before that this study wanted to determine the effect of learning VCT (*Value Clarification Technique*) to *ecoliteracy* and critical thinking skills of students.

1. Learning the value of VCT (*Value Clarification Technique*) has an influence on *ecoliteracy* students. Conclusions can be drawn based on the results of the analysis of data shows that there is a significant difference in *ecoliteracy* students who use the learning VCT (*Value Clarification Technique*) with *ecoliteracy* students who use conventional methods of learning. *Ecoliteracy* can be obtained through reflective thinking activities that can be developed in learning VCT (*Value Clarification Technique*). *Ecoliteracy* needed to sustain all forms of life on this earth, so it takes awareness that comes from

within students through values clarification and good behavior that already existed within the student .

2. Learning the value of VCT (*Value Clarification Technique*) has an influence on critical thinking skills of students . Learning VCT (*Value Clarification Technique*) to train students to think and explore the values that exist in him to later clarified, so as to improve the critical thinking skills of students . After analyzing the data can be obtained that there are significant differences in the critical thinking skills of students who use the learning VCT (*Value Clarification Technique*) with the critical thinking skills of students who use conventional methods of learning. This can happen because the learning VCT (*Value Clarification Technique*) includes the steps of reflective thinking that is characteristic of critical thinking activities.

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# Student's Learning Obstacle of Perimeter and Area Concept of Parallelogram in Learning Mathematics at Junior High School

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**Abstract.** The purpose of this research was to find and analyze students' learning obstacle of the perimeter and area of parallelogram concept. This research is an early study of a didactical design at SMPN I Cisayong Tasikmalaya. The research subject was determined based on purposive sampling graders 8A and 8G. The method used is Think Out Aloud. Data collection techniques: identify materials that predictable students experiencing learning obstacle, generate grillwork and questions about learning obstacle, judged by two experts math education, revised based on advice from experts, then revalued until it is declared fit for use, test learning obstacle, analyze the results of tests, interviews with students who did not answer or the wrong answer. The research instrument used test questions learning obstacle and interview guidelines. The study found some students' learning obstacles are grouped into: understanding the concept of parallel sides parallelogram namely the difficulty in differentiating and explaining parallelogram and not a parallelogram, the students do not understand the features of parallelogram that distinguish the other forms of geometry, mean of learning obstacle on this type of 65.0% medium criteria; understanding the concept of base and height parallelogram that students do not understand that the parallelogram base and height is always perpendicular to each other, mean learning obstacle on this type of 95.0% very high criteria; understanding area concept of parallelogram, mean learning obstacle on this type of 81.8% very high criteria; understanding the concept perimeter the parallelogram, mean learning obstacle on this type of 91.7% very high criteria.

Keywords: Learning Obstacle; Perimeter and Area, Parallelogram.

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## I. INTRODUCTION

Mathematics is one of the sciences that has been introduced to students from the basic level to the higher level, mathematics has an important role in everyday life. Many problems in everyday life that solving using mathematics, so that math needs to be understood and well controlled by all levels of society, especially by students [1], [2]. In addition, mathematics also functions in developing one's thinking ability, as argued by [3] mathematics is a way and thinking tool developed using consistent and accurate reasoning rules so that mathematics can be used as a very effective thinking tool to view various problems Including outside mathematics. Success in learning mathematics depends on how mathematics is given by teachers in learning. If the concepts of mathematics are given directly in the form of the end result, then the functions will not be optimal, because only by knowing the end result of a concept can lead to students' understanding of the mathematical context to be limited, even can cause students experiencing difficulties in learning mathematics [ 4], [5]. The focus of mathematics learning is not only on the end result but also in the process of forming mathematical concepts.

Students find it difficult to understand a concept when learning is a natural thing, the difficulties students experience when learning varies, this is influenced by the different initial knowledge possessed by each [3]. On the answers of various students, the teacher should be able to explore the difficulties or obstacles in learning, then conditioned the learning process that can involve students

actively, pay attention to the preknowledge of students, as well as develop an appropriate learning environment because teachers should be able to guide students overcome learning difficulties so that students can understand the concept being taught.

Geometry is one of the mathematics subject matter given at junior high school level that is difficult for students to understand [6]. According to [6], geometry occupies a special position in the curriculum of mathematics, because many concepts contained in it. From a psychological point of view, geometry is the presentation of abstractions from visual and spatial experiences, such as fields, patterns, measurements, and mappings. Moreover, from a mathematical point of view, geometry provides approaches to problem-solving, such as drawings, diagrams, coordinate systems, vectors, and transformations [6]. Geometry is also an environment for studying mathematical structures. Geometric concepts include flat planes and three-dimensional planes. The flat plan includes triangle, rectangle, parallelogram, rhombus, and kite. At a glance the concept of geometry in learning mathematics looks easy, students just draw and count what is asked. In fact, many students have difficulties in understanding the geometrical concepts they are studying, so that student learning outcomes on geometry are still low [6].

Research [7] on the difficulties of student learning in terms of epistemology on the concept of quadrilateral in grade 7 of SMPN 3 Gorontalo, the result of the research shows that learning obstacle students on epistemology include: applying the concept, visualization of a quadrilateral,

determining formula, problem-solving, and understanding problem. In addition, research [8] on the didactic design of the concept of rhombus area in grade 7 students of SMPN I Bandung, the results of the study showed that students' obstacle learning includes: rhombus understanding, concept of rhombus area, problem-solving that requires imagination to be constructed first, and connection concept of rhombus area with another concept. The results of the study [9] conducted in 7th-grade students in Bandung stated that in studying geometry on the concept of parallelogram area found some learning obstacle on epistemology that is: conceptual, visualization, construction, structural, and connection.

Taking into account the results of the research, it is inspiring to be interested in conducting research at the junior high school level in Tasikmalaya City about the epistemological learning obstacle on the concept of parallelogram but exploring other aspects. Based on interviews with mathematics teachers at SMPN 1 Cisayong Tasikmalaya City, it is found that students still have difficulty in understanding the concept of the base, height, and area of a parallelogram. The results of the interviews have not been sufficient to obtain information about learning obstacles of students on the concept of a parallelogram, need to be explored further through research on other indicators that are different from the previous research include two pairs of parallel sides, base, height, area, and perimeter. Teachers need to know the learning obstacle on certain concepts experienced by students, in order to prepare the learning process so as to overcome the obstacle learning experienced by students.

As [10] states that the goal of mathematics learning is that students actualize learning at the highest level, but the facts show that most students have difficulty actualizing themselves in learning. Learning obstacles of these students include inadequate basic concept learning, inability to attempt to formulate mathematical problems orally, lack of algebra skills, geometry and trigonometry. This research is a preliminary study of Didactical Design Research study on parallelogram concept, with the research question, is: on which indicator students experience learning obstacles on the concept of the parallelogram? The purpose of this research is to explore and analyze student learning obstacles on the concept of the parallelogram.

Learning obstacle is the things that happen in the learning that resulted in students experiencing barriers in understanding the concept or one in making perceptions about a concept. One effort that can be done by teachers in preparing a learning process is to consider the existence of learning obstacle, so it can be anticipated to avoid the occurrence of learning obstacles that appear in the future. Learning obstacle is a condition in the learning process characterized by the presence of certain obstacles to achieve learning outcomes [11]. Furthermore [12] reveals that learning obstacle in mathematical content can be interpreted as a student difficulty that can be expressed from the pattern of mistakes made by students in answering questions. Furthermore, according to [12], that obstacle learning in mathematics has certain characteristics that are difficulty in processing information, difficulties related to the ability of language and reading, and math anxiety. Learning obstacle

occurs due to several factors, such as [13], [14] suggesting that in practice students may naturally experience a situation called learning obstacle. There are three factors that cause learning obstacle is the ontogeny barrier (the mental readiness of learning), didactic (due to the way the teacher gives the concept), and epistemology (knowledge of students who have limited application context).

According to the [15] - [17], the epistemological obstacle is essentially a person's knowledge which is limited to a particular context, if the person is confronted with a different context, his knowledge becomes unusable or he has difficulty using it. In the learning process, there may be differences in concepts received by one student to another. This is due to differences in perceptions about the concept conveyed by the teacher with the concept formed in the minds of students. There are several concepts as suggested by [18] are concept image and concept definition. Concept image is a description of a concept that each individual received based on both observation, experience and both. Therefore, each individual is able to have a different concept image though with the same term. While concept definition is an individual understanding of concept image. Concept definition can be made by individuals with their own language, so it is slightly different from the formal definition of a concept.

## II. METHODS

This research was conducted on 8A and 8G students of SMPN I Cisayong Tasikmalaya City based on purposive sampling that students in that class have received perimeter and area concept of parallelogram, and enabling the various obstacle learning that is identified. The research method is Think Out Louds or Think Alouds: students are asked to solve the obstacle learning test questions as well as telling what he is thinking. The research phase includes: determining the mathematical concept will be explored learning obstacle is the perimeter and area concept of parallelogram, making the instrument test learning obstacle, evaluated by two experts math education, the revision of the test instrument based on the evaluation of two experts, re-evaluated by two experts math education, after being approved by two experts conducted tests of mathematics education further learning obstacle, analyzing test results learning obstacle, interviews with students the answer is wrong or does not answer, make inferences about learning obstacle on the perimeter and area concept of parallelogram. Techniques of collecting data through obstacle learning tests and interviews of students who did not answer or wrong answers. The research instrument is about obstacle learning test and interview guide. Grid about obstacle learning test as follows:

TABLE I  
GRID PROBLEM LEARNING OBSTACLE TEST

Indicator Concept	Learning Obstacle	Indicator Problem	Number Problem
Explains the parallelogram properties.	The Concept side parallel to parallelogram	Students are able to differentiate and explain parallelogram and not parallelogram	1
Solve problems related to calculating the perimeter and the area of the parallelogram.	The concept of the base and the height of the parallelogram	Students are able to define, draw and explain the base and height of the parallelogram	2
	The concept of the area of parallelogram	Students are able to explain and calculate the area of parallelogram	3, 4, 5
The concept of the area of parallelogram in the context		Students are able to understand the context of the sentence, change into the mathematical model and be able to calculate the area of parallelogram	6
	The concept of a perimeter of parallelogram	Students are able to calculate the perimeter of parallelogram	7

Students' answers to learning obstacle test questions are assessed using Rubric Score ranges from 0 to 4 as shown in the following table:

TABLE II  
RUBRIC SCORE STUDENT'S ANSWER

Learning Obstacle	Student's Answer	Score
The Concept side parallel to parallelogram	No answer	0
	Answer but wrong	1
	Differentiate the parallelogram and not the parallelogram but there are errors	2
	Distinguish parallelogram and not parallelogram but not complete	3
	Distinguish parallelogram and not parallelogram complete and true	4
The concept of the base and the height of the parallelogram	No answer	0
	Answer but wrong	1
	Draw the base and the height of the parallelogram but give no explanation	2
	Draw the base and the height of the parallelogram and provide explanation but there are errors	3
The concept of the area of parallelogram	No answer	0
	Answer but wrong	1
	Applying the concept but wrong calculation process	2
	Applying the concept but the calculation process is a mistake	3
The concept of the area of parallelogram in the context	Applying the concept and the calculation process is correct	4
	No answer	0
	Answer but wrong	1
	Converts from context to mathematical model correctly but the area calculation process is wrong	2

Learning Obstacle	Student's Answer	Score
The concept of a perimeter of parallelogram	Converts from context to mathematical model correctly but the area calculation process there is an error	3
	Converts from context to mathematical model correctly and the area calculation process is correct	4
	No answer	0
	Answer but wrong	1
	Implemented the perimeter concept but incorrect in the calculation process	2
	Apply perimeter concept but wrong in final result	3
	Apply the perimeter concept correctly and the results are correct	4

Students are said to experience learning obstacle on each item, if able to answer the problem correctly less than 75% or get score less 3 or no answer. The learning obstacle criteria are modified from [19] as shown in the following table:

TABLE III  
LEARNING OBSTACLE CRITERIA

Learning Obstacle Percentage	Criteria
$0\% \leq - < 20\%$	Very low
$20\% \leq - < 40\%$	Low
$40\% \leq - < 60\%$	Medium
$60\% \leq - < 80\%$	High
$80\% \leq - \leq 100\%$	Very High

### III. RESULT AND DISCUSSION

Learning obstacle test of the perimeter and area of parallelogram concept was carried out for students of SMPN 1 Cisayong Tasikmalaya City, 8A class as many as 31 people and 8G as many as 29 people. To explore the learning obstacle students on the concept, given 7 items about learning obstacle test in the form of a description that must be answered for 120 minutes. The question of learning obstacle test has been declared valid and fit for use by 2 experts mathematics education. To the students who do not answer or answer wrongly done an interview to explore deeper about student learning obstacle. Problem number 1 to explore obstacle learning about the concept of the parallelogram and the properties of the parallelogram, the question is as follows:

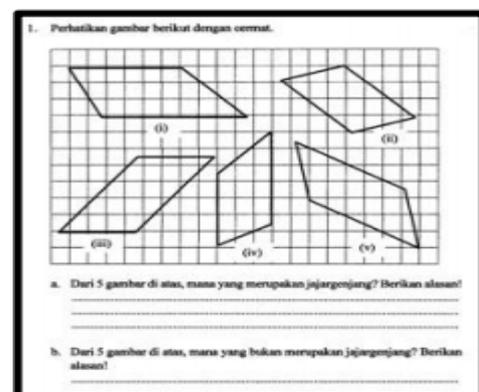


Fig. 1 Problem Number 1

Based on the results of the analysis to students answer to the number 1, only 35% of students able to answer correctly, the student's difficulties in distinguishing and explaining the parallelogram and not the parallelogram, students are fooled by the parallelogram depicted with different positions. In addition, students have not understood the characteristics of the parallelogram that distinguish it from the other flat builds. Based on the results of interviews with students, the mistake is caused by students' understanding of the parallelogram in previous learning is always described with a horizontal position. The characteristics of the parallelogram are only memorable only to understand from the packaged book without gaining experience in directly identifying the parallelogram characteristics. Thus, the students do not understand the concept of the parallel side of the parallelogram. Learning obstacle about the number 1 is an average of 65.0%, so students are still having difficulty with high criteria.

Problem number 2 to explore obstacle learning about the base and height of parallelogram, the question is as follows:

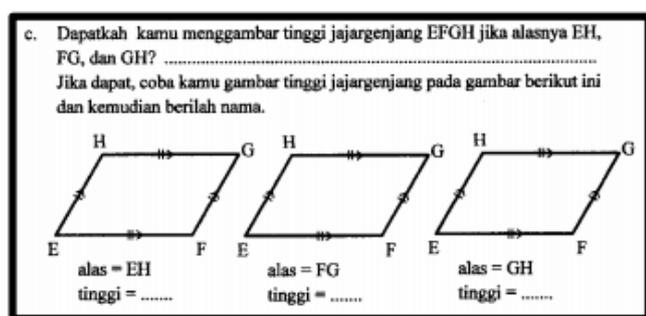


Fig. 2 Problem Number 2

The result of analysis to student answer about number 2, only 5% student able to answer correctly. In general, students mistakenly determine the base and height of the parallelogram, the students' understanding that the height of the Parallelogram is always vertical, is a diagonal line, and there are also students who think that the height of the parallelogram is the side of the Parallelogram. Based on the results of interviews with students, this is because students have not understood that the base and height of the parallelogram are always perpendicular to each other. Students do not understand the concept of base and height parallelogram, so confused in answering questions. Thus indicating that students have difficulty learning about the concept of base and height of parallelogram. Learning obstacle determines the base and the average parallelogram of 95.0%, thus the students have difficulty with very high criteria.

Problems 3, 4, and 5 to explore learning obstacle about the concept of parallelogram area, one of them as follows:

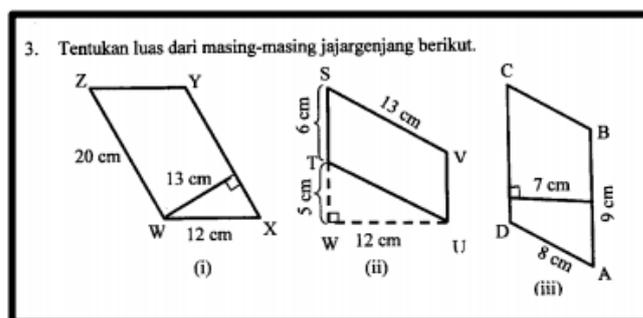


Fig. 3 Examples problems of Parallelogram Area

The results of the analysis of students' answers to questions 3, 4, and 5, students are able to answer correctly only 16.4%, most students answered wrong. This is because in general students are not able to determine the base and height of the parallelogram with the position of the image is vertical and tilted. Based on the results of interviews, this is because students only recognize the concept of the base and height of the parallelogram horizontal image position, students are not accustomed to given the problem of the area of the parallelogram varying image positions. It becomes a challenge for teachers to provide experience to the students giving the concept of the area of the parallelogram with different image positions, as recommended by [20]. Learning obstacle students on the concept of area parallelogram average of 83.6%, thus students have difficulty with very high criteria.

Problem number 6, to explore learning obstacle about the concept of parallelogram area in context. To answer the problem, students must first change the context into the mathematical model. Based on the results of the analysis of the answers to the question, only 20% of students are able to answer the problem correctly. This is because students have not been able to change from context into a mathematical model. Based on the results of interviews, students are less understanding of the context, what is known and what is asked, so wrong in answering. This is because, in the previous learning process, students are accustomed to given the problem of parallelogram area directly in the form of images, rarely given in the form of context. As stated by [21] students should be given problems in real word problems then convert them into mathematical symbols. Thus the students have difficulty in solving parallelogram area problem in the form of context. Learning obstacle on the concept of parallelogram area in the context of 80.0%, so students have difficulty with very high criteria.

Problem number 7 to explore learning obstacle about perimeter parallelogram concept with the following problem:

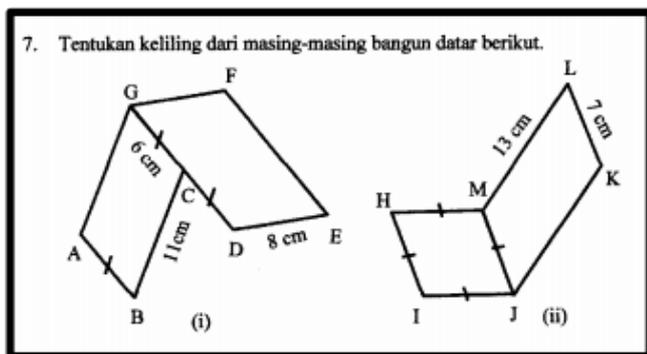


Fig. 4 Problem Number 7

In problem number 7 the picture of the parallelogram has been combined with another flat plane. To determine the perimeter of the parallelogram must understand the basic concepts of the parallelogram perimeter. Based on the results of the analysis of students' answers to the problem, only 8.3% of students are able to answer correctly. Student's answer to problem 7, in determining the perimeter parallelogram calculated the perimeter of each plane first and then for the perimeter by summing. Based on the results of interviews obtained information that students are rarely given the concept of determining the perimeter of the parallelogram whose image is combined with another flat plane. In everyday learning, it usually determines the perimeter of a parallelogram from a single image. Thus the students are not accustomed to being given a concept of which the parallelogram image is combined with another plane. Learning obstacle on the concept determines the average parallelogram perimeter of 91.7%, so students have difficulty with very high criteria.

The findings that have been described, complemented by other findings are summarized in the following table:

TABLE IV  
NUMBER OF STUDENTS EXPERIENCING LEARNING OBSTACLE ON EVERY PROBLEM

Class	Number of Students Learning Obstacle						
	1	2	3	4	5	6	7
8A	10	28	17	18	28	19	27
8G	29	29	29	29	29	29	28
Sum	39	57	46	47	57	48	55

The percentage of students experiencing obstacle learning on each question is presented in the following table:

TABLE V  
PERCENTAGE OF LEARNING OBSTACLE STUDENTS ON EVERY PROBLEM

Learning Obstacle of Concept	Pro-blem	Sum	%	Cri-teria	Ave-rage (%)	Cri-teria
The Side parallel to parallelogram	1	39	65,0	High	65,0	High
The base and the height of the parallelogram	2	57	95,0	Very High	95,0	Very High
The area of parallelogram	3	46	77,6	High	83,6	Very High
	4	47	78,3	High		
	5	57	95,0	Very High		
The area of parallelogram in the context	6	48	80,0	Very High	80,0	Very High
The perimeter of parallelogram	7	55	91,7	Very High	91,7	Very High

Analyzing the findings of the study, the learning obstacle sequence experienced by students starting from the most experienced lies in the concepts: height and base of the parallelogram, parallelogram perimeter, parallelogram area, parallelogram area in the context, and parallelogram whose picture is varied.

#### IV. CONCLUSIONS

Based on the results of data analysis and findings of students' learning obstacle of the perimeter and area of parallelogram concept obtained the conclusions that:

1. Learning obstacle students on understanding the concept of the properties of the parallelogram: students difficulty in distinguishing and explaining parallelogram and not the parallelogram, students do not understand the forms of parallelogram presented in different positions. This is due to the students' limited understanding that the parallelogram is only described horizontally. Furthermore, the student has not understood the special features that distinguish the parallelogram with the other flat plane of having two pairs of opposite sides, parallel, and the same length. Learning obstacle shows an average of 65.0%, thus students have difficulty with high criteria.
2. Learning obstacle on understanding the concept of the base and the height of the parallelogram that students have not understood that the base and height of the parallelogram are mutually perpendicular. Learning obstacle shows an average of 95.0%, thus students have difficulty with very high criteria.
3. Learning obstacle on understanding the concept of the area of the parallelogram is the students have difficulty in understanding the image of the parallelogram whose position is varied or not horizontal. Learning obstacle shows the average percentage of 83.6%, thus students have difficulty with very high criteria.
4. Learning obstacle on understanding the concept of the area of parallelogram presented in context, the student

has not been able to change the context into the mathematical model, this is because students are accustomed to receiving directly in the form of images not presented in context. Learning obstacle shows an average of 80.0%, so students have difficulty with very high criteria.

5. Learning obstacle on the understanding of the concept of the parallelogram is that students have not yet understood the concept of the parallelogram whose image is combined with another plane shape, the student assumes that the parallelogram is the sum of the length of each segment in each flat field plane. Learning obstacle shows an average of 91.7%, thus students have difficulty with very high criteria.

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# IMPLEMENTATION CRYPTOGRAPHY DATA ENCRYPTION STANDARD (DES) AND TRIPLE DATA ENCRYPTION STANDARD (3DES) METHOD IN COMMUNICATION SYSTEM BASED NEAR FIELD COMMUNICATION (NFC)

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**Abstract.** Cryptography is a method used to create secure communication by manipulating sent messages during the communication occurred so only intended party that can know the content of that messages. Some of the most commonly used cryptography methods to protect sent messages, especially in the form of text, are DES and 3DES cryptography method. This research will explain the DES and 3DES cryptography method and its use for stored data security in smart cards that working in the NFC-based communication system.

Several things that will be explained in this research is the ways of working of DES and 3DES cryptography method in doing the protection process of a data and software engineering through the creation of application using C++ programming language to realize and test the performance of DES and 3DES cryptography method in encrypted data writing process to smart cards and decrypted data reading process from smart cards.

The execution time of the entering and the reading process data using a smart card DES cryptography method is faster than using 3DES cryptography.

Keywords: Cryptography, Data Encryption Standard (DES), Triple Data Encryption Standard (3DES), NFC

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## I. INTRODUCTION

In a process of communication, there are exchanging the messages. Delivery of a message that is sensitive and must be protected in order to avoid the theft of information by parties who are not responsible. One way to protect the delivery of a message is to use cryptographic methods. One method that is most commonly used cryptography in securing the delivery of messages, especially messages in the form of text data, is a cryptographic method Data Encryption Standard (DES). DES cryptographic methods developed by scientists in the field of computer network

security in the US computer company, the International Business Machines Corporation (IBM) since 1974. [1] DES cryptographic methods developed by the cryptographic algorithm Lucifer made by Horst Feistel and were first published in 1971.

Cryptographic methods Triple Data Encryption Standard (3DES), can also be called Triple Data Encryption Algorithm (TDEA), is a further development of DES cryptographic methods. Cryptographic 3DES method was first published in 1998 and was made to replace the DES cryptographic method as standard cryptographic text data in the world. Difference between the two is 3DES using triple

DES-step process used for encryption and decryption process by using a three key combination for each process.

Near Field Communication (NFC) protocol and interface for data exchange process in a simple wireless communication system devices connected in near distance. NFC is one of the development of communications technology Radio Frequency Identification (RFID) and belong to the category of High frequency (HF) and has a working frequency of 13.56MHz. Examples of devices that was support NFC based communication process is a contactless smart card and smart card reader. Smart card reader is used as a device supporting the process of data writing and data reading contactless smart cards.

## II. THEORETICAL BASIS

### A. Data Encryption Standard (DES)

DES cryptography method is a text data cryptographic method with the type of symmetric - key block cipher and consists of two processes, namely the process of encryption and decryption process. [2] Each of that process has an eight-step process. Decryption process is done by reversing the steps - steps encryption process. Key used in DES cryptography method has 56 bits of effective length.

The process of encryption using DES cryptographic method consists of the eight-step process, [3] [4], that are:

1. Convert plaintext and the key that will be processed into binary bits. Plaintext and the key that has been converted and then broken down into data blocks form with each of the block has a 64 bits (eight bytes) length. If the message is in the form of the alphabet or symbols, it must be first converted into decimal and hexadecimal form following the ASCII character table, and then are converted into binary bit.
2. Randomize the bits in plaintext data block based on Initial Permutation (IP) table, so that the bit sequence randomized compared to bits sequence of early plaintext block. The bits sequence after the second step followed the results from the IP table, with the first bit derived from the 58th sequence bit of early plaintext blocks, and then the second bit derived from the 50th sequence bits until the 64th sequence bit derived from the seventh. sequence bits.
3. The scrambling of key bits based on permuted Choice 1 (PC - 1) table. Results from the PC - 1 has a 56 bit length because the last bits of each byte of the key (8, 16, 24, 32, 40, 48, 56 and 64 bits) that acts as the parity bit is not used again in the next step process. Once completed the results of PC - 1 then divided into  $C_0$  and  $D_0$ , with  $C_0$  is 28 leftmost bits and  $D_0$  is 28 rightmost bits from PC - 1 results bits sequence.
4. Shift bits to the left (left shift) at  $C_i$  and  $D_i$  as much as one or two times, with the value of  $i$  based on encryption process round that consists of 16 rounds. The result of the shift bits from every round of the  $C_i$  and  $D_i$  are then combined into  $C_iD_i$  with a length of 56 bits. After that the  $C_iD_i$  key bits are randomized based on PC - 2 (permuted Choice 2) table until produce the  $K_i$  variable.
5. Running the data expansion process of  $R_{i-1}$  with a length of 32 bits (starting from the  $R_0$  of second process step

results) becomes  $R_i$  with a length of 48 bits, where  $i$  is the round during the process. This process will be carried out as much as 16 times with the value of turnover  $1 \leq i \leq 16$  using the Expansion Table. The results of the expansion process is referred to as  $E(R_{i-1})$ , starting from  $E(R_0)$  to  $E(R_{15})$ . Afterwards,  $E(R_{i-1})$  will be XOR processed with  $K_i$  that has been obtained from the fourth step process for each bit corresponds to running process round to produce  $A_i$  variable with a length of 48 bits and in a vector form.

6. Once obtained,  $A_i$  then broken down into eight blocks with each block consist of six bits. Each block is then distributed into eight pieces of S - Box (Substitution Box), with the first block distributed to the S - Box 1, the second block distributed to the S - Box 2 and so on. The result of the substitution process using S - Box will be collected and produce  $B_i$  variable.
7. Once  $B_i$  variable obtained, the next step is do the permutation process on each bit of  $B_i$  variable using P - Box table. The results obtained from the permutation using P - Box referred to as  $P(B_i)$ , with  $i$  adapted to the round during the process, starting from  $P(B_1)$  through  $P(B_{16})$ . Thereafter,  $P(B_i)$  will be XOR processed with the  $L_{i-1}$  obtained from the second process step in accordance with the processes running round to produce an  $R_i$  variable with a length of 32 bits and in a vector form.  $R_i$  results will then be merged with  $L_i$ , which came from the  $R_{i-1}$ , into  $L_iR_i$  which is the result of the encryption process of plaintext for each round process with a length of 64 bits.
8. The eighth process step carried out when the seventh process step has obtained the  $L_{16}$  and  $R_{16}$  from the 16th process round. The next step is the process of reversing positions on  $L_{16}$  and  $R_{16}$ , and then combined to obtain the  $R_{16}L_{16}$  form. These results are then permuted using IP-1 (Inverse Initial Permutation) table. Results obtained from the eight process step is referred to as cipher, which is a data block that has been encrypted and is ready to be sent to the recipient along with the other ciphers. A combination of several cipher is called ciphertext.

For the note, the first and second step of the process is done only once at the beginning of the DES encryption process, while the eight step of the process is done only once at the end of the DES encryption process. The third step process to the seventh process step carried out 16 times according to the number of rounds of Feistel process used by DES cryptographic method. DES encryption process block diagram is shown in Figure 1.

### B. Triple Data Encryption Standard (3DES)

3DES cryptography method is the development of DES cryptographic method. The difference between the two methods is 3DES using triple times the DES process step used in encryption process and decryption process by using three key combination.[5] In addition, the effective length of the key used for encryption process and decryption process using 3DES cryptographic method is 168 bits (consisting of three sub - key that each have a length of 56 bits), in contrast

to DES cryptographic method that uses a key with and effective length of 56 bits.[6]

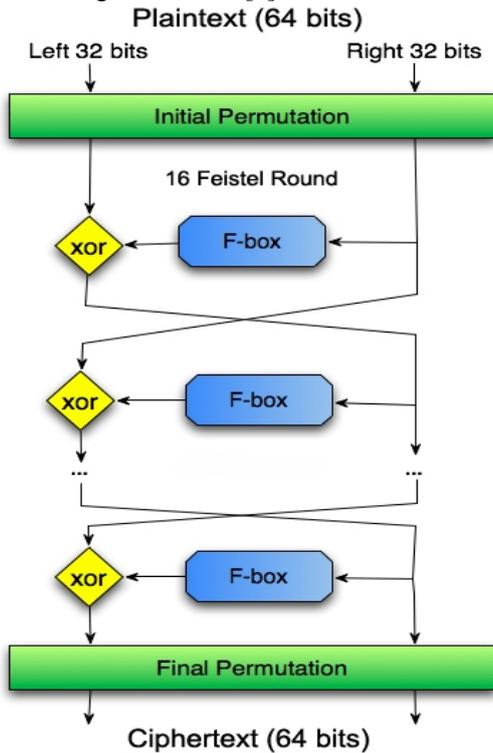


Figure 1 - DES Encryption Process Block Diagram

There are three options to use a combination of sub - key that has become standard in the encryption process and decryption process using 3DES cryptographic method,[7] that are :

1. Three sub - key have different combinations (3K3DES).
2. K1 and K2 have different combinations, whereas K1 and K3 have the same combinations (2K3DES).
3. Three sub - key has the same combinations..

Of the three options, the use of sub - key, the first option is the best because the three sub - key has a different combination, with an effective key length of 168 bits, so that the data is encrypted using the first option is more difficult to resolve than the use of the second and third options.[8] The second option has an effective key length of 112 bits, because the first sub - key has same combination as the third sub - key, but this option is still better than using the DES encryption process twice. The third option is the weakest compared to the previous option because the first sub - key and the second sub - key negated each other in the process so that the key used in this option has an effective length of 56 bits, the same as the length of the key used by DES cryptographic method. The second option will be used in the performance examination process of 3DES cryptographic method in this research. 3DES encryption process block diagram is shown in Figure 2.

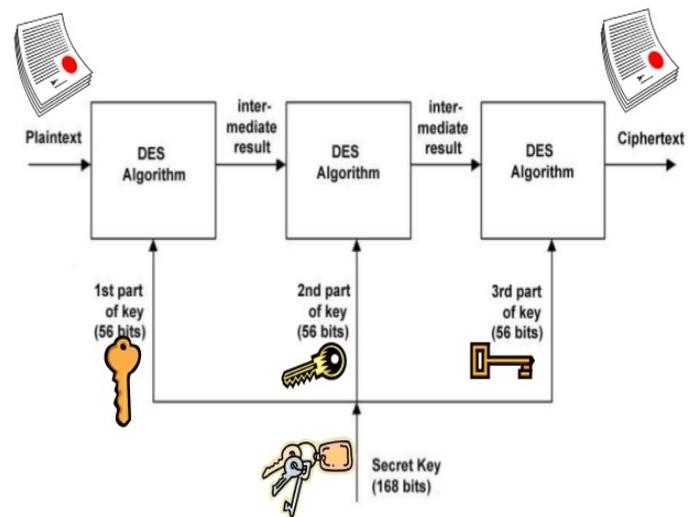


Figure 2 – 3DES Encryption Process Block Diagram

### C. Near Field Communication (NFC)

NFC is one of the latest communication technology and developed from RFID communication technology with working frequency of 13.56 MHz.[9] The device used in NFC based communication process is divided into two types, namely active devices and passive devices. An example of active device is a smart card reader, while an example of a passive device is a contactless smart card. Each NFC based active device can work in three modes of operation,[10], that are :

1. Card Emulation.
2. Card Reader / Writer.
3. Peer - to - Peer.

Card Emulation operating mode is used to change the function of active devices such as smart phones that can be used like a smart card. Card reader / writer operating mode is used to perform the writing process and reading process of the data contained in a passive device. Peer - to - peer operation mode used to perform data exchange process between two active device with similar condition, such as two smart phone devices. The second operating mode will be used in this research to examine the performance of DES and 3DES cryptography method.

## III. IMPLEMENTATION AND TESTING

### A. Program Implementation

In this research, the authors implemented DES and 3DES cryptographic methods into programs created using the Microsoft Visual Studio 2008 software and in C++ programming language. Programmes built in the form of application can be used on computers that have been based on the .NET framework. There is one application made in this research, that is the application of data writing and data reading of ACOS3 smart card using DES and 3DES cryptographic method in NFC - based systems. Contactless smart card and smart card reader that will be used in this research are ACOS3 8 KB smart card and ACS ACR1252U reader. The application display can be seen in Figure 3.

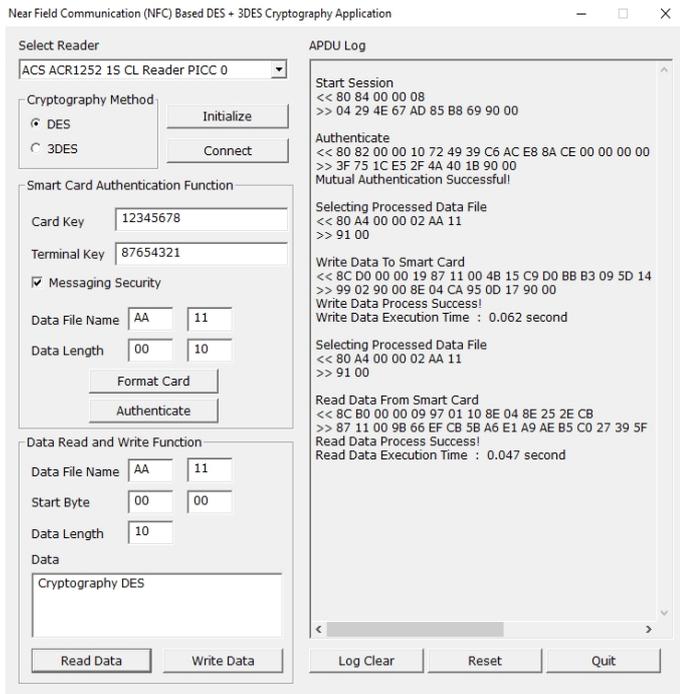


Figure 3 - Application Data Charging and Data Reading Method Using Cryptographic Smart Card ACOS3 DES and 3DES in NFC-Based Systems

The ACOS3 smart card data writing process using DES and 3DES encryption method have two inputs, that are the message that will be encrypted (plaintext / data) and key (card key and terminal key), and a single output, that is the message that has been encrypted perfectly (ciphertext) and also will be loaded into the ACOS3 smart card. The data writing process is executed by pressing the “Write Data” button. The ACOS3 smart card data reading process using DES and 3DES decryption method have two inputs, the ciphertext and key, and a single output, the message that has been perfectly decrypted (plaintext) and also will be displayed in the “Data” text box in the application. The data reading process is executed by pressing the “Reading Data” button.

### B. DES and 3DES Performance Testing

Performance examination was conducted to examine two things, the data writing execution time and data reading execution time of ACOS3 smart card using DES and 3DES cryptographic method. There are 10 observational data for each trial based on the length of data to be processed, starting from 8 ASCII characters up to 4096 ASCII characters. Each data observation tested three times to generate the average execution time. The performance examination results table that is carried out can be seen in Table 1 up to Table 3.

Performance examination that is done on ACOS3 smart card shows the result that the data writing execution time using DES encryption method is faster than using 3DES encryption method for each observational data. It also occurs in the data reading process using DES decryption method that is faster than using 3DES for each observational data. The execution time difference between that two

cryptographic method is growing along with increasing length of the data processed.

Table 1 – DES Cryptographic Method Performance Examination Results

No.	Data Length (ASCII Character)	DES Cryptography Method							
		Execution Time (milliseconds)							
		Data Write Process				Data Read Process			
		Test 1	Test 2	Test 3	Average	Test 1	Test 2	Test 3	Average
1	8	57	57	57	57	44	41	40	42
2	16	60	59	62	61	43	42	43	43
3	32	64	63	68	65	47	46	48	47
4	64	78	77	78	78	56	56	58	57
5	128	99	99	100	100	73	72	71	72
6	256	148	149	145	148	113	113	115	114
7	512	208	206	209	208	145	145	147	146
8	1024	265	263	263	264	181	180	183	182
9	2048	321	327	326	325	217	219	220	219
10	4096	387	383	390	387	255	254	258	256

Table 2 – 3DES Cryptographic Method Performance Examination Results

No.	Data Length (ASCII Character)	3DES Cryptography Method							
		Execution Time (milliseconds)							
		Data Write Process				Data Read Process			
		Test 1	Test 2	Test 3	Average	Test 1	Test 2	Test 3	Average
1	8	62	62	60	62	44	43	44	44
2	16	64	66	66	66	46	49	46	47
3	32	68	70	68	69	53	50	50	51
4	64	84	84	85	85	61	61	61	61
5	128	110	111	112	111	83	85	84	84
6	256	169	172	170	171	133	133	131	133
7	512	253	255	260	256	192	195	194	194
8	1024	321	325	331	326	244	248	247	247
9	2048	393	399	402	398	297	294	300	297
10	4096	472	468	473	471	365	369	372	369

Table 3 – DES and 3DES Cryptographic Method Performance Examination Average Results

No.	Data Length (ASCII Character)	Average Test Results			
		Execution Time (milliseconds)			
		Data Write Process		Data Read Process	
		DES	3DES	DES	3DES
1	8	57	62	42	44
2	16	61	66	43	47
3	32	65	69	47	51
4	64	78	85	57	61
5	128	100	111	72	84
6	256	148	171	114	133
7	512	208	256	146	194
8	1024	264	326	182	247
9	2048	325	398	219	297
10	4096	387	471	256	369

Through conducted performance examination, it also found that the data writing execution time of ACOS3 smart card using DES and 3DES decryption method is faster than the data writing execution time of ACOS3 smart card using DES and 3DES encryption method for each observational data. The average execution time chart of ACOS3 smart card

data writing process and data reading process using DES and 3DES cryptographic method for each observational data can be seen in Figure 4 and Figure 5.

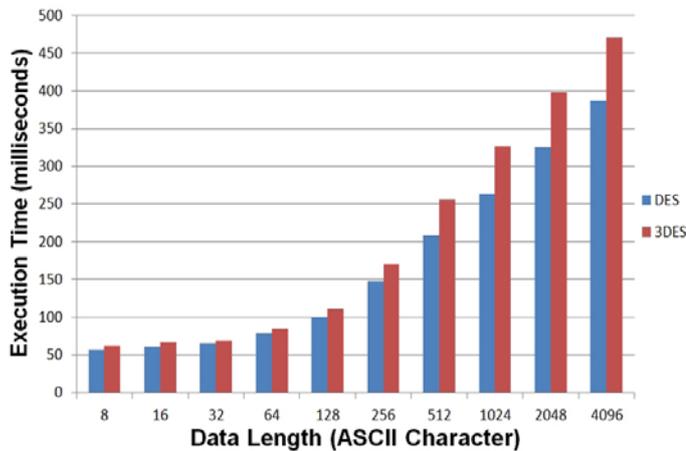


Figure 4 – Average Execution Time Chart of ACOS3 Smart Card Data Writing Process Using DES and 3DES Encryption Method

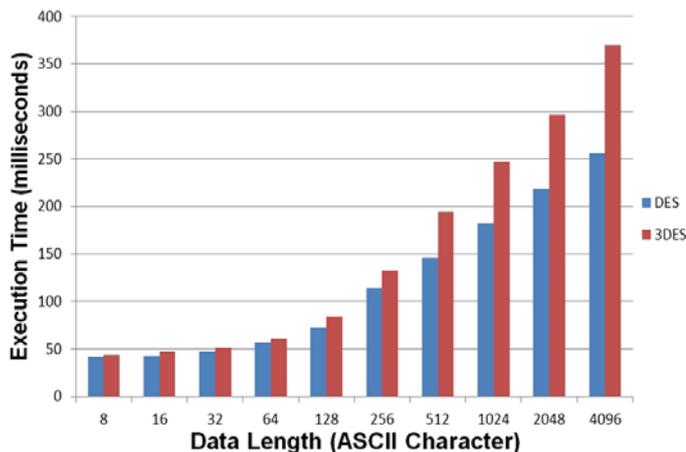


Figure 5 – Average Execution Time Chart of ACOS3 Smart Card Data Reading Process Using DES and 3DES Decryption Method

#### IV. CONCLUSION

Based on performance examination conducted on DES and 3DES text data cryptographic method with the help of the application of data writing and data reading of ACOS3 smart card using DES and 3DES cryptographic method in NFC -based systems, there are several things that can be concluded :

1. DES and 3DES text data cryptographic method can be implemented on application of ACOS3 smart card data writing process and data reading process in NFC - based systems.

2. The execution time of ACOS3 smart card data writing process and data reading process using DES cryptographic method is faster than 3DES cryptographic method.
3. The execution time of data reading process is faster than data writing process for ACOS3 smart card, using DES or 3DES cryptographic method.

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# Verification Image Of The Veins On The Back Palm With Modified Local Line Binary Pattern (Mllbp) And Histogram

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**Abstract.** The verification to person who is used today as a fingerprint, signature, personal identification number (PIN) in the bank system, identity cards, attendance, easily copied and forged. This causes the system not secure and is vulnerable to unauthorized persons to access the system. In this research will be implemented verification system using the image of the blood vessels in the back of the palms as recognition more difficult to imitate because it is located inside the human body so it is safer to use. The blood vessels located at the back of the human hand is unique, even humans twins have a different image of the blood vessels. Besides the image of the blood vessels do not depend on a person's age, so it can be used for long term, except in the case of an accident, or disease. Because of the unique vein pattern recognition can be used in a person. In this paper, we used a modification method to perform the introduction of a person based on the image of the blood vessel that is using Modified Local Line Binary Pattern (MLLBP). The process of matching blood vessel image feature extraction using Hamming Distance. Test case of verification is done by calculating the percentage of acceptance of the same person. Rejection error occurs if a person was not matched by the system with the data itself. The 10 person with 15 image compared to 5 image vein for each person is resulted 80,67% successful Another test case of the verification is done by verified two image from different person .that is forgery, and the verification will be true if the system can rejection the image forgery. The ten different person is not verified and the result is obtained 94%.

Keywords: Verification, Vein image, Modified Line Local Binary Pattern (MLLBP), Histogram, Hamming Distance

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## I. INTRODUCTION

The biometric technology [1] has recently become a reliable technology to provide a high level of security in the system of recognition of a person. Among various biometric techniques and their characteristics are used to identify a person, biometric of the hand into one of the techniques most widely used and most successful. The parts of the hand that is often used for the introduction of a person's identity, among others, hand geometry, fingerprint, palm lines, the lines on the knuckles and blood vessels

Currently, the majority of a person through the hand's identifier device requires direct contact between the user's hands with the identification device to take pictures of the unique patterns of the user's hands. There are a number of problems in this regard, the first is the level of cleanliness of the device that has been used many times by others, the problems will increase if there is a virus such as SARS can be transmitted by touching the rest of germs residing on the

surface of recognition devices. The second problem is the rest of the hand imprint mold on the appliance can affect the accuracy of the system to recognize a person's identity. And the third is that biometrics can be easily forged.

These problems can be overcome by using biometrics veins on the back palm. There are several supremacy used biometric vein, that is the first image captured using an infrared camera, so there is no direct contact between the equipment and the user, the second the blood vessels inside the human body so that its are difficult to counterfeit, the third blood vessels can be used for long term.

## II. VEIN AS BIOMETRIC

Blood vessels are part of the circulatory system that transport blood throughout the body. There are three types of blood vessels, namely: the arteries that carry blood from the heart, the capillaries that serve as the actual exchange of water and chemicals between the blood and tissues, and the

blood vessels of the vein that carries blood from the capillaries back to the heart.

One biometric technology that is currently being developed is based vein biometric technology. Each individual has a unique pattern of blood vessels even in twins, though, and does not change with age but it change after experiencing the process of surgery. The advantage of vein biometric is location of vein within the skin surface. The pattern of veins which are widely used in the biometric system is the pattern of blood vessels located in the hand i.e., the back palm, the palm, and the finger. Because of it lies within the human body causes the pattern of blood vessels is impossible to forge. Therefore it is developed into vein biometric.

In the biometric system, the pattern of blood vessels can be seen clearly using infrared light. Infrared [2] is electromagnetic radiation of a wavelength longer than visible light, but shorter than radio wave radiation.

Vein biometric is adequate to the criteria of good biometric because, universal which every human being has the hands and the blood vessels in it, unique which based on the above description of each individual has a unique pattern of blood vessels even in twins, permanent which pattern of blood vessels in the hand does not change with age, can be measured quantitatively by using the imaging device near -infrared (NIR) imaging patterns so that blood vessels can be extracted and features of blood vessels can be measured.

### III. IMAGE PROCESSING OF VEIN IMAGE

Definition image processing itself is a two-dimensional image processing using a computer. Image processing is done with the aim of getting the results as expected. Based on the objective, digital image processing can be divided into several types, among others: eliminating noise in an image, improving the quality of the image by increasing or decreasing the contrast, segmentation image which divides the image into sections, analysing image by using feature extraction image for recognition and identification the objects.

Image quality improvement is one of the initial processes in image processing. Image quality improvement is needed because often the image of an object has a poor quality, for example, the image is too dark or too light, the image less sharp, and blur. There are several techniques to improve the image, such techniques gaussian low pass filter, high pass filter, and median filter.

#### A. Median Filter

At a median filter, a "window" contains a number of pixels. The window is shifted from point to point on the entire image area. On each shift created a new window. The midpoint of this window amended by the median value of the window. For example, review the window in the form of groups of pixels (square shaded) on an image in Figure 1 (a). A pixel that is being processed is an intensity of 35. Sort of pixels - the pixel

9    10    10    10    **10**    10    11    12    35

The median of the group is 10 (in bold). The midpoint of the window (35) is now replaced with the median value (10). Results of the median filter are shown in Figure 1 (b). Thus,

the median filter removes the pixel values are very different from its neighboring pixels.

13	10	15	14	18	13	10	15	14	18
12	10	10	10	15	12	10	10	10	15
11	11	35	10	10	11	11	10	10	10
13	9	12	10	12	13	9	12	10	12
13	12	9	8	10	13	12	9	8	10

(a) Midpoint pixel value 35    (b) 35 replace with median 3 x 3 pixel

Fig. 1 Removal of noise with a 3x3 median filter

#### B. Feature Extraction Using Modified Local Line Binary Pattern (MLLBP)

Feature extraction is a process of making characteristic/feature of a form, in this case, is the picture/image. Feature value obtained will be analysed for further processing. Feature extraction is done by counting the number of dots or pixels that encountered in any of checks carried out in various directions tracing checks on Cartesian coordinates of the digital image is analysed, namely vertical, horizontal, diagonal right and left diagonal.

Features a unique characteristic of an object/image. Features can be divided into two, namely: features of "natural": part of the image, such as brightness and edges of objects, and features "artificial": features that are obtained with certain operations on the image, for example, gray level histogram.

The feature extraction is the process to get characteristic features that distinguish an object with other objects. Extraction feature method Local Line Binary Pattern [3] is a proposed method for the extraction of better features and generate a higher level of recognition than the previous method, namely the Local Binary Pattern (LBP). One advantage of this LLBP method is able to confirm the change of image intensity like dots, edges, and corners. LLBP Operator consists of two components, namely a horizontal component and a vertical component. The magnitude of LLBP obtained by calculating the binary code sequence from the second component.

The basic idea of the method LLBP similar to the original method is Local Binary Pattern (LBP), but the difference is: neighbourhood shape is a straight line with a length of N pixels, unlike in the LBP of the square.

Binary weight distribution starting from the left or right side that are adjacent to the central pixel ( $2^0$ ) toward the tip end of the left or right pixel. Start from the centre pixel ( $2^{\lceil \frac{N}{2} \rceil - 2}$ ), for example N = 15 then ( $2^{\lceil \frac{15}{2} \rceil - 2}$ ) =  $2^6$  with  $\lceil x \rceil$  is ceiling function, namely the function to take the smallest integer greater than or equal to  $x$ .

	...	20	21	22	23	24	25	26	27	28	29	30	31	32	33			
:	200	252	252	30	35	78	150	100	190	190	252	250	290	190	252	100	0	2 <sup>26</sup>
144	180	76	34	190	190	160	160	250	250	178	178	107	250	178	252	250	1	2 <sup>25</sup>
145	190	30	160	252	62	252	190	71	190	160	178	252	250	100	178	71	0	2 <sup>24</sup>
146	200	175	100	62	62	107	190	220	160	100	160	100	160	107	178	220	1	2 <sup>23</sup>
147	187	100	203	62	71	71	71	62	107	160	160	190	190	160	160	62	0	2 <sup>22</sup>
148	177	190	62	62	252	107	71	87	160	107	252	160	160	160	160	87	0	2 <sup>21</sup>
149	160	178	62	100	190	190	252	160	160	160	71	71	160	160	160	160	1	2 <sup>20</sup>
150	200	140	179	138	191	233	162	146	60	71	149	164	203	183	206	146		
151	250	252	178	190	190	71	187	107	71	160	160	190	250	107	107	107	0	2 <sup>20</sup>
152	250	18	252	250	187	71	187	240	250	107	250	190	250	107	107	240	1	2 <sup>21</sup>
153	250	178	62	71	71	187	250	187	187	187	252	250	107	107	107	250	1	2 <sup>22</sup>
154	252	160	178	252	62	187	187	215	187	190	250	107	107	107	190	215	1	2 <sup>23</sup>
155	178	62	62	160	160	187	100	112	190	220	220	190	220	220	160	112	0	2 <sup>24</sup>
156	62	178	178	252	100	187	187	208	250	220	220	250	252	220	252	208	1	2 <sup>25</sup>
157	178	60	187	187	100	187	100	200	220	220	250	220	160	220	220	200	1	2 <sup>26</sup>
	200	140	179	138	191	233	162	146	60	71	149	164	203	183	206			
	1	0	1	0	1	1	1	0	0	1	1	1	1	1	1			
	2 <sup>26</sup>	2 <sup>25</sup>	2 <sup>24</sup>	2 <sup>23</sup>	2 <sup>22</sup>	2 <sup>21</sup>	2 <sup>20</sup>		2 <sup>20</sup>	2 <sup>21</sup>	2 <sup>22</sup>	2 <sup>23</sup>	2 <sup>24</sup>	2 <sup>25</sup>	2 <sup>26</sup>			
	LLBP <sub>h15,8</sub> (26,150)	= (1+8+32) + (2+4+8+32+64) = 151																
	LLBP <sub>v15,8</sub> (26,150)	= (1+2+4+16+64) + (4+8+16+32+64) = 211																
	LLBP <sub>m15,8</sub> (26,150)	= √(151 <sup>2</sup> + 211 <sup>2</sup> ) = 259																

Fig. 2 Illustration LLBP Operator

In LLBP algorithm, the first is to determine the binary code line in horizontal and vertical directions separately and then calculate the value of a magnitude that characterizes image intensity changes such as edges and corners. This can be expressed mathematically in equation (2) to (5).

$$s(x) = \begin{cases} 1, & x \geq 0 \\ 0, & x < 0 \end{cases} \quad (2)$$

$$LLBP_{hN,c}(x,y) = \sum_{n=1}^{n=c-1} s(h_n - h_c) \cdot 2^{c-n-1} + \sum_{n=c+1}^{n=N} s(h_n - h_c) \cdot 2^{n-c-1} \quad (3)$$

$$LLBP_{vN,c}(x,y) = \sum_{n=1}^{n=c-1} s(v_n - v_c) \cdot 2^{c-n-1} + \sum_{n=c+1}^{n=N} s(v_n - v_c) \cdot 2^{n-c-1} \quad (4)$$

$$LLBP_m = \sqrt{LLBP_h^2 + LLBP_v^2} \quad (5)$$

information :

N: is the length of the line in pixels

h<sub>n</sub>: pixel intensity values - pixel along the horizontal row

v<sub>n</sub>: pixel intensity values - pixel along the vertical row

$$c = \left\lfloor \frac{N}{2} \right\rfloor \quad (6)$$

Where c is the position of the center pixel intensity values

h<sub>c</sub>: pixel intensity values at the center coordinates (x<sub>c</sub>, y<sub>c</sub>) in horizontal row

v<sub>c</sub>: Pixel intensity value at the center coordinates (x<sub>c</sub>, y<sub>c</sub>) in a vertical row

s(x): define a function threshold (barrier), this function will be worth 1 when x ≥ 0 and will be 0 when x < 0

LLBP<sub>h</sub>: LLBP feature values in the horizontal direction

LLBP<sub>v</sub>: LLBP feature values in the vertical direction

LLBP<sub>m</sub>: the value of the magnitude of LLBP

Based on the equation (2) and (3), the horizontal component of LLBP (LLBP<sub>h</sub>) extract the binary code of N-1 bits of each pixel. The same number of bits extracted by the vertical component of LLBP (LLBP<sub>v</sub>) based on the equation (2) and (4). Thus, by combining the binary code of (LLBP<sub>h</sub>) and (LLBP<sub>v</sub>), a total of LLBP binary code for each - each pixel is 2 (N-1).

From Figure 2, the binary sequence of horizontal components are defined from left to right as 1010111.0011111<sub>2</sub> and the vertical component is defined

from top to bottom as 0101001.0111011<sub>2</sub>. Therefore, the binary code of LLBP is 1010111001111101010010111011<sub>2</sub>. Each binary code both horizontally and vertically are converted to decimal numbers with the following calculation:

For the horizontal component of the binary sequence to the left and right of the centre pixel: 1010111<sub>2</sub> = (1x2<sup>6</sup>) + (0x2<sup>5</sup>) + (1x2<sup>4</sup>) + (0x2<sup>3</sup>) + (1x2<sup>2</sup>) + (1x2<sup>1</sup>) + (1x2<sup>0</sup>) = 64+16+0+0+4+2+1=87<sub>10</sub>.

For the horizontal component of the binary sequence to the right of the centre pixel: 0011111<sub>2</sub> = (0x2<sup>0</sup>) + (0x2<sup>1</sup>) + (1x2<sup>2</sup>) + (1x2<sup>3</sup>) + (1x2<sup>4</sup>) + (1x2<sup>5</sup>) + (1x2<sup>6</sup>) = 0+0+4+8+16+32+64 = 124<sub>10</sub>. By adding these two decimal values, then the values obtained LLBP the horizontal direction, namely: 87<sub>10</sub> + 124<sub>10</sub> = 211<sub>10</sub>

For the vertical component of the binary sequence the top of the centre pixel: 0101001<sub>2</sub> = (0x2<sup>6</sup>) + (1x2<sup>5</sup>) + (0x2<sup>4</sup>) + (1x2<sup>3</sup>) + (0x2<sup>2</sup>) + (0x2<sup>1</sup>) + (1x2<sup>0</sup>) = 32+0+8+0+0+0+1 = 41<sub>10</sub>. For binary sequences vertical component lower part of the centre pixel: 011 1011<sub>2</sub> = (0x 2<sup>0</sup>) + (1x2<sup>1</sup>) + (1x2<sup>2</sup>) + (1x2<sup>3</sup>) + (0x2<sup>4</sup>) + (1x2<sup>5</sup>) + (1x2<sup>6</sup>) = 0 + 2 + 4 + 8 + 0 + 32+64 = 110<sub>10</sub>. By adding these two decimal values, then the values obtained LLBP in the vertical direction, namely: 41<sub>10</sub> + 110<sub>10</sub> = 151<sub>10</sub>

From a decimal value LLBP<sub>v</sub> and LLBP<sub>h</sub> already acquired can be calculated the value of the magnitude of LLBP, namely: LLBP<sub>m</sub> = √(211<sup>2</sup> + 151<sup>2</sup>) = 259

After all the pixel value is counted with LLBP, the next process is to divided the LLBP value to be 10 x 10 block, and we have one block is 15 x 15 pixel. Each block is counted the histogram distribution and this value of histogram distribution will be counted with Hamming distance to know how similarity each block one image extracted with each block another image extracted . This process is called Modified Local Line Binary Pattern.

### C. Hamming Distance

Hamming distance is used to determine the degree of similarity between the binary code histogram distribution image extracted with binary code histogram distribution image contained in the database. The similarity between the binary code histogram distribution of the image that will be tested with the binary code histogram distribution from the image contained in the database measured using a calculation Hamming Distance (HD). Hamming Distance is one of the testing methods to find how similar a vector to the other vector based on the value of proximity. If the value of the proximity is smaller, meaning the greater the similarity the two vectors, on the contrary, if the value is bigger means both vector similarity is smaller.

The formula for the calculation of Hamming Distance given in equation 7.

$$HD = \frac{\|(\text{codeA} \otimes \text{codeB})\|}{\text{codeLength}} \quad (7)$$

Operator ⊗ is an Exclusive-OR Boolean operator between a couple of bits - the bits that correspond to. Code A is code sequence tested binary image, while the code B is a row of binary code from the image that was in the database. Code Length is the length of the binary code from the image to be

tested. Here is an example of calculating Hamming Distance between two different codes, namely:

Hamming Distance between 11001101 and 10110010 is 7

Hamming Distance between 10111010 and 10010010 is 2

Figure 3 shows the block diagram realization equipment for verification image of the vein.

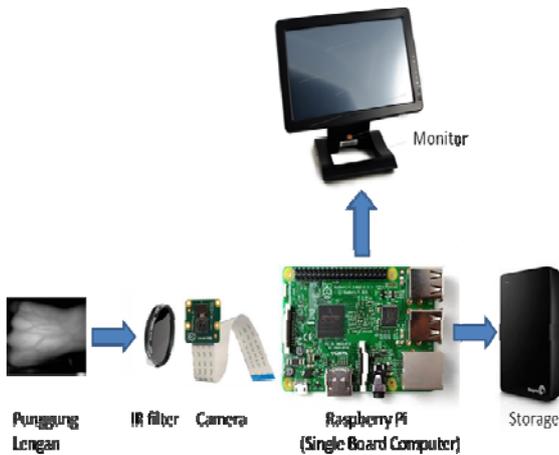


Fig. 3 Block Diagram Realisation Equipment

#### IV. TEST CASES

Data collection was performed against 16 person and each person is done taking 20 pictures (V01 s / d V20), meaning a total of 320 images. In Figure 4 we look the position of the hand looks towards the camera.



Fig. 4 Position the hand looks towards the camera

After that, the captured image from the camera will be cropped into 150 X 150 pixels image as shown in Figure 5 (a). Then the image quality improvement process is carried out as shown in Figure 5 (b). Furthermore, the feature extraction process is carried out so it looks like in Figure 5 (c).

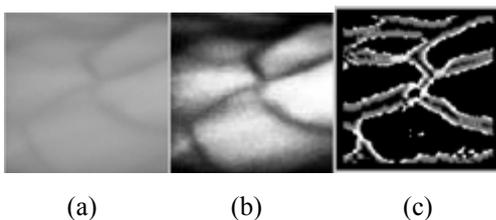


Figure 5 (a) the capture image from camera (b) the improvement image (c) The feature extraction image

Then the next process, the data matrix image with 150 x 150 pixels, divided into blocks numbered 10 x 10, meaning there are 100 blocks and each block have 15 x 15 pixels. From each block to get the process done histogram. Then from the histogram which will be calculated Hamming distance value.

Here is a table of determining the maximum value Hamming Distance of 5 vein image (V01 / V05) each of the 16 respondents. Suppose of first person, image vein 1 (V01) calculated the value of Hamming Distance for image 2 until image 5 (V02 until V05), then the image vein 2 (V02) calculated the value of Hamming Distance for image 3 until image 5 (V03 until V05), vein image 3 (V03) is calculated Hamming value Distance for image 4 and image 5 image (V04 and V05), and image vein 4 (V04) is calculated Hamming value Distance for image 5 (V05). Hamming value of 10 Distance then specified maximum value. Furthermore, the maximum value determination Hamming also Distance for person 2 until 16.

Hamming Distance Based on the maximum value, it will be tested image data of 6 until 20 (v06 until V20) of each person.

Figure 6 shows Percentage Successful Recognition the results of the verification data of the image of the 10 person.

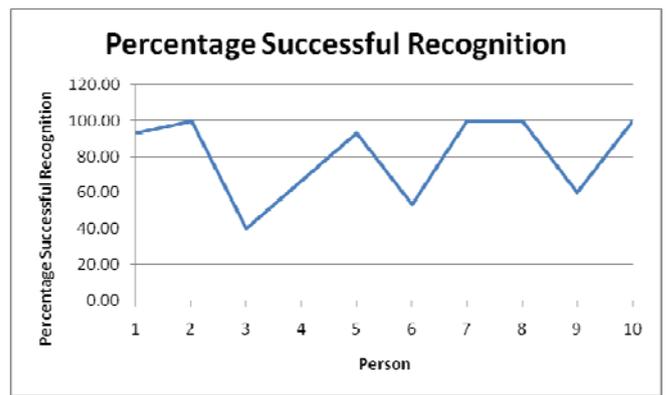


Fig. 6 Percentage Successful Recognition

Figure 7 shows Percentage Successful Rejection the tested image data of different people and the obtained results are as follows:

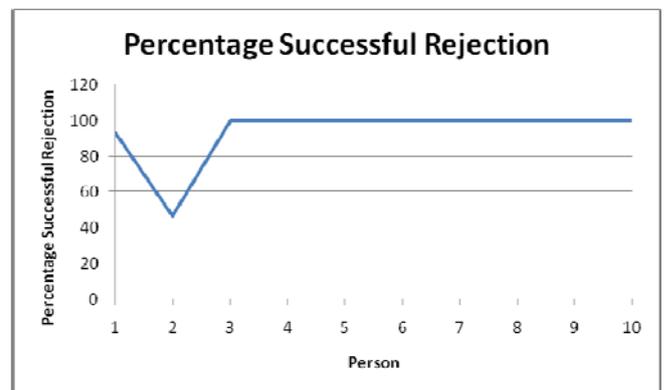


Fig. 7 Percentage Successful Rejection

## V. CONCLUSIONS

Test case of verification is done by calculating the percentage of acceptance of the same person. Rejection error occurs if a person was not matched by the system with the data itself. The 10 person with 15 image compared to 5 image vein for each person is resulted 80,67% successful. Another test case of the verification is done by verified two image from different person .that is forgery, and the verification will be true if the system can rejection the image forgery. The ten different person is not verified and the result is obtained 94%.

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# Eco-centrism Paradigm In Design and Planning Of A Friendly City

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**Abstract.** Environmental awareness is increasing when people feel the impact of the ecological backlash, which is included the environmental impact of development in urban area. The design and planning of a city has a big role on the influence of the quality of environment in the urban area. Some evidence has shown that the degradation of the urban environment is accelerated by the unsupportive of planning and design. In contradiction to that, a good and healthy environment of a city can be realized because of the intervention of the planners and designers. Thus, the new paradigm in urban planning and design has been developed, in which it is primarily intended to create a friendly city. Eco-centrism paradigm does not apply only in the context of micro (buildings), but also in the context of Mezzo (neighborhoods) and macro context (city). Eco-centrism paradigm is the holistic view of ecology, that has been shifted the paradigm of Anthropos-centrism. Architecture is no longer just an emphasized of the term 'how does it looks' and 'how does it works' which is very Anthropos-centrism. It has been developed into how does it relates to the web of life that is holistic in an ecosystem. General assumptions assume that the architecture is more damaging the nature instead of the repair (the case of prohibiting to built a building at water catchment areas, riverbanks or steep slopes) is expected to shift the development of Eco-centrism paradigm. An understanding of ecological holistic is an understanding of a system, that architecture will tend to destroy the web of life if it is not to be part of the system. Through this understanding of planning and design is not intended to answer the question of how to maintain ecosystem from the change and the human influence, but how to unite human activities with ecosystem as little as possible through the use of resources and the reduce of environmental damage. The results of the planning and design is not only to make people happy or to make people comfortable, but it should make people think and act as the achievement of a friendly city.

Keywords: Eco-centrism, holistic, friendly city.

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## I. INTRODUCTION

It is the nature of a human to have a faith that today is better than yesterday. What is considered enough today will be less tomorrow. Human has planned maximum efforts in order to achieve the ideal life. To live a comfortable life, both physically and psychologically, in all the circumstances are ideal life forms that human has planned including the life aspired of ideal urban community. Moving from the idea not to feel hot and noisy inside a room, eat and drink healthily without fear of being contaminated with anything, the kids can chase each other with joy at the park, drive to work without the congestion, the disability can access facilities in the city safely and independent. Most actively proven if the workers can enhance the creativity of their business without fear of "to be disciplined". All the groups of community freely interact and socialize their thought, to the tourists who come to visit and satisfied by a variety of different amazing attractions in the city. That is several of the living conditions which ideally imagined by urban communities as a form of a friendly city.

To realize the ideal purpose in life, humans often excessively exploit existing environmental resources. Massive exploitation which is only intended to meet today's needs without ignoring the needs of tomorrow. It can be ascertained that it will turned into something completely unintended. Environmental resources are not something unlimited.

Carrying capacity of the environment in urban areas and surrounding becomes important to note because the city is basically behaving as an ecosystem. As a system, the city which is the human built environment, always correlated, interrelated and interdependent with the natural environment. When the city system crippled human began to turn to its natural environment.

### **What is wrong with the environment?**

Increasing environmental awareness directly when humans began to feel the impact of ecological backlash, particularly environmental impact in urban areas. Every individual is a waste producer, it is normal. It is amazing when people who live in the city with all the hustle bustle is no longer concerned with the waste that is produced. Garbage all over the city, it happened in Surabaya in October 2001. Society was shocked, for a city who have won several environmental award in the older regime, become ragged for having to deal with the waste problem that is no longer simple. This phenomenon is an example of ecological backlash impact that is directly felt by the people of Surabaya. Since the incident, Surabaya has become increasingly distant from the concept of a friendly city. Trash is only one of many components of the environment in the city that need attention. Just because a disregard for trash, Surabaya became unfriendly destination not even a place to live with happiness and to be proud by the people.

Most of planners and urban designers have a big hand in influencing the quality of the environment in urban areas.

Some evidence suggests, city environmental degradation may be accelerated with the planning and design that does not support. Conversely, a good environment and healthy city can be realized because of the intervention of the planners and designers. As the accumulation of vast and complex inhabit functions over time, planning and design of the city is not an easy thing to think about and to be done. The city with excessive population density makes it difficult to be manage is one phenomenon that prevails today. Metropolis population has always been in excessive physical and psychological pressure, causing social problems on a large scale at a later stage. Consequences of environmental pressure due to incorrect sequence of problems of environmental management that exceed the limits of carrying capacity.

In relation to the growth of environmental awareness, in the planning and design of a city has developed a new paradigm, which is primarily intended to create a friendly city. Eco-centrism Paradigm that does not just apply in the context of micro (building), but also in the context of Mezzo (neighborhoods), and the macro context (city) [1], represents a new paradigm that promises enlightenment in the process of urban planning and design.

## II. DISCUSSION

### The New Paradigm?

The term of ecology has first introduced by Haeckel in 1869. Ecology defined by Haeckel [2] as:

*“the study of the interactions of organisms, populations, and biological species (including humans) with their living and nonliving environment; the composition change and stability of geographically localized groups of species, and the flow energy and matter within such groups of species (ecosystem)”*

The keyword from the definition of ecology that there is interaction in between environmental component which is an ecosystem. Eco-centrism paradigm has rooted in understanding of ecosystem. The term of ecology and ecosystem has been known since the 19<sup>th</sup> century, then a question raised “why eco-centrism is considered as a new paradigm?”

Like waves in the ocean, rolling waves of the ocean ripples that ultimately surprising to those who were sunbathing on the beach when the waves come suck everything in its path. As a concept, Eco-centrism paradigm is an eco-centrism based on understanding the ecology and ecosystems have been developed for a long time, and reached a peak when the live humans began to feel the impact of ecological backlash. Many people talk about it, from various backgrounds and in various occasions. Urban planning and design world started to adopt the concept.

In eco-centrism paradigm, a friendly city is a city where people can enjoy the city life in a safe and comfortable way as well as the visitors. Before, the planning and designing of cities tended to only pay attention to the economic aspects, functionality, and aesthetics, rarely think about the ecological impact, and disregard the environmental aspects. Today is the time for urban planning and design conducted in

environmentally concept.

### What and Why?

Ecological holistic approach as the central theme ecosystem thinking which is adopted by eco-centrism paradigm, has shifted the Anthropos-centrism paradigm. However, even if this ecological approach has been applied, in some cases remain oriented towards human interests, not on natural prosperity. Partly due to the strong understanding that architectural masterpiece is something static and dead in the natural living environment.

In eco-centrism paradigm, nature is seen as an integrated whole and interdependent absolute in a system. The understanding of ecological holistic in eco-centrism paradigm embraces an understanding of the system, so the architecture is considered destructive the web of life if there is no attempt to make the architecture as part of the system. Architectural work is not isolated and fragmented within the boundary walls, fences, as well as the administrative border with the ecosystem. As part of the system, architecture interacts with other environmental components in an ecosystem and among ecosystems.

Such a view is a spiritual and religious conscience that recognizes that all beings is a subsystem of a large system. Therefore, it is time for architectural work also serves as a subsystem of life in nature is also alive, resulting in a harmonious relationship. The properties of the system awake when no subsystems are analyzed in isolation, however studied in contextual thought appropriate linkages in the system. The consequence of this approach is pursued influential in the design process, design decisions, and system design.

Based on the same view, as the habitat, the municipal system is the process once the product, in the form of a structural network mutual crochet hooks with each other. To avoid damage, the architectural masterpiece of this one must be part of the web of life that linkage in a symbiotic mutualism. Linkages are mutually empowering not just each other presents.

The architecture of the city is no longer just emphasized how does it looks and how does it works very Anthropos-centrism, but the emphasis architecture of the city has developed into how does it relates to the web of life that is holistic in an ecosystem. General assumptions assume that architectural works more damaging nature of the natural repair (case of prohibiting the building was built in the water catchment areas, riverbanks or steep slopes) is expected to shift to development paradigms eco-centrism.

### Eco-Centrism and FriendlyCity

Within the micro-scale architecture, site as part of an ecosystem can be fenced (artificial man-made boundaries), then the only known natural boundary ecosystems (natural boundaries). If the analysis is an activity adjustment building site that will be placed in a site with the site itself, then it should be a component of the ecosystem building. Eco-centrism paradigm underlying the holistic study of the components and processes that occur in an ecosystem.

Behavior responsive to the site and construction of a traditional approach to architecture studies. In eco-centrism paradigm, the response has been developed not only on the scale of the site but on a wider scale, namely in one cycle of

mutual relations environment interaction. The dynamics of change, relationships and interdependencies are always present in an ecosystem or an ecosystem. Characteristics of these environmental systems require a total view or generalizations as well as in planning and designing integrated friendly city.

Through a holistic understanding of ecological, urban planning and design environmentally friendly is not intended to defend the city from changing ecosystems, but how to synergize the human activities with the urban ecosystem, so the use of resources and environmental damage can be minimized. Nevertheless, the ecological approach in urban planning and design are not solely oriented on the ecological sustainability of the city, but also involves other dimensions, such as social aspects broader. The results of the planning and design that not only make people happy or make people comfortable, but it should make people think and act as a friendly outcomes city [3].

### Implementation and Expectation

Cities like mosaic pattern of alternating between the controlled and uncontrolled, between the planned and grows spontaneously, and between the organized and unorganized. The difference between one city to another city is located on the proportion and composition of the two sections, so says [4]. Meanwhile, in the city, the interplay between humans and their natural environment has also established social system. Design paradigm eco-centrism trying to anticipate, to eliminate and minimize all impacts of product design system. So that planners and urban designers are expected to be able to anticipate, to eliminate and minimize the impact of system parts of the city and social systems that are not controlled, grows spontaneously, and not organized.

Among piece eco-centrism an implementation paradigm is the vegetation began to find its place in the city as people feel vapidly in design. Vegetation is no longer limited only as a supplement, the vegetation is required to improve the quality of design and the environment. Vegetation as aesthetic components, steering, shading, shadowing effects, reducing the pollution load, and reduce the radiation is in the expansion of the role of vegetation in the design.

Architects often design with short-term horizons and less attention to the interests of the future. To that end, the architect must look at the problem of architecture with other disciplines glasses. This concept is in line with eco-centrism paradigm that is based on environmental science. Environmental science is an integration of various disciplines. The ecosystem approach or a comprehensive holistic perspective, that means all the components and relationships must be studied in depth. Comprehensive which is intended to be integrated or study done on components and relationships that has wide coverage by looking at the opportunities that exist, and are integrated.

Here are delivered a few things to note in the eco-centrism paradigm [3]. Site analysis done on the components of the specific ecosystem or the analysis of a case by case basis. Used a contextual approach, because the site boundary is not always synonymous with ecosystem boundaries. This approach is important because it related to the scale of the impact of activities. The first and second concept should be synergized with the concept of environmental ecology and life

cycle design concepts, including the holistic approach or the total system.

Thought necessary energy conservation design, material, and ecosystems with attention to the environmental carrying capacity in anticipation of a waste product.

If previously in architectural education teaches environmental engineering methods through an engineering, aesthetics, and socio-humanities [5] then in the future, as now the full complexity of the necessary expansion of the third approach. The aesthetic sensibilities must be balanced with social sensitivity and development ratio to understand architecture as a component of a broader ecosystem. Design architecture is not just environmental engineering effort to create a built environment. Instead, the architectural work should be able to contribute to the environment. Therefore, it is time for a paradigm eco-centrism implemented also in the educational system architecture as a print planner and urban designer with environmental sensitivity. Implementation eco-centrism paradigm in the educational system architecture is not just an effort to socialize the opinion should be discussed among lecturers and students or between lecturers and professors, and students with a student in the learning process of planning and designing a city friendly. Implementation eco-centrism paradigm in the learning process should cover all stages of the learning process. Gradual learning process includes the step acquisition of knowledge, then proceed with the implementation of learning objectives rehearsal stage, and final stage is the feedback [6].

Eco-centrism paradigm in the learning process, the role of a teacher must be changed, a professor not only serve as a source of knowledge providers (center instructor instruction), but more than that a teacher should act as a facilitator, resource persons and consultants. Thus, environmentally sound curriculum can be prepared based on free-thinking for the future realization of the aspired, not a curriculum developed by the tendency of the national curriculum.

### III. CONCLUSION

Given the magnitude of the role of planners and urban designers in affecting environmental quality in urban areas requires the implementation eco-centrism paradigm in all stages of the learning process of architectural education system. Through this introduction, students of architecture and architects in their work is no longer only emphasizes how does it looks or how does it works very Anthropos-centrism, but the emphasis architecture has been developed to be how does it relates to the web of life that is holistic in an ecosystem. The results of the planning and design that not only make people happy or make people comfortable, but it should make people think and act as a city friendly achievement. Therefore, understanding the nuances of eco-centrism paradigm, should cover all the teaching materials in higher education architecture in Indonesia.

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# The Design of Expert System Application Using Backward Chaining Method to Diagnose Disorders in Diesel Power Plants (PLTD) in PT Semen Padang

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**Abstract.** Along with advances in information technology and artificial intelligence that continues to grow rapidly, have made it possible to move from human expert system to a computer system, making it possible to solve problems that require expertise without having to bring in the experts. The expertise of an expert is transferred to a computer, knowledge that is stored in the computer, and users can consult on the computer for an advice, then the computer can take inference (infer, deduce, etc.) Like an expert, as knowledge of an expert has transferred into the computer. The design of an expert system used to diagnose disorders of the Diesel Power Plant (PLTD) using backward chaining. The purpose of this development could eventually help in diagnosing disorders of the diesel and the results are precise and accurate diagnosis, and their advice is expected to facilitate the handling of the operator and the management in taking action / decision. Application design support are used is a relational database in Microsoft Office Access 2007.

Keywords: Design System, Expert System, inference, Backward Chaining, diagnosing disorders

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## I. INTRODUCTION

Developments in information technology today runs very fast and plays an important role in a variety of ways. Computer is one important part in improving information technology. The ability of the computer to remember and store information can be used without having to depend on barriers like those of humans, such as the condition of hunger, thirst or emotional. By storing the information and a set of rules that adequate reasoning allows computers provide conclusions or take decisions that same quality invitation ability of a particular scientific field experts. Expert systems are computer-based systems that use knowledge, facts and reasoning techniques in solving the problem, which usually can only be resolved by an expert in a particular field. Martin and Oxman, [1]

The expert system is a field which is characterized by knowledge-based systems (Knowledge Base System), allowing the computer can think and make decisions on a set of rules. Ignizio, [2]

Expert systems are computer programs that are designed to replicate the problem-solving skills of an expert. Specialists are those who have the ability or understanding in the face of a problem. Through experience, an expert develop the skills that allowed him to solve the problems with good results and efficient. John Durkin, [3]

An expert system is a branch of artificial intelligence that uses knowledge-specific knowledge possessed by an expert to solve a particular problem. Giarratano and Riley, [4] In general, the expert system is a system that is trying to adopt human knowledge into a computer that is designed to model the ability to solve problems like an expert. Sri Kusumadewi, [5].

With this expert system, any layperson can solve the problem or just looking for a real quality information can only be obtained with the help of experts in the field. This expert system will also be able to help the activities of experts as assistants who are experienced and have the required knowledge. In preparation, the expert system combines the rules of inference (inference rules) with a certain knowledge base provided by one or more experts in a particular field. The combination of both of these are stored in the computer, which is then used in the decision-making process for the settlement of certain issues.

PT Semen Padang is a company founded on March 18, 1910 under the name NV Nederlandsch Indische Portland Cement Maatschappij (NV NIPCM) which is the first cement plant in Indonesia. Over time, PT Semen Padang undergoing a process of awakening through the rehabilitation and development of plant capacity Indarung I. Furthermore, the plant transformation of plant capacity expansion of wet process technology becomes dry process with the construction of the factory Indarung II, III, IV and V. The development of the plant capacity would it requires a source of power intake is greater. Therefore, PT Semen Padang build several power plants Alone (PS) as the supporting main electrical intake of the State Electricity Company (PLN). One Power Alone PT Semen Padang is Diesel Power Plant (PLTD). PLTD is a vital asset as a backup unit producing power if at any time - the main source of power intake of PLN disconnected. Observing the things above, the writer got the idea to take advantage of computer technology to design an expert system application that is used to assist in diagnosing disorders of the diesel. Designing an expert system application program is useful for diagnosing disorders of the diesel. Program expert

system application is received input / update of the technicians and several other sources to be used as the foundation for an expert to diagnose the disorder in diesel and diagnosis given by the application program expert system is expected to help engineers and management in taking action / decision which of course for the sake of a smooth production process.

Based on the descriptions above, the authors are interested in doing research with the title Design Expert Systems Applications Using Backward Chaining method Diagnosing Disorders of the Power Diesel (PLTD) in PT Semen Padang.

Problem Formulation is How to design an expert system for diagnosing disorders of the Diesel Power Plant (PLTD) PT Semen Padang along with suggestions to handle the expected allow the operator and the management in taking action / decision ?

This research aims to devise an expert system that can be further developed to provide quick information about the obstruction on the Diesel Power Plant (diesel) PT Semen Padang, along with suggestions to handle the expected allow the operator and the management in taking action/ decision.

## II. METHOD

Backward chaining rules are processed when your program asks Pyke a question (i.e., asks Pyke to prove a specific *goal*). See Figure 1. Pyke will only use activated rule bases to do the proof.

Overview of "Backward-Chaining"

To do backward-chaining, Pyke finds rules whose *then* part matches the *goal* (i.e., the question). Once it finds such a rule, it tries to (recursively) prove all of the subgoals in the *if* part of that rule. Some of these subgoals are matched against facts, and others are subgoals for other backward-chaining rules. If all of the subgoals can be proven, the rule succeeds and the original goal is proven. Otherwise, the rule fails, and Pyke tries to find another rule whose *then* part matches the goal, and so on.

So Pyke ends up linking (or *chaining*) the *if* part of the first rule to the *then* part of the next rule.

Reviewing:

1. Pyke starts by finding a rule whose *then* part matches the goal.
2. Pyke then proceeds to process the *if* part of that rule.
3. Which may link (or chain) to the *then* part of another rule.

Since Pyke processes these rules from *then* to *if* to *then* to *if* in the reverse manner that we normally think of using rules, it's called *backward* chaining.

To make this more clear, Pyke has you write your backward-chaining rules upside down by writing the *then* part first (since that's how it is processed).

"Use", "When" Rather than "Then", "If"

But *then-if* rules sound confusing, so Pyke uses the words **use** and **when** rather than **then** and **if**. You can then read the rule as "use" this statement "when" these other statements can be proven.

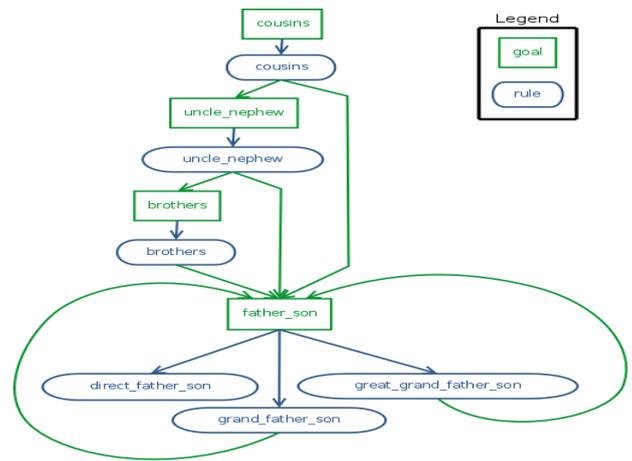


Fig.1. i.e., asks Pyke to [prove](http://pyke.sourceforge.net) a specific goal <http://pyke.sourceforge.net>

Backward Chaining method is a method of decision-making were also commonly used in expert systems. Backward chaining method is the opposite of Forward Chaining. Experiment facts or statements starting from the right (first THEN). In other words, reasoning starts from the first hypothesis and to test the truth of this hypothesis to look facts in the knowledge base. The search process by backward chaining method departs from right to left, from the provisional conclusion leads to the premise, this method is often called a goal-driven search is controlled by the given destination.

Backward Chaining method is a search strategy of Forward Chaining the opposite direction. The search process starts from the goal, that conclusion into the solution of problems faced. Inference engine looking to the rules in the knowledge base that conclusion is a solution to be achieved, then of the rules obtained, respectively conclusion Backward Chaining pathway that leads to that conclusion. If the information or the values of attributes that lead to that conclusion in accordance with the data given the conclusions of such a solution is sought, if it does not match then the conclusion is not the solution sought. Backward Chaining start the search process for a purpose so this strategy also called goal-driven. See figure 2.

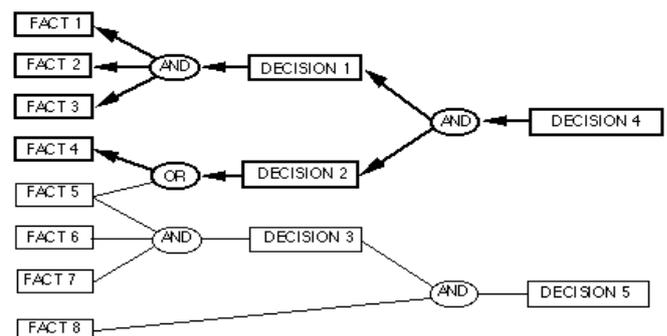


Fig. 2. Backward chaining Proces <http://www.cse.unsw.edu.au>

## III. RESULTS AND DISCUSSION

### Problem analysis

Expert systems are structured system with dynamic knowledge base. Existing knowledge on the expert system can increases, so should be added or removed without changing

the contents of the program as a whole. So the change is only done on the basis of knowledge alone.

Menggunakan knowledge base rule-based reasoning, knowledge represented by using rules of the form: IF-THEN. This form is used when we have a number of expert knowledge on a particular issue, and the expert can solve the problem sequentially. In addition, this form is also used when needed explanation of the trace (step - step) the achievement of a solution.

Stages analysis of a system done before the design stage is done. Objective analysis of the implementation of a system is to find out the reasons why such a system is necessary, formulate the needs of the system to reduce the excess resources as well as help plan the scheduling of the establishment of the system, so that the functions contained within the system is working optimally. One of the main elements that should be considered in the analysis phase of this system is a software problem, because the software that is used should be appropriate to the problem formulated.

#### Disorders Diagnosis PLTD

To design the knowledge base, the data obtained in consultation with the experts and books on diesel power plants. The data are designed such based on the relationships problems related to one another. Information obtained from sources it is known some PLTD common disorders that often occur. Here are the types of interference on PLTD PT Semen Padang:

TABLE I  
DISORDERS MACHINE CAN NOT START

No	Indicator	Facts Disorders	Handling Solutions
a.	Generator in a state of lock / unlocked	Shaft does not rotate	Help with turning gear to rotate the shaft
b.	Pressure water tank	Pressure water tank is empty	Turn on the compressor to fill air
c.	accessories generator	Indicator lights of motor / pump inactive	Check the electrical pumps and mechanical contact
d.	Governor machine	Governor can not increase speed	Check Switch, contact the electrical parts for repair
e.	Handle fuel	Supply fuel to the engine no	Check motors, pipes and fuel filter

TABLE II  
DISORDERS CAN NOT PARALLEL MACHINES

No.	Indicator	Facts Disorders	Handling Solutions
a.	engine speed	Engine speed does not qualify parallel	Checks RPM (Rotation per minute) machine or a panel with tachometer
b.	excitation	There is no voltage	Reset Switch excitation ON, if not functioning electrical contact
c.	frequency machine	The frequency of the engine and the system has not been the same	Set the engine RPM to match the frequency of the engine and the system
d.	Synchronization	Needle synchronization inactive	Set the synchronous switch ON for easy parallel.
e.	CB parallel	The machine does not generate power	Check the main CB panel space, set in the ON position

TABLE III  
DISTURBANCE FULL SPEED NOT BE ACHIEVED

No.	Indicator	Facts Disorders	Handling Solutions
a.	Suitability of fuel	Fuel instead of diesel	Replace fuel with diesel
b.	The fuel in tank mixes	There was water on the surface of the solar	Suck the fuel mix
c.	A fuel filter	Fuel supply is not smooth	Clean the pipe and the fuel filter
d.	oil pressure	Engine oil pressure to less	Checks if the blockage, and check the oil pressure pump motor

TABLE VI  
DISORDERS DOWN SPEED AND DEAD MACHINES

No.	Indicator	Facts Disorders	Handling Solutions
a.	Availability of fuel	Fuel runs out	Coordination with the addition of a warehouse for solar
b.	The fuel in tank mixes	There was water on the surface of the solar	Suck water blended fuel
c.	A fuel filter	Fuel supply is not smooth	Clean the pipe and the fuel filter
d.	Supply of fuel to the engine	The engine speed fluctuation	Check the fuel pump

TABLE V  
PARALLEL DISORDERS ARRIVED DISCONNECTED

No	Indicator	Facts Disorders	Handling Solutions
a.	The resulting voltage	The voltage is too high or too low	Set the voltage switches in the normal position
b.	The resulting stream	Current is too high or too low	Set the voltage switches in the normal position
c.	frequency system	The frequency of the system is unstable	Coordinate with the substation if any additions or decrease the load
d.	Indication/s ignal from the generator	There was damage to the machine	Checks damages pursuant indication lights are lit on the panel

**Context Diagram**

Is a global design tools that show the system in general and the parts of subsystems - subsystems involved in the system as a whole, linkages and interactions between subsystems designed himself, See Fig.3

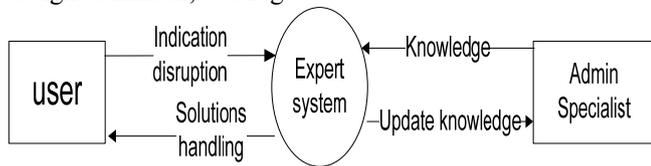


Fig. 3. Context Diagram

**Data Flow Diagrams (DFD)**

Data Flow Diagrams (DFD) is used to describe the flow of information and the process of moving data from data entry to output. Data Flow Diagram allows users who are less mastered the field of computers to understand the system to be worked on or developed.

**Entity Relationship Diagram (ERD)**

Entity Relationship Diagram is used to model the data structures and relationships between data. Entity relationship diagrams used a number of notations and symbols to describe the structure and relationships between data.

In the system described several entities and attributes that are required as well as the relationships each designed for this application. For more details can be seen in Figure 4 below:

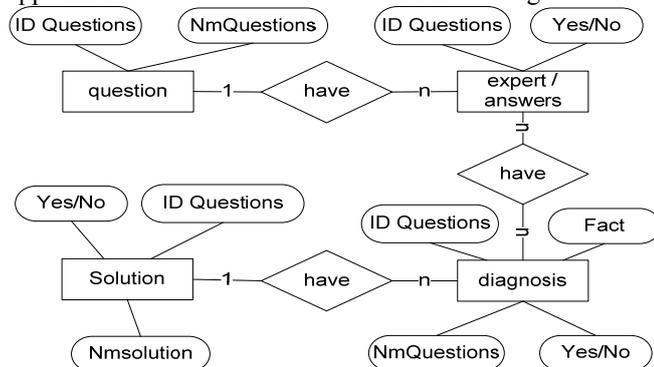


Fig.4. Entity Relationship Diagram

**System implementation**

Implementation of the system is the final stage of the development process after the application system through the design stage. In order for the process of implementation of the

software can work perfectly, the first such software should be tested to identify the weaknesses and errors are then evaluated.

**Backtracking Implementation System**, see table 6,7,8,9,10

TABLE VI  
TABLE SYSTEM DISORDERS MACHINES CAN NOT START

Questions	answer	fact	handling Solution
a. Is the engine shaft can rotate?	• Yes • No	• shaft can rotate • shaft does not rotate	• Shaft OK • Help with turning gear to rotate the shaft
b. Is Air Pressure tank empty?	• Yes • No	• The water tank is empty • The tank holds pressure	• Turn on the compressor to fill air • Air Pressure OK
c. Are all accessories function generator	• Yes • No	• Indicator Lights motors / pumps active • Indicator Lights motors / pumps inactive	• Accessories OK • Check electrical pumps and mechanical contact
d. Is Governor machine function?	• Yes • No	• Governor can increase speed • Governor can not increase speed	• Governor OK • Check Switch, contact the electrical parts for repair
e. Do handle fuel in the ON state?	• Yes • No	• suply of fuel to the engine smoothly • suply of fuel to the engine no	• Handle fuel OK • Check the motor, pipes and fuel filter

TABLE VII  
SYSTEM DISORDERS CAN NOT PARALLEL MACHINES

Questions	answer	fact	handling Solution
a. Is the machine has a maximum speed?	• Yes • No	• The engine speed max • The engine speed does not qualify parallel	• The engine speed is OK • Check RPM (Rotation per minute) machine or a panel with tachometer.
b. Do excitation in the ON state?	• Yes • No	• The engine speed max • The engine speed does not qualify parallel	• Excitation OK • Reset Switch excitation ON, if not functioning electrical contact
c. Is the frequency of the engine and the same system?	• Yes • No	• The frequency of 50.00 Hz • The frequency of the engine and the system has not been the same	• Frequency OK • Set the engine RPM to match the frequency of the engine and the system.
d. Is already synchronous generator?	• Yes • No	• Needle active sync • Needles synchronization inactive	• Synchronization OK • Set the synchronous switch ON for easy parallel.
e. Is the CB parallel in the ON state?	• Yes • No	• Top CB ON • The machine does not generate power	• CB parallel OK • Check the main CB panel space, set in the ON position

TABLE VIII  
TABLE SYSTEM DISORDERS FULL SPEED NOT BE ACHIEVED

Questions	answer	fact	handling Solution
a. Is the fuel suitable?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	<ul style="list-style-type: none"> <li>• Diesel fuel</li> <li>• Fuel is not diesel</li> </ul>	<ul style="list-style-type: none"> <li>• Fuel OK</li> <li>• Replace fuel with diesel</li> </ul>
b. Is ditanki fuel mixed with water?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	<ul style="list-style-type: none"> <li>• There is water on the surface of the solar</li> <li>• Fuel clean</li> </ul>	<ul style="list-style-type: none"> <li>• Suck fuel mixed with water.</li> <li>• Fuel OK</li> </ul>
c. Is the fuel filter good?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	<ul style="list-style-type: none"> <li>• fuels to cleaner engines</li> <li>• suply fuel noncurrent</li> </ul>	<ul style="list-style-type: none"> <li>• Filter OK</li> <li>• Clean the pipe and the fuel filter</li> </ul>
d. Is the oil pressure normal?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	<ul style="list-style-type: none"> <li>• The indicator on the normal panel</li> <li>• engine oil pressure to less</li> </ul>	<ul style="list-style-type: none"> <li>• oil pressure OK</li> <li>• Check if the blockage, and check the oil pressure pump motor</li> </ul>

TABLE IX  
TABLE SYSTEM DISORDERS DOWN SPEED AND DEAD MACHINES

Questions	answer	fact	handling Solution
a. Is enough fuel in the tank.?	<ul style="list-style-type: none"> <li>•Yes</li> <li>•No</li> </ul>	<ul style="list-style-type: none"> <li>• Fuel pretty</li> <li>• Fuel runs out</li> </ul>	<ul style="list-style-type: none"> <li>• Fuel OK</li> <li>• Coordinate with the warehouse to the addition of solar</li> </ul>
b. Is ditanki fuel mixed with water?	<ul style="list-style-type: none"> <li>•Yes</li> <li>•No</li> </ul>	<ul style="list-style-type: none"> <li>• There is water on the surface of the solar</li> <li>• Fuel clean</li> </ul>	<ul style="list-style-type: none"> <li>• Suck fuel mixed with water.</li> <li>• Fuel OK</li> </ul>
c. Is the fuel filter good?	<ul style="list-style-type: none"> <li>•Yes</li> <li>•No</li> </ul>	<ul style="list-style-type: none"> <li>• fuels to cleaner engines</li> <li>• suply fuel noncurrent</li> </ul>	<ul style="list-style-type: none"> <li>• Filter OK</li> <li>• Clean the pipe and the fuel filter</li> </ul>
d. Is the fuel supply to the engine normal?	<ul style="list-style-type: none"> <li>•Yes</li> <li>•No</li> </ul>	<ul style="list-style-type: none"> <li>• The engine speed is stable</li> <li>• The engine speed fluctuation</li> </ul>	<ul style="list-style-type: none"> <li>• Supply of fuel OK</li> <li>• Check the fuel pump</li> </ul>

TABLE X  
TABLE PARALLEL SYSTEM DISORDERS ARRIVE DISCONNECTED

Questions	answer	fact	handling Solution
a. Is the generated voltage stable?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	<ul style="list-style-type: none"> <li>• Voltage Stable</li> <li>• Voltage too high or too low</li> </ul>	<ul style="list-style-type: none"> <li>• Voltage OK</li> <li>• Set the voltage switches in the normal position</li> </ul>
b. Is the current generated is stable?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	<ul style="list-style-type: none"> <li>• The current stable</li> <li>• Flow is too high or too low</li> </ul>	<ul style="list-style-type: none"> <li>• Flow OK</li> <li>• Set the voltage switches in the normal position</li> </ul>
c. Is the frequency of the system stable?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	<ul style="list-style-type: none"> <li>• Frequency stable</li> <li>• Frequency system unstable</li> </ul>	<ul style="list-style-type: none"> <li>• Frequency OK</li> <li>• Coordinate with the substation if any additions or decrease the load.</li> </ul>
d. Is there any indication / signal from the generator?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	<ul style="list-style-type: none"> <li>• There is damage to the machine</li> <li>• Generator normal</li> </ul>	<ul style="list-style-type: none"> <li>• Checks damages pursuant indication lights are lit on the panel</li> <li>• Generator OK</li> </ul>

## Implementation Interface / Interface

### a. Main Menu page (Figure 5)

On the main menu there are two buttons namely the diagnosis and expert admins, to level users can only use the facilities keys diagnosis and continued by choosing the type of disorder that has been provided by the system, whereas the level of expert admins can use the facilities to change knowledge base either add or remove data.



Fig.5 Main Menu page

### b. Maps Select Disorders

On this page the user can choose one type of disorder expected, the user can select by clicking the button provided and will continue on the question page. See Figure 6.



Fig.6 Page Select Disorders

Once the user selects the type of disorder expected, then the user will be redirected to the page question in accordance with the selected key questions. Each kind of disorder has a different question. Following implementation: Machines Can not Start

Weather question Engine Start Can not be used by the user to select five questions and answer yes or no, then fill in the fields that have been provided keeping in mind the fact that encountered in the field. See Figure 7.



Fig. 7 Questions page Machine Can not Start

Handling Solutions is an advanced page after the user presses the button handling to know that the focus of attention in dealing with distractions. See figure 8.



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[http://pyke.sourceforge.net/logic\\_programming/rules/backward\\_chaining.html](http://pyke.sourceforge.net/logic_programming/rules/backward_chaining.html)

# Effect of Discipline and Facilities Working on Employee Productivity in. Bpr Gema Pesisir

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**Abstract.** This research was conducted at PT BPR Gema Pesisir to analyze the extent of discipline, work facilities affect the productivity of employees at PT. Gema BPR Pesisir. Either partially or jointly, descriptive study. Its population of all employees of PT. Gema BPR Pesisir 60 people. Total retrieval technique using the technique of sampling with a sample of 60 employees. The type of data, primary data secondary data. Data analysis used descriptive analysis through hypothesis testing using the F test and t test with  $\alpha = 0.05$  with the results of a significant difference between discipline against the employee at PT amenities. Gema BPR Pesisir with its significance level of 0.001. There is significant influence between Work Facilities on Productivity Employees at PT. Gema BPR Pesisir, with signficanci level of 0.000. With the same discipline and working facilities significantly influence labor productivity in PT. Gema BPR Pesisir, with signficanci value of 0.000.

Keywords: Discipline, Work Facilities and Productivity

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## I. INTRODUCTION

Important factors that greatly affect the performance of the company is working discipline. Discipline of employees is expected by the company in order to realize the company's goals, both short-term goals and long term. Labor discipline is a procedure to correct or punish subordinates for violating the rules or procedures. From these opinions can disimpulkan that labor discipline is a form of self-control and the implementation of regular employees and shows the level of seriousness of teamwork within an organization. To improve employee work discipline, the need for good working facilities According to Suad Husnan "work facility is suatu form of service to employees to support the company's performance in meeting the needs of employees, so that they can increase employee productivity." Their work facilities supplied by the company supports employees in the work. The working facilities as a means or infrastructure to help employees to more easily complete the job and the employee will work more productively. The facilities such as computers, laptop, printer, air conditioner, copier his copies and other facilities that support the activities and trasaksi. So they can create a good productivity by using a reliable facility.

Agus Mulyono and Indriyo Gito Sudarmo "Productivity is not just a matter of technical and managerial but it is a complex problem, a problem concerning public goods, setikat workers and other agencies are increasingly different from the objective will be different Similarly defenisinya productivity.

Discipline employees at PT. BPR GEMA PESISIR, not in accordance with the regulations that have been awarded the Bank, thus directly affect the productivity PT.BPR GEMA PESISIR. That look of how the employee is not

neat, the use of office equipment that does not comply with the rules and work practices that are not in accordance with the procedures proper work and there are still many irregularities committed by employees, which is less smooth conduct of employees in the use of working hours and they last errors in using the work tools that can inhibit the completion of work, especially in many teller queue long enough so that customers do not feel comfortable. Coupled with the availability of facilities are not complete as work space is too small, limited number of computers, print inadequate, there is only a fan, a photo machine copies do not exist, and many other facilities there were very dibutuhkan by employees PT. BPR GEMA PESISIR to do the job So that affects work productivity PT. BPR GEMA PESISIR. Based on the above phenomenon authors are interested in doing research on the topic "EFFECT OF DISCIPLINE AND FACILITIES WORKING ON EMPLOYEE PRODUCTIVITY IN. BPR GEMA PESISIR.

Productivity comes from "the productive" means something that contains the potential to be explored, so the productivity is said to be something structured process of activities to explore the potential that exists in a commodity or object. Philosophy productivity can actually implies the desire and efforts of every human being (individual or group) to selalau improve the quality of life and livelihood. According to the Productivity Council has an idea as a mental attitude that always holds that the quality of life today is better than yesterday and tomorrow better than today. Meanwhile, according to Muchdarsyah (in Yuli Tri Cahyono and Lestiyana Indira M) Mention that can affect the productivity of labor is labor, art and science of management and capital as well as the level of education or the skills of employees who have a level of education or higher skill certainly productivity will be higher when

compared with workers who have high levels of education or lower skills among others. Physical conditions, attitudes and habits, work environment, work methods and equipment used. According to a statement Sinungan [1] "discipline" to boost productivity or discipline is an important means to achieve productivity ". Labor discipline is a tool used by managers to berkomunikasi with employees so that they are willing to change a behavior as well as an effort to raise awareness and the willingness of a person to comply with all company rules and social norms that apply [2]. Discipline employee office or agency which is quite good (Leteiner & Levine, found Soejono) The adherence of employees to regulation of working hours, observance of employees against work clothes, Using and maintaining office supplies, quantity and quality of the work in accordance with the standards and their spirit of employees in work.

### Frame work for Thinking

Based on a literature review that we get for significant and positive, the framework in this research is worth the effect of discipline and facility on employee productivity. Where discipline and facility have a relations.

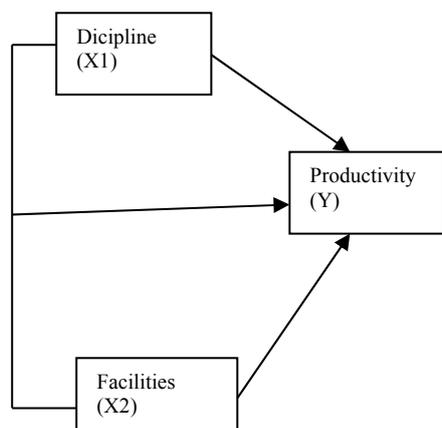


Fig. 1 Frame Work for Thinking

### Hypothesis

Based on the problem to be solved and the theory underlying frameworks in this study can be formulated hypotheses as follows: H1: Suspected disciplinary effect on employee productivity.

H2: Suspected facility effect on employee productivity.

H3: Allegedly Taken together discipline and facilities significance on employee productivity. This study uses quantitative methods and data were taken from PT. BPR

## II. METHODS

GEMA PESISIR. The population in this study were employees of PT. BPR GEMA Pesisir numbered 60 people. Multiple Regression Analysis Method.

The study used multiple regression analysis to determine the effect of independent variables on the dependent variable. The author uses SPSS (Statistical product and service Solution) version 16.0 for the results obtained more accurate. Multiple regression formulation used is as follows:

$$Y = a + b_1X_1 + b_2X_2 + e \quad (1)$$

## III. RESULTS AND DISCUSSION

TABLE I  
MULTIPLE LINEAR REGRESSION ANALYSIS

Model	Coefficients <sup>a</sup>						Collinearity Statistics	
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Tolerance	VIF	
	B	Std. Error	Beta					
((Constant)	8.167	2.785		2.933	.005			
Disiplin	.270	.078	.331	3.468	.001	.741	1.349	
Facilitas	.512	.087	.562	5.888	.000	.741	1.349	

a. Dependent Variable: Productivity

To know the discipline and work facilities on employee productivity, according to the formula: From the multiple linear regression equation above can be described as a constant value of 8167 means that in the absence of discipline and work facilities, then the productivity of employees has reached 8167%. Then the coefficient of .270 this discipline states that each discipline there is an increase of one unit remains then raise labor productivity amounted to 0.270%. While the value of the coefficient of work facilities for 512 it is stated that an increase of one unit every work facilities stay then raise labor productivity by 0512%. From the description of the respondent data showed that employees feel, the result of a disciplinary impact on completion of the work. employees feel given the same opportunity to obtain a higher office by showing discipline

Effect on Productivity of employees Discipline PT. Gema BPR Pesisir. Based on the results obtained t value at 4:12 table above for Discipline variables for 3468 and the significance value is 0,001, the value of  $t < t_{table}$  (3,468 < 1.664) and greater significance value  $\alpha$  of 0.05 (0.001 > 0, 05), meaning that there is discipline on PT. BPR Gema Coastal positive and significant impact on employee productivity. This means that if discipline (good) then the productivity is also getting better, that is to say with a high attention to the leadership of their employees by means of taking jobs and provide regulations. With the discipline for employees will increase employee productivity impact on increasing the income of employees that will motivate employees in their work with full responsibility.

Effect on Productivity Work Facilities employee PT. Gema BPR Pesisir Based on the results obtained from the above table t value for the variable working facilities amounting to 5,888 and 0,000 significance value is the value of  $t_{count} > t_{table}$  (5,888 > 1,664) and the value of smaller significance  $\alpha$  of 0.05 (0.000 < 0, 05), meaning that the facilities work done by employees of PT. BPR Gema Pesisir positive and significant impact on employee productivity.

With the work facilities complete dang good for the employee, the employee can work optimally without any interference from the other, indirectly facilities that can improve employee productivity. Discipline and amenities influence the productivity of employees at PT. Gema BPR Pesisir Based on the results that collectively disciplined and amenities influenced by labor productivity factors and the effects of 0615 or 61.5% influenced by other factors such as work environment, leadership style, motivation, compensation, incentives and so on. From koefisien

regression showed that, if discipline is increased then the employee's productivity will also increase. If the facility is increased then the employee's productivity will also increase. This means that someone will have to get regulatory authority and greater responsibility because of the rules that have been given a mandate to be obeyed. In order to increase the productivity of labor, the discipline should include more features.

#### IV. CONCLUSIONS

Based on the results the authors conclude discussion on the influence of discipline and work facilities on the productivity of employees at PT. Gema BPR Pesisir as follows:

1. There is a positive and significant influence between Work Productivity Work Discipline against the employees of PT. Gema BPR Pesisir with regression coefficient 0.270 with a significant level of 0.005 <0.05. This means that the increase in labor productivity can be done by improving the discipline at PT. Gema BPR Pesisir.
2. There is a positive and significant impact on the relationship between Work Facilities Work Produktiviyas the employees of PT. Gema BPR Pesisir with regression coefficient 0.512 with a significant level of 0.001 <0.05. This means an increase in productivity of employees can be done to make improvements to the facility on PT. Gema BPR Pesisir.
3. Provided the value of F count equal to 1169,000 significant value of 0.000. Value Sig <of  $\alpha$  ie (0.000 <0.05) can thus be interpreted variable Discipline and work facilities together have a significant effect on work productivity.
4. R square value of 0.615 indicates that the influence of discipline and work facilities on labor productivity amounted to 61.5% and the remaining 38.5%. explained by other variables not examined in this study.

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# CIVIL LAW REVIEW OF COMPLETION OF NONPERFORMING LOANS REVOLVING LOAN PROGRAM NATIONAL URBAN COMMUNITY SELF SURABAYA

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**Abstract.** This study aims at the implementation of the provision of revolving fund PNPMMMP, any obstacles encountered in the implementation process of granting revolving fund, how the settlement of non-performing loans on a revolving fund PNPMMMP terms of credit agreement law and legal guarantees. The method used in this research is normative and descriptive empirical jurisdiction, said the legislation relating to the implementation of the community which is the object of research. Lending through some stage of the loan application stage, the stage of the examination, the decision stage, and the stage of realization of the loan. This revolving fund into the general constraints the lending process as revolving fund in noncurrent become non-performing loans due to defaults KSM substandard due to the debtor's business, one of the members of KSM did not make installment payments of the loan, not the implementation of joint responsibility. Completion of nonperformance loans resolved by consensus and through three approaches to collect arrears, rescue troubled loans(rescheduling,reconditioning and restructuring)and charge through legal channels.

Keywords: Nonperforming loans, revolving funds, PNPMMMP

## I. INTRODUCTION

Indonesia is an emerging country that is constantly doing development in all fields. Development is being actively carried out currently covers all aspects of life which are essentially aimed to improving the economy and well-being in society, as stipulated in the 1945 Constitution in fourth paragraph. These efforts of improvement can not be separated from the fact that Indonesia which still has problems of poverty and unemployment, which increasingly growing. Poverty is nation's problems urgently and requires countermeasures and systematic, integrated and comprehensive approaches in order to reduce the burden and meet the fundamental rights of citizens feasibly through the inclusive, equitable, and sustainable development to create the prestige life.

Community Self-Supporting (LKM) is a nonprofit organization, but LKM has a Financial Management Unit (UPK) that aimed to obtaining profits to support the main mission of LKM that is to alleviate poverty by providing "revolving loan" that can be used to increase the poor incomes. The government creates a program to support LKM mission in its management that is to reduce poverty called "revolving fund" which is one of the National Program for Urban Self-Community Empowerment (PNPMMP). This Revolving Fund Loan is to reduce poverty by empowering communities through economic activity that is lending a micro scale to the

poorcommunities in the villages where LKM/UPK are existing by the terms and conditions that have been set.

In the provision of revolving loans to the poor societies through Community Self-Supporting Groups (KSM), the communities themselves who decide whether to use the revolving loan activities in poverty reduction programs. The determining of revolving loan activities to poor communities is decided by the community through Community Self-Supporting Institute (LKM). Implementation of revolving fund lending to the communities can only meet the criteria of good management, and right on target, if the implementationsare goin accordance with the provisions and expectations of P2KP especially Urban PNPM.

## LITERATUR REVIEW

The implementation process of the provision of revolving fund on a self-supporting PNPM provides financial resources through revolving funds and micro-credit to develop the economic activities of the poor communities. Revolving loans must be used for the productive concerns that can increase their income and or welfare. The various types of businesses, causing a variety of the need for funds and the ability to develop the business is also different in each Community Self-Supporting Groups (KSM). In provision of this revolvingloan credit, the credit agreement becomes the important and fundamental things. Before performing the credit agreement, it is made the agreement firstly, because the agreement is a binding agreement of two or more parties that arranged by the in forced laws.

So it called the engagement, in which must be executed or fulfilled by the performance of the debtor parties. Credit agreement is a consensual agreement between the debtor and creditor who delivered debt and accounts payable relationship, where the debtor is obliged to repay loans granted by creditor on the basis of the terms and conditions agreed by the parties. Therefore, by the revolving credit agreement between BKM/UPK and KSM then engagement arises that have consequences or legal relationship created by the parties until they have legal consequences in the form of rights and obligations as a result of an agreement that would be binding on the BKM/UPK parties which provides loans and KSM as a debtor.

As the credit loan agreement, this revolving funds resulting obligation of repayment in the form of installments yielding from the business conducted by each member of the KSM group with the determined term so it can be revolved to other group of KSM that have proposed funding for loans to BKM/UPK.

A valid agreement means an agreement which qualifies predetermined legislation, so that is recognized by law. In Article 1320 of Civil Code, mentioned the provisions on the validity of the terms of agreement are as follows:

There are consent agreements between the parties who make an agreement (consensus).

There are capabilities of parties to make agreements (capacity).

There is a certain subject matter.

There is a halal reason.

The loan agreement between KSM and BKM/UPK if assessed through the requirements of the treaty validity are having fulfilled the elements of the agreement contained in the Article 1320 of Civil Code:

a. Agreed they were bound themselves

The point is that the agreement/consensual. The credit agreements in PNPM program is based on an agreement between both parties that are BKM as creditor and the members of KSM as debtor.

b. Capable to make an agreement

Capability to make an agreement, or not under supervision or because the law they are not prohibited to make arrangements. The both parties in this agreement that are BKM and KSM have no obstacle to make an agreement. Subjects in this agreement are the debtor that is KSM and creditors that is BKM which are bounded in this agreement are have been equally have the legal capability to perform a legal act that is to making an agreement and there is no restriction of any party to KSM and BKM to conduct an agreement.

c. A certain matter

In an agreement the agreement performance object are clear, what, how much and how. This agreement is an agreement between a creditor (KSM) and the debtor (BKM) that made clearly that is the agreement has provisions concerning the type of business that is clearly done with the clearly process and procedures, loan amount in rupiah is clearly available, there are ways of loans repayment as the obligations and the others.

d. A halal reason

Purpose of the agreement is not intended for deception or for certain crimes. The agreement between KSM and BKM

has the goal to help improve the poor economy, and used for purposes that are not against to the law (not for crimes).

In revolving credit agreement of PNPM MP in an affidavit of KSM there is also a statement about the ability of joint responsibility between the members of KSM that mention "agreed to implement a joint responsibility (joint responsibility for other member if they are not able or do not have a good faith) to pay installments to UPK, which means in relation to the fulfillment of Article 1282 of the Civil Code that "there is no engagement is considered to be joint responsibility, but if it is explicitly stated."

#### PHASES OF PREPARATION, IMPLEMENTATION AND TERMINATION

This preparation phase does not stand alone but rather parallel and integrated with the preparatory steps undertaken by the program:

1. It was starting with the implementation of the concept of how the delivery of a revolving loan in various workshops/orientation, both at the national, provincial, district/city and sub-district/village levels. This is aims to achieve a common perception/understanding of the actors in the concept of a revolving loan program.
2. Then identify the needs of revolving loans, feasibility testing for the LKM/UPK, KSM, members.
3. After the actors have met the feasibility criteria then conducted orientation training program of revolving loans to LKM to get readiness to implement revolving loan program.
4. Holding basic training of revolving loan bookkeeping and supervision to supervisors UPK, basic training in the management of revolving loan for prospective managers of UPK and UPK officer, as well as basic training and simple bookkeeping of revolving loans to KSM as the loan recipients.

While the implementation phase of the revolving loan activities can be started after various strategic steps in the preparation stage were done. The process of the implementation phase:

1. It was starting with the guidance of KSM members in identifying and developing business plans.
2. Guidance to prepare proposals based on a plan.
3. Motivating and mobilizing member savings according to their ability and put it in a bank or financial institution nearby.
4. Feasibility analysis of KSM and loan proposals of KSM accordance with the principles and basic rules in revolving loans to determine whether the loan is approved or not, for the loans that has already approved then it progressing to the realization of the loan to the KSM with the loan agreement. Revolving loan that has been carried out are accounted for by UPK through accounting and reporting in accordance revolving loan accounting system followed by the monitoring and supervision of loan utilization. Reports of progress on the implementation of revolving loan are consistent with Regional Management Consultants and the National Management Consultant.

In the termination stage it does not mean that it conducted before the program ends, but it has an inherent strategy in every step of the preparation, implementation and towards to the end of program. The process of termination stage activities

are related to the development of cooperation network with external resources of NGOs, universities, individuals, businesses, banks, offices and others who have the ability and awareness in micro-business development, micro-finance and revolving loans. Granting of revolving loan has a prime target for poor households (low-income) in the territory of the urban/rural where LKM/UPK located. The indicators of the achievement of these objectives are including:

1. The debtors are come from poor households that have been identified in the Medium Term Development of Poverty Reduction Program.
2. Minimum 30% of debtors are women
3. The debtors of such households have been incorporated in the Community Self-Supporting Groups (KSM) that consisting at least 5 peoples.
4. Access to loan of KSM that has repayment in good performance are ensured its sustainability both through BKM and through phase of channeling proceeds with clear lending policy.

In accordance with the principle of credit in general, the revolving loan credit of UPK also examine the feasibility of KSM, seeking information and perform analysis of each KSM members based on 5C (character, condition, capacity, capital, and collateral)

a. Character

Characters of prospective debtor seek by request information to neighbors and local village officials.

b. Condition

Business conditions of prospective debtors, whether it will new stand, or it was already established, it contrary to the law, decency and morality or not. The competitors are strong enough or not. Possibility able to compete or not. Thus it can be seen the possibility of the continuation of the business.

c. Capacity

The ability of business to make a profit. How do the sales, how the basic price, how much profit/gains in the business cycle, how many family living expenses, how much net profit, and what percentage of their business improvement plan.

d. Capital

How much capital is owned, what debts are covered, and how net capital existing in the business.

e. Collateral

In the revolving fund is not allowed material collateral, which is the only form of collateral are joint responsibility savings.

Obstacles that encountered in the implementation process of granting loans to the revolving fund of PNPM because in practice whether intentional or not, the credit recipient community as KSM (community self-supporting groups) are in default so that the PNPM hard to negotiate loan repayment installments. The incapability of the debtor in revolving loans that are the community self-supporting groups (KSM) in completing and returning the loan can be classified as a default. Default is a situation where a debtor does not meet or does not implement the performance as stipulated in an agreement.

Default due to the breaking of debtors' businesses are affected by various factors, that are the conducted business is not enough profit to repay the loan, the use of loan money for

other needs or one of the members of KSM did not pay the loan installments.

Based on the credit agreement in this case BKM does not apply analysis of the appraisal to all members of KSM that have been doing a credit agreement because the credit agreement is based on trust and character recognition of KSM prospective members. This is also the underlying causes of problems in the revolving fund. Therefore the majority of users of credit are tied to an agreement without collaterals; this is what led to the occurrence of defaults.

In the existing credit agreement in this KSM has stated clearly that there is a written statement of joint responsibility among group members of KSM, as mentioned above that the joint responsibility savings are considered as collateral in this revolving loan fund, but in the case of KSM that has formed from different stand-alone business the joint responsibility has a different sense, although it has been agreed separately that these credits is joint responsibility agreement between the members of KSM. But the existing notion in this case that is when one member of KSM in default then the other group members of KSM especially the group leader of KSM help to remind and collect fulfillment of accomplishment to the members of the KSM who are in default. So that in practice in case of nonperforming loans could not be completed and just wait until KSM able to repay the loan.

In fact the weakness of loans through government programs without using the guarantee/collateral are need optimal assistances, moreover the targets are the poor households which mostly have low level of human resources so they are easily affected by the issue/incorrect information, for example, many people are affected by the negative issues so that they have principles that loan through PNPM is a grant by the government and does not need to be returned.

Loans that can not be restored within a predetermined time causing the revolving of fund becomestopped and community groups who want to borrow have to wait to get a loan. It is becoming common obstacles in the implementation process so that the revolving fund credit loan is said to be a nonperforming loan credit.

The completions of nonperforming loans on revolving fund loan of PNPMMP are viewed in terms of credit agreement law and guarantees law. Provisions of completion in case of nonperforming loans have been set in the guidelines for the implementation of revolving loan which is as follows: Completion of nonperforming loan/credit can be solved through three approaches, which are:

a. Collect arrears

Collect arrears are efforts to resolve nonperforming loans by visiting collections to the defaulted debtors. Stages of completion of nonperforming loans with arrears collections are:

1. Clerks, Officers of UPK must administer loans in an orderly and correctly so it is easily known the data of defaulted debtors and amounts of arrears.
2. Officers of UPK in every month-end must make a list of KSM/members that have arrears and make final plans for collection.
3. Officers of UPK then create a work plan to collect arrears to the KSM to be carried out every working day of the week.

4. Collection visit activity
5. Make priorities scale of collection visit. Priorities scale of visits based on: KSM/ members that was newly defaulted, KSM/members that on a previous visit promises to pay, KSM/members that have less arrears and there is possibility to pay, KSM/members that have more enough arrears but the business is still exist, KSM/members that have more enough arrears and the location is closely to the UPK and easy to reach and KSM/members that have more enough arrears and the location is quite far.
6. Visit implementation  
Visits to the defaulted KSM are carried out by officers of UPK and or teams (twos and threes, for example: UPK officer with LKM and local volunteers, UPK with RT/RW, UPK with officials Village).
7. Record the results of the visit. UPK officer must record the results of his visit whether the default KSM are pay or only promised to pay.
8. Inform defaulters promise to the volunteers. UPK officer inform to the volunteers for the defaulters promise to be asked for help to remind defaulters in order to keep their promises.
9. Revisit. On the promised date UPK officer shall revisit defaulters KSM to collect his promises.
10. Gives Warning Letter. After the second visit conducted and still not yielding results (still to promise), then the defaulters KSM were given a warning letter (SP) which contain the defaulters to complete the payment.  
SP I: given in together with the third visit of collection  
SP II: given two weeks after SP I was given  
SP III: given two weeks after SP II was given
11. Involve officials' village. At the time giving SP III it can also be accompanied by village officials to collect. SP III in addition to containing a final warning in order to make installment payments of loans, and also contains a warning that if within one week not also pay in installments, then the savings will be used as a joint responsibility installments.
12. Pay out joint-responsibility savings. Pay out joint-responsibility savings (both of cash and books transfer) is based on a clause in the Loan Agreement, by utilizing the control over letter to pay out joint-responsibility savings in the event of arrears.
13. Completion of arrears by the Special Team of Arrears Collection. Arrears collection in addition to be done by officers UPK it can also be done by forming a special team to collect arrears with the following steps: a). Forming Arrears Collection Team. LKM together with the community to form a team to collect arrears and then make a decision letter that the working periods of the team are adjusted to the size of the arrears and the existing problems. When the team formation needed the funds to support the activities it is necessary to mention the amount and the sources. b). Debriefing to the team by the facilitator.  
The completion of defaults can be done by BKM to take legal action by arresting a general over all the assets of KSM members. In accordance with the statement of Article 1131 Civil Code states that all the material of debtors, whether movable or immovable both was existed and will existing in

later are become the guarantees on any individual engagement. The meaning contained in this article is that all of the debtor's property (that is, in particular KSM especially KSM members) either moving or fixed objects, both existing objects and will existing objects are become guarantee for all debts of KSM members. BKM can make an assessment of the economic value of the entire property and valuables belonging to members of KSM defaulted as the repayment of remain performance that have not been met.

Based on interviews conducted, in generally it solved by means of deliberation involving the BKM/UPK and communities, including groups of KSM that has nonperformance loans to discuss what measures should be taken and how best to rescue nonperformance loans so it can be rolled to other communities. The completion ways conducted to defaulted KSM above by visiting KSM that experiencing nonperformance loans and reminded to pay the loan repayment but until just before the last payment, so it should be done a withdrawal of the goods contained in the list of collateral in the affidavit of KSM.

## II. CONCLUSIONS

The things do not correspond with the above discussion regarding the rules in the implementation guidelines to revolving loans on the provision in completion of nonperformance loans, which is mentioned in terms of collecting the arrears that if after a second visit was conducted and still not yielding results (still promise to pay) then the defaulted KSM are given a warning letter (SP) which contents is defaulters must complete the payment. This is in order to make a warning letter to follow up the nonperformance loans KSM, but before any action either of BKM or UPK. The cash guarantees that should be obtained from the joint-responsibility fund also not implemented as a function when a member is unable to meet their obligations.

It is not in conformity with the points to pay out joint-responsibility savings in the completion through an approach to collect arrears which stated that the pay out of joint-responsibility savings (cash or transfer) is based on a clause in the loan agreement, by utilizing the control over letter to withdraw joint-responsibility savings in the event of arrears that are also mentioned the setting in the form of debt recognition and joint-responsibility which examines the debt recognition letter, joint-responsibility statement and control over of savings transfer. By given of these points, joint-responsibility contained in a statement of KSM agreement in applying for loans that have been agreed between the KSM members and BKM/UPK should be bounded and must to be fulfilled and implemented as defined in Article 1338 of Civil Code "all agreements made legally valid as the law for those who make it", but in reality is not executed, because if there are members who are in arrears, the joint-responsibility funds of any other members of the KSM that are not experiencing default should be used to refund the loan is not running properly and in the implementation the members who are not experiencing default allowed to create other groups to do the loan so that the collection of arrears is only performed against to defaulted members only.

As described in the above discussion regarding the efforts to rescue nonperformance loans, when associated with the theory relating to the credit completion of 3Rsthat are rescheduling, reconditioning, and restructuring. The collection through legal means is not preferred, although in an affidavit of KSM stated that “when there are dispute in the group internal and to BKM, it shall be settled by deliberation and consensus, but if it does not find a way out then will be resolved through legal ways.”.

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# WORK ENGAGEMENT AS A PREDICTOR OF LECTURER'S PERFORMANCE

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**Abstract.** Work Engagement is important for organization since it contributes from the bottom to the top line. Recent studies have shown that work engagement is positively related to in-role and extra-role performance. This study intends to examine the level of work engagement and three dimensions of work engagement namely vigor, dedication and absorption. Design applied of this study using a non-experimental causality research method and questionnaires about work engagement. A participants were 50 lecturers that currently perform in their duties and obligations of Tridharma Perguruan Tinggi. The results showed that the overall conditions of work engagement lecturers at the level of high and moderate. This level of work engagement shows that lecturers have been engaged with their work as a lecturer. Based on dimensions of work engagement, it is obtained that work engagement influenced by dedication with the highest percentage. This was followed by the dimensions of vigor and absorption. This condition indicates that the lecturer is able to provide greater work effort, able to work in a long time, and do not give up easily, so that it becomes more productive. Lecturers have a sense of enthusiasm, pride, inspired and challenged by their work. Lecturers can also immerse themselves and find it difficult to break away from work. Thus, the lecturers that engage with their work can be assumed to give a great contribution to creation of good performance in carrying out the tasks of Tridharma Perguruan Tinggi, which is includes education and teaching, research and community service.

**Keywords:** Work Engagement, Performance, Lecturers, Tridharma Perguruan Tinggi

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## I. INTRODUCTION

Work engagement is a positive, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli et al., 2006). Vigour is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication refers to being strongly involved in one's work, and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. Finally, absorption is characterized by being fully concentrated and happily engrossed in one's work, where by time passes quickly (Schaufeli & Bakker, 2008).

Thus, engaged lecturer have high levels of energy, are enthusiastic about, inspired by and proud of their work, and feel like time flies when they are working. In the current situation, having an engaged workforce may provide a competitive advantage, because work engagement is an active state that is positively related to important outcomes such as job performance, commitment, and health. Bakker & Lieter (2010) also explains that work engagement is one of the main causes of the good work performance.

It is inevitable that the participating of organization provide its own role in the formation of work engagement and lecturer's performance, but positive relationship lecturer with the job becomes a psychological element that becomes much more important. The psychological element can be discuss on the concept of personal resources. Personal

resource is a positive self-evaluation, which is associated with an individual's ability to control and provide a positive impact on the environment. Personal resources or positive experiences can be facilitated by the organization. Therefore, organizations need to provide a meaningful and positive experience for lecturers when performing their duties.

Each lecturer has needs and different expectations about what lecturer want obtained from any work performed. Meeting the needs and expectations of the lecturers can be perceived through the experience gained while working. According to Wanous (in Meyer & Allen, 1997), needs and expectations will affect the experiences. Lecturers who feels that his/her experience with the work already meet their needs and in accordance with expectations, will provide a positive work attitude. A positive attitude will then foster belief that work provides a positive experience.

Based on the extent enough scope of the task Tridharma Perguruan Tinggi, that is education and teaching, research and service community, so the availability of energy and physical condition would have to be owned by a lecturer in order to meet the targets of its duties. In addition, the ability to give full attention during the work also will be very helpful in performing the duties optimally. Lecturers who engage with his work, will feel more energized at work and better able to focus on work. These conditions will bring lecturers to be able to show a greater work effort and able to work in the long term, so it will be more productive. Therefore, a good working performance of the lecturers is a

strong indicator of work engagement of lecturers. The role of work engagement in improving performance, become an important foundation for researching the specifics regarding the conditions of work engagement on the faculty. It is not limited to maintain, but to improve the performance levels of lecturers in the future.

According to these research, the main purpose is : 1) The examination of level work engagement and 2) The examination of dimation of work engagement.

## II. RESEARCH METHOD

This research method is applied of non-eksperimental approach with descriptive method. The verification method to test the hypothesis by using statistical tests. In this research, data collection is conducted by using a questionnaire. Retrieving data using questionnaires, 30 items of measurement tools that was adopted from The Utrecht Work Engagement (UWES), from theory of Bakker & Schaufeli (2006) and modified by researcher.

The sampling technique used is non probability-incident sample type. The participants were 50 lecturers that currently perform in their duties and obligations of Tridharma Perguruan Tinggi. Lecturers selected by the minimum term of 12 months, with assuming they have been exposed long enough to Tridharma Perguruan Tinggi, namely education and teaching, research and service community.

Analysis of construct validity using Spearman rank where all items have a value above 0.7, indicates that the all items is valid. Analysis of reliability measured by Alpha Cronbach shows the level of high reliability, 0.911. Analysis data gender and marital status using Mann-Whitney. Analysis data tenure and age using Chi-Square. Data processing by summing the total value of a questionnaire to determine the level of work engagement (frequency distribution). The answer were given using Likert Verbal Frequency Scale, with four point scale ranging from 1 (never), 2 (rarely), 3 (often) and 4 (always). Categorization level outlined in table 1.

TABLE I  
TOTAL VALUE AND LEVEL OF WORK ENGAGEMENT

No	Categorization of Work Engagement	
	Total Value	Level
1	High	91-120
2	Moderate	61-90
3	Low	30-60

## III. RESULTS

The result of 50 lecturers showed that the condition of work engagement of lecturers as a whole is at a high level, namely 78.4%. Followed by a moderate level of 21.6% and 0% at a low level. With predominantly at the level of work engagement is high, it can be said that the lecturers have been in a state engaged with his work as a lecturer. The level of work engagement lecturers in Fig 1.

According to work engagement dimitions, namely vigor, dedication and absorption, in Fig 2. The results showed that work engagement is affected by the dimensions dedication with the highest percentage of 35.76%. This was followed

by the dimensions of vigor 33.16% and 31.07% absorption. This indicates that the lecturers have a sense of enthusiasm, pride, inspired and challenged by his work in the line of duty. Dedication lecturers accompanied by energy willingness to do his job, willing to give a business that can be considered and not easily give up (vigor). Lecturers can immerse themselves, find it difficult to break away from work and total when doing tasks of Tridharma Perguruan Tinggi (absorption).

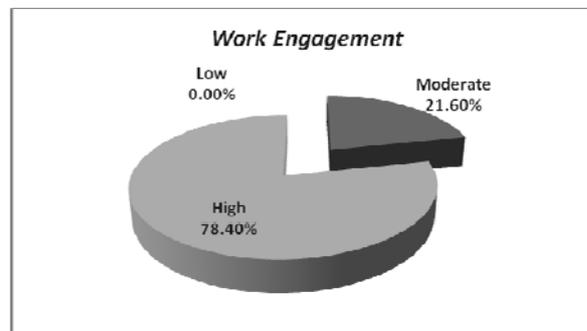


Fig. 1 Level of Work Engagement

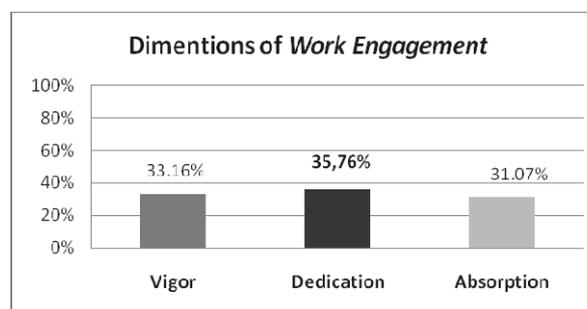


Fig 2 Dimintions of Work Engagement

## IV. DISCUSSION

The result showed that work engagement of the lecturer is at the level of high and moderate. Referring to the definition of work engagement is a positive feeling, full and engaged state of mind to work (Schaufeli et al, 2002), it can be said that most of the lecturers have been fully involved himself/herself in the work. In other words, a lecturer in a state of engagement with his job as a lecturer. Lecturers who are engaged in this work, who have the passion, enthusiasm, has a feeling of pride and joy in doing his job. Work engagement at a high and moderate level is a representative lecturer in the duties of Tridharma Perguruan Tinggi.

According to the theoretical overview, work engagement can have implications towards improving work performance. Lecturers who are at a high level of work engagement, can be assumed to have contributed significantly to the creation of good performance was achieved in the duties of Tridharma Perguruan Tinggi. Lecturers with a high level of work engagement can be identified on the faculty who have eager and not easily give up when working and able to focus on his work. With this condition, the lecturer is able to provide greater work effort and able to work in a long time, so it becomes more productive. While lecturers with moderate levels of work engagement, basically also showed spirit, unyielding and able to concentrate. However, of

course there is a difference between the level of moderate to high levels, such as in terms of intensity and how much willingness to provide the best lecturers on his work.

In this study, also included work engagement dimensions profile. Its composition is dedication, with the highest contribution, followed by the vigor and absorption. This suggests that, lecturer who has a high level of work engagement, has a strong dedication. Lecturer feel gain meaningful experience of his work, feel excited and challenged in completing the task, as well as inspired and proud of his/her profession. With dedicated, lecturer put his job duties foremost position.

Dedication to the largest share in contributing to the work engagement of lecturers, make intrinsically motivated lecturers to concentrate when doing their jobs. With dedicated, lecturer feels that his work provides a positive emotional or affective state that is fun. Teaching, research and serve the community gives happiness, the significance of its own and build a personal resource of physical, intellectual, social and psychological resources. Lecturer who filled feeling happy or have a high positive affective state here that support the high performance. Lecturer dye job with diligence and constant effort, once considered giving psychological wellbeing.

Dimensions vigor and absorption that follows makes the lecturer can manage his energy to work effectively, have the mental endurance during work and perseverance when faced with problems. Dimensions vigor give lecturer a better physical health, with better physical condition can be associated faculty can provide the best performance because it can use the physical and mental resources more effectively. With dedication and passion, faculty can easily drown in their work and feel time goes so fast (absorption). Lecturers can allocate energy is focused on the job and can overlook the surrounding environment.

On the other hand, lecturer at the level of work engagement moderate, also had an order of the same dimension that is dominated by the dimensions of dedication, followed vigor and absorption. In moderate levels of work engagement, it can be said that the experience gained from his work sometimes meaningful to teachers, but sometimes not. Similarly, with a sense of enthusiasm and challenged in completing the task, the lecturer is quite enthusiastic and challenged, but only on certain tasks. Teaching, research and service to their communities sometimes perceived bring happiness, but sometimes also not in accordance with the expectations of the lecturers. On the dimension of vigor and absorption, characterized by lecturer who do not exert all his energy to work, sometimes doing other things that are not related to their work and feel overwhelmed when faced with severe problems.

Thus, the lecturer who has a high level of work engagement, can provide optimal performance. Lecturers have the desire to provide effective teaching to the progress of the student's knowledge he was teaching, guiding his students in order to graduate on time and with a satisfactory score, motivated to improve themselves by taking the level of higher education, seminars latest in science, willing to make research by publishing a book or journal and provide service to the community with the science that has, it made a lecturer for the profession carried a live call to him/her and

make lecturers feel more helpful and useful to themselves teachers, professional lecturers, organizations and society.

On the other hand, lecturer at the level of work engagement moderate, yet provide optimal performance. Lecturers at this level, characterized by an instructor with a willingness to stay in the work they are responsible. Lecturers are willing to provide teaching and guiding students, but more oriented on task completion. Lecturers seek to improve levels of education if it is considered necessary. Similarly, with the task of researching and serve, made a lecturer for the fulfillment of its obligations. In other words, lecturers who are at moderate levels of work engagement, feeling yet fully that work is the most important thing and provide for his personal resources.

Although the results of this study showed that almost all the lecturers had been a high level of work engagement, but there is also a lecturer with moderate levels of work engagement. This shows that there are lecturers who have not been able to experience a work engagement optimally. To that end, it is necessary an appropriate intervention to improve and maintain the level of work engagement of lecturers. It becomes critical given the task Tridharma Perguruan Tinggi will certainly continue to increase in line with increasing the quality of education as well. It is not possible if it does not get proper treatment so in the foreseeable future the level of work engagement of lecturers will decrease, which will affect work performance and well-being of lecturers. Work engagement can be a variable that has a major role to the creation of lecturer's performance today.

## V. CONCLUSIONS

Based on the results of the study, it can be concluded that lecturers have a work engagement at the level of high and moderate. Dimensions of work engagement in lecturer at high and moderate is affected by the dedication and followed by the dimensions of vigor and absorption.

Lecturers who have high levels of work engagement, can provide optimal performance. Lecturers have the desire to provide effective teaching, guiding students in order to graduate on time and with a satisfactory score, motivated to improve themselves by taking the level of higher education, seminars latest in science, willing to make research by publishing a book or journals and provide service to the community with its scientific, this is done as a profession carried lecturer is a call to live for themselves and make lecturers feel more helpful and useful to themselves teachers, professional lecturers, organization and community.

Lecturers with a moderate level of work engagement, feeling that the experience that sometimes meaningful, but sometimes not. In carrying out the textile, enthusiastic lecturer only at certain tasks that interested him/her. Teaching, research and service to their communities sometimes perceived bring happiness, but sometimes also not in accordance with the expectations of the lecturers. Lecturers at this level, yet exert all his energy to work, sometimes doing other things that are not related to his work and overwhelmed when faced with severe problems.

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# THE LOCAL GOVERNMENT POLICY IN BORDER AREA ON THE EDUCATION RIGHTS FULFILMENT FOR PERSON WITH DISABILITIES IN NORTH KALIMANTAN PROVINCE

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**Abstract.** The research problems are; first, how is local government authority within human rights fulfilment for person with disabilities? Second, how is legal policy on human rights for person with disabilities?. Third, how is law protection from local government related to education rights fulfilment for person with disabilities in North Kalimantan?. The method of this research uses normative method be equipped by field research. This research is important considering the obligation of state to protect, to recognize and to fulfil of human rights for citizens in its region without discrimination particularly for person with disabilities in border area. Within an effort to implementation, Indonesia Government regulates some legal instrument of human rights, one of the newest is Law No 8 of 2016 on Person with Disabilities. North Kalimantan is youngest province in Indonesia, some local regulation on human rights has been regulated, but the human rights instrument particularly for person with disabilities has not been set up. The research urgency becomes one of the goals to regulate the local government policy on education rights particularly the rights of person with disabilities in North Kalimantan Province, its expected to be a solution against regulation plan in Indonesia on fulfilment of human rights degree for person with disabilities especially education rights for them in North Kalimantan Province.

Keywords: Local Government Policy, Border Area of North Kalimantan, Education Rights for Person with Disabilities.

## I. INTRODUCTION

Human Rights is an universal concept, first appeared in the 17th century. The concept of human rights has been gradually developed, one of its important developments occurred in the 20th century, which was the first draft of the Universal Declaration of Human Rights (UDHR), which was announced on December 10, 1948. The declaration was then added to the Convention of Civil and Political Rights as well as Economic, Social and Cultural Rights.

Essentially, Civil and Political Rights (SIPOL) aims to protect everyone against abuse of power by the authorities. Franklin. D. Roosevelt (1941) proposed four freedom speeches in SIPOL Rights, namely: 1. Freedom of speech; 2. Freedom of worship; 3. Freedom from fear; 4. Freedom from want. While, International Covenant on Economic, Social and Cultural Rights (ECOSOC) includes: Labor Rights, the right to decent working conditions; the right to form trade unions; the right to social security; the right to family life; the right to an adequate standard of living, including the right to food, clothing and housing; the right to free education; and the right to participation in cultural life. Economic, Social and Cultural Rights are designed to ensure the protection of entire human

race based on the principal that human beings are entitled to enjoy their rights, freedom and social justice simultaneously.

In connection with the three international legal instruments above, Indonesia added the concept of UDHR into its national law, [1]. ECOSOC Conventions were also ratified by the Indonesian government, and its set out as Law No 12 of 2005 concerning on the Ratification of the International Covenant on Civil and Political Rights and Law No.11 of 2005 on the Ratification of the International Covenant on Economic, Social and Cultural Rights. Hence, all those rights should be enjoyed by everyone without discrimination or restrictions that are not based on morality, religion, customs, and public order. The disabled people are no different, they could enjoy these rights as it is recognized by the government.

Leonard of the United Nations in "Monitoring The Convention on the Rights of Persons with Disabilities, Guidance for Human Rights Monitors-Professional Training Series No. 17" estimated that there are 650 million disabled people or 10% of the total population in the world. Many adults and children with disabilities are able to mingle within the society, however the majority of them still face discrimination, exclusion, isolation and harassment. In addition, many disabled people live very poor and do not have access to good education therefore they should stay in the

shelter home and did not get a chance to work. Even in some countries, disabled people are not allowed to have any ownership on anything.

To respect, to protect and to fulfill the disabled people's rights, The Government of the Republic of Indonesia has established a variety of laws and regulations. Start with the Government's commitment to sign the Convention on the rights of persons with disabilities on March 30, 2007 in New York. Then, the convention ratified by [2] on the Ratification of the Convention on the rights of persons with disabilities.

The Indonesian government increasingly showing concern for the fulfillment of rights for persons with disabilities, on April 15 the enactment of [3] on Persons with Disabilities was ratified. [3] stated the definition of Disabled as person who have physical limitations, intellectual, mental, and/or sensory in long periods which in interaction with the environment may experience obstacles and difficulties to participate fully and effectively with others based on equality.

The principles of its implementation and fulfillment of the rights of disabled people: Respect for dignity; individual autonomy; no discrimination; full participation; human diversity and humanity; Equal Opportunity; equality; accessibility; the evolving capacity and child identity; inclusive; Protection and special treatment and so on. These principles are included in the Law on Disability as a series of basic rights that must be obtained by disabled people. The duties of both central and local government are to ensure, to respect and to fulfill the implementation of these rights. Some parts of Indonesia put the regulations on disabled people into its local regulations, while others are still working on it. The rights listed as a fundamental right for disabled people is the right to education.

Right to education for disabled people has to be fulfilled by both the government and local governments. Government and Local Government are obliged to implement and / or facilitate education for Disability on any level of education in accordance with their authority. Implementation includes: the implementation of inclusive educational system and specific; 12-year compulsory education program; School location near to their homes; scholarship; skills training; and facilitate the basic skills.

Kalimantan Utara is the youngest province in Indonesia. It was formed as a New Autonomous Regions based on [4] on October 25, 2012. Kalimantan Utara has a total area of 72.567.49 km<sup>2</sup> (28,018.46 sq mi) with a total population of 738. 163 inhabitants (2013). Kalimantan Utara territory is divided into five administrative region. They are City of Tarakan, population 239. 973, the capital city of Tarakan; Bulungan, population 226 322, capital Tanjung Selor; Malinau, population 62 460, the capital of Malinau; Nunukan, populasi 140.567, capital of Nunukan; Tana Tidung, populasi 22.841, Tideng Pale. The fulfillment of the right to education for disabled people in the province of Kalimantan Utara are currently scattered in several areas, namely in Malinau, Nunukan, Tanjung Selor, and Tarakan. The regulations governing disabled people are accommodated in education and children regulations by local governments. There are no specific regulations yet in regards to disabled people.

## II. METHOD

Based on the problem, this research method is normative that equipped by field research. The character of the research is participatory which is combined the data and the interview result with competent people (local government, special school teacher, and the family of person with disabilities) as a key informant.

### A. The resource of the Data

The characteristic of the data are primary and subsidiary. The primary data is the various of regulation, local government policy, interview result with informant, and also person with disabilities as a main target in local government policy. Meanwhile, the subsidiary data is the result of literature research. The data consist of primary legal resources such as regulation, and subsidiary data such as proceeding of conference, a result of research, documents, journals, and books related to the title of this research; and addition resources such as dictionary, encyclopedia, brochure and map.

### B. The aggregation technique of the data

The data in this research gained by two research instruments are interview and document study. The technique of interview refer to a unstructured model, meanwhile the technique of document study collected the data by legal document and literature was available.

### C. Analysis of the Data

Related to the type of data has gained, this research integrated qualitative and quantitative analysis model. Qualitative used for analyze the data of congruence of policy and local regulation related with human rights standard. Quantitative used for analyze some statistic data was relevant and local budget allocation with the fulfilment of rights that reserached.

### D. The Location of Research

Related to the title of research is boarder area, then the location of this research be implemented in Nunukan which is border area between Indonesia and Malaysia

## III. RESULTS AND DISCUSSION

### The Regulation on Person With Disabilities in Indonesia

Within Indonesia Constitution of 1944 stated affirmatively that "Indonesia is a state-law", according with it Indonesian people very understand the meaning and the essence of human rights. As evidence, the first express within preamble of Indonesia Constitution of 1954 be determined that all colonialism must be abolished in this world as it is not in conformity with humanity and justice. These commitment sourced from Pancasila, Particularly the second principle is just and civilized humanity.

Human rights regulation be accomodated within Indonesia Constitution 1945 till special regulation in order to fulfil human rights. Article 28I Paragraph (2) of Indonesia Constitution 1945 stated that "Every person shall have the right to be free from discriminative treatment based upon any grounds whatsoever and shall have the right to protection from such discriminative treatment". Meanwhile, Article 3 Paragraph [1] affirms that "Everyone is born equal in dignity and human rights, and is bestowed with the intellect and

reason to live with others in a spirit of brotherhood". This provision is a legal basis underlying principle of non-discrimination in Indonesia.

Indonesia is a party of some human rights conventions, a commitment as a party within the advancement of human rights should be pursued by government as an organ representing the state. The basic rights particularly rights within ECOSOC covenant by the expert of law and human rights interpreted as positive rights because the state should be have a role actively to implementation that rights. The main provision is Article 2 ECOSOC covenant stated that "Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures". The party states have obligation to take a steps without considering their economic progress, as well as ensuring to respect against human rights for all people.

The consideration of Indonesia to be a party of ECOSOC covenant, since its independent on 1945 upholds human rights. Indonesian attitude can be seen from the fact that although made before the proclamation of the Universal Declaration, the Constitution of the Republic of Indonesia of 1945 already contains some provisions on respect for human rights is very important.

Within law and international human rights, Equality struggle by a group of persons with disabilities has been started since 1970s. In an effort to respect, protect and fulfill the rights of persons with disabilities, the Government of the Republic of Indonesia established a variety of laws and regulations governing the protection of persons with disabilities. Broadly speaking some regulations related to the rights of persons with disabilities are as follows:

a. Law No. 19 of 2011 on Ratification of the Convention on the Rights of Persons with Disabilities.

The Indonesia Government has signed the Convention on the Rights of Persons with Disabilities / CRPD on March 30, 2007 in New York. The signing shows the seriousness of the Indonesian State to respect, protect, fulfill and promote the rights of persons with disabilities, which is ultimately expected to provide for the welfare of persons with disabilities. At the time of signed the Convention on the Rights of Persons with Disabilities, Indonesia signed the Convention without reservation. However, doesn't sign the Optional Protocol to the Convention on the Rights of Persons with Disabilities. As a signatory state, Indonesia has a commitment to ratify the Convention.

The convention was ratified by [2] on the Ratification of the Convention on the rights of persons with disabilities. Related to education rights for persons with disabilities in the preambule of the this convention that the state should be "Recognizing the importance of accessibility to the physical, social, economic and cultural environment, to health and education and to information and communication, in enabling persons with disabilities to fully enjoy all human rights and fundamental freedoms"

Moreover, the party state have obligation to take steps in the field of legislative, administrative, social, education, etc to

prevent the person with disabilities from exploitation, violation, and mistreatment, including gender-based aspects, both within inside and outside the home.

Specifically related to education rights for persons with disabilities in the Convention on the Rights of Persons with Disabilities stipulated in Article 24 that:

1. States Parties recognize the right of persons with disabilities to education. With a view to realizing this right without discrimination and on the basis of equal opportunity, States Parties shall ensure an inclusive education system at all levels and life long learning directed to:
  - a. The full development of human potential and sense of dignity and self-worth, and the strengthening of respect for human rights, fundamental freedoms and human diversity;
  - b. The development by persons with disabilities of their personality, talents and creativity, as well as their mental and physical abilities, to their fullest potential;
  - c. Enabling persons with disabilities to participate effectively in a free society.
2. In realizing this right, States Parties shall ensure that:
  - a. Persons with disabilities are not excluded from the general education system on the basis of disability, and that children with disabilities are not excluded from free and compulsory primary education, or from secondary education, on the basis of disability;
  - b. Persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live;
  - c. Reasonable accommodation of the individual's requirements is provided;
  - d. Persons with disabilities receive the support required, within the general education system, to facilitate their effective education;
  - e. Effective individualized support measures are provided in environments that maximize academic and social development, consistent with the goal of full inclusion.
3. States Parties shall enable persons with disabilities to learn life and social development skills to facilitate their full and equal participation in education and as members of the community. To this end, States Parties shall take appropriate measures, including:
  - a. Facilitating the learning of Braille, alternative script, augmentative and alternative modes, means and formats of communication and orientation and mobility skills, and facilitating peer support and mentoring;
  - b. Facilitating the learning of sign language and the promotion of the linguistic identity of the deaf community;
  - c. Ensuring that the education of persons, and in particular children, who are blind, deaf or deafblind, is delivered in the most appropriate languages and modes and means of communication for the individual, and in environments which maximize academic and social development.
  - d. In order to help ensure the realization of this right, States Parties shall take appropriate measures to employ teachers, including teachers with disabilities, who are qualified in sign language and/or Braille, and to train professionals and staff who work at all levels of

education. Such training shall incorporate disability awareness and the use of appropriate augmentative and alternative modes, means and formats of communication, educational techniques and materials to support persons with disabilities.

b. Law No 20 of 2003 on National Education system

In this Education Law explained that regarding to the education rights for persons with disabilities described explicitly, that: Every citizen have the same right to obtain a quality education, and for citizens who have physical, emotional, mental, intellectual, and / or social entitled to special education. Thus, in principle, the Education Law has been oriented to fulfil of the education rights for persons with disabilities, although it's only one chapter regulates the Rights and Duties of Citizens.

c. Law No. 35 of 2014 on the Amendment of Law No. 23 of 2002 on Protection of Children

Related to children with disabilities particularly Article 1 paragraph 7 of Law 35 of 2014 explains that the Children with Disabilities is a child who has a physical disability, mental, intellectual or sensory impairments which is in the long term to interact with the environment and the attitude of the community can get obstacles makes difficult to participate fully and effectively based on equality. The education rights for person with disabilities especially for children regulates in detail of Article 9 Paragraph (1), (1,a) and (2), that:

1. Every child has the right to education and teaching in order to develop his personality and his intelligence level in accordance with the interests and talents.
2. Every child has the right to protection in the educational unit of sexual crimes and violence committed by educators, staff, fellow students, and / or other parties
3. Beside the rights to children as mentioned, children with disabilities has the right to get special education and Children with excellence eligible for special education.

Related to the accessibility, furthermore the law of children protection also explains that the Children with Disabilities has opportunities and accessibility to inclusive education and / or special education.

d. Law No 08 of 2016 On Person With Disabilities.

The Indonesia government increasingly taking a concern for the fulfillment of rights for persons with disabilities, on April 15 regulated the Law No. 8 of 2016 on Persons with Disabilities defined that "Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others"

Furthermore, related to education rights for person with disabilities within Article 5 stated that one of some their rights is education rights. Based on the data's UNICEF (2013) that children with disabilities are disproportionately often ignored their right to an education, which reduces their ability to enjoy their citizenship rights, getting a job and take a valuable role in society.

Household survey data from 13 countries and middle-income vulnerable showed that children with disabilities

between 6-17 years old were significantly less to put into school than their peers who are not persons with disabilities.

Furthermore, the right to education for persons with disabilities provided in Article 10, which include: getting a quality education in the educational unit in all types, lines and levels of education in inclusive and special; Equal Opportunities have to be an educator or educational personnel in the educational unit in all types, lines and levels of education; Equal Opportunities as the organizers have quality education in the educational unit in all types, lines and levels of education; and get the Decent accommodation as learners; Exercise and enjoy of these rights with principle are: Respect for dignity; individual autonomy; without discrimination; full participation; human diversity and humanity; Equal Opportunity; equality; accessibility; the evolving capacity and identity of the child; inclusive; special treatment and more protection. Those principles concretely poured into the Law on Disability in the form of a basic rights that must be obtained by persons with disabilities, it was the duty of central and local government to ensure, respect and fulfill the implementation of these rights.

The Authority of Local Government to fulfil human rights for person with disabilities.

In the stateness practice in Indonesia, after legalization of Law 32 of 2004, afterwards has changed some provisions by law No. 12 of 2008, and then revised by Law No. 23 of 2014 About Local Government, known as the principle of decentralization. Decentralization based on Article 1 Paragraph 8 [5] on Local Government is penyerahan Urusan Pemerintahan oleh Pemerintah Pusat kepada daerah otonom berdasarkan Asas Otonomi. Deconcentration is the delegation while the majority of Government Affairs under the authority of the Central Government to the governor as a representative of the Central Government, the vertical institutions in certain areas, and / or to the governor and regent / mayor in charge of government affairs public. governmental delegation of authority by the Government to the Governor as representatives of governments and / or the vertical institutions in a particular region (Article 1, paragraph 9 of Act 23 of 2014).

the practices in decentralization and deconcentration policy is the result of Rationality 'subjective' actors or policy actor. When the policy actors changing their views in accordance with the value or interest that would be achieved at a certain time, then the action or implementation of the policy will be changed also, conclusion such as these also supported widely by many studies in developing countries.

Article 18A paragraph (1) of the 1945 Constitution provides direction of arrangement relationship of authority between the central government and the provinces, districts and cities must be made regard to the specificity and diversity of the area. If the reference to provisions of Article 18A Paragraph (5) of Indonesia Constitution 1945 which determines that the scope of regional autonomy is the broadest exception of governmental affairs determined by law as affairs of the Central Government, the scope of local government affairs are all matters except the matters specified as the affairs of the Central Government. All Government Law reform era determine the six (6) matters under the authority of the Central Government, which is based on [5], referred to as

absolute affairs, namely (1) foreign policy; (2) defense; (3) security; (4) judicial; (5) monetary and national fiscal; and (6) religion. Thus in essence beyond the sixth affairs, including matters of education, is part of a regional government affairs, also called concurrent government affairs within the framework of the widest possible autonomy.

[5] on Local in principle gives priority to balance the principle of centralization and decentralization. Didik Sukriono stated principles of local governance is the use of the principle of decentralization, deconcentration and assistance. Decentralization is the delegation of authority by the government to local government autonomy within the framework of the Unitary Republic of Indonesia. Thus, the authority to regulate and organize the administration not solely by the central government, but also by government units lower, both territorial and functional. The lower unit of government (provincial and district / city) entrusted and allowed to regulate and organize their own government affairs.

In Article 11 on Local Government law stated that “(1) Affairs concurrent administration as referred to in Article 9 paragraph (3) which is composed of the Regional authority of Government Affairs and Government Affairs Mandatory Options. (2) Mandatory Government Affairs referred to in paragraph (1) shall consist of Government Affairs relating to Basic Services and Government Affairs that is not related to the Basic Services”. Furthermore, In Article 12 Paragraph (1) states Government Affairs related to the Compulsory Basic Service includes:

- a. Education;
- b. Health;
- c. public works and spatial planning;
- d. housing and residential areas;
- e. peace, public order, and the protection of society; and
- f. social.

Based on the description of Article 12 Paragraph (1), it can be concluded that education matters included into the mandatory government affairs relating to basic services, so that, the educational affairs is Government Affairs who shall be convened by all Regions including by local government of north kalimantan province. The local autonomy era and distribution of authority between the central government, provincial government and district / city government is an opportunity for the Government to improve people's welfare. Regional authority in the administration of educational affairs, further elaborated in Government Regulation No. 38 of 2007 on the Division of Government Affairs between the Government, Provincial Government, and the Government of Regency / City.

in order to determine the scale of government affairs between the affairs under the authority of the Government, Provincial Government and Local Government City District, which is based on the criteria of externality, accountability and efficiency, Government Regulation No. 38 of 2007, has set the details in the field of government affairs as intent the provisions of Article 2 paragraph (3) of Government Regulation No. 38 of 2007. Details of the government affairs, listed in the annex and inseparable part from the Government Regulation No. 38 of 2007. Specifically for government affairs Education, listed in the annex section A (Government Affairs Division of Education), which consists of sub-areas: Policy, Financing, curriculum, Infrastructures, Education and

educators, and Quality Control of Education. Apart from the scope of the broadest possible autonomy, education also be seen in terms of the constitutional rights fulfillment and constitutional obligation of the state in education. Article 31 of Indonesia Constitution of 1945 affirmed that Every citizen has the right to receive education. The education rights is a part of human rights in the category of social rights which requires the activeness of the state for its fulfillment. Article 28I of Indonesia Constitution of 1945 affirmed that The protection, advancement, upholding and fulfilment of human rights are the responsibility of the state, especially the government.

Legal Protection of Local Government regarding to education rights for Persons with Disabilities in North Kalimantan Province.

North Kalimantan Province is the latest province in Indonesia was formed as a New Autonomous Regions pursuant to Law No. 20 of 2012 on October 25, 2012. North kalimantan have a total area of 72.567.49 km<sup>2</sup> with a total population of 738 163 inhabitants (2013). North Borneo territory divided into five administrative region, which is consist of one city and four districts. One of the five administrative regions immediately adjacent to the neighbour country namely Malaysia is Nunukan which is the location of the present research.

Nunukan formed as an autonomous region through [6] on the Amendment of the Law No. 47 of 1999 on the Establishment of Nunukan district, Malinau district, West Kutai, East Kutai and Bontang. Population in Nunukan amounted to 140 567 inhabitants. In an effort to fulfil human rights particularly education rights for person with disabilities, the local government of Nunukan makes some program programs that the authority granted to related agencies namely the Education Department of Nunukan. In addition the role of the Institution, the fulfillment of Human Rights has also pursued by the Regional Representatives Council (DPRD) Nunukan through Local Legislation Program which produces regional included in those program.

Here in this part will be presented some local government program and institutions related to fulfilment of education rights for person with disabilities that gained by interview result of research team in the field.

- a. Dissemination program of Human rights

This program follow up by local government of Nunukan. The program specifically invited the regional work units to develop a National Action Plan for Human Rights (RANHAM). This annual program hasn't been optimally due to the units haven't yet understand about that plan. The legal basis of the implementation of this program refers to the Presidential Decree No. 75 of 2015 About the National Action Plan on Human Rights 2015-2019. That plan is a document including the goals, strategies, and focus on priority activities national action plan for human rights Indonesia and using as a reference for the ministries, agencies and local governments to implement the respect, protection, compliance, enforcement, and promotion of human rights in Indonesia (Article 1 Paragraph 2) Furthermore, Article 6 stated that to implementation of that plan as referred to in Article 2, ministries, agencies, and regional governments must draw up

Action on Human Rights determined every 1 (one) year. Its mandate trying to be implemented by the local government of Nunukan.

b. The program of district and city cares human right.

According to Sherwin Evran SH, LL.M (Head of Documentation and Legal Aid), the program requires every SKPD reporting an annual report of human rights issues and reporting the progress to fulfil of human rights in every institution, but this program also has not been optimal due to unconsciousness to report in every year as well as required, particularly to report the problem about person with disabilities. So that, government assumes that there is no significantly problem about person with disabilities in human rights. Whereas, based on the observation of research team that infrastructure in Nunukan has not reached as a friendly territory for person with disabilities. Furthermore, the reason of hasn't been optimal the fulfilment of education rights for them caused by the spread of area in Nunukan so that government becomes difficulty to gain the data of person with disabilities.

c. Local Legislation Program

This program is clearly the authority of the legislature to formulate local regulations. Based on the interview team with Herwin, S.H Public Relations Section at the Secretariat Nunukan Regency. Currently in Nunukan has not entered a regulation of persons with disability in local legislation program of [8]. However, the rights of persons with disabilities have been included in the regulation of education stipulated in [8] on Management and Implementation of Education. This regulation specifically stipulated clauses pertaining to special education programs. In Article 48 Paragraph (1) stated that: "Special education is an education for Students who have difficulty in following the learning process because of physical, emotional, mental, social, and / or have the intelligence and special talents".

Special education is the rights for every citizen who have physical, mental, emotional, and social obstacles, as set forth in Article 66 of the regulations of education. Based on the mandate of this regulation, local government shall appoint elementary, junior high, high school, or equivalent inclusive to facilitate students with special needs. Related to the education fund set forth in this regulation, local governments are required to provide education budget at least 20% (twenty percent) of the budget excluding salaries of teachers, educators and educational training gradually. Furthermore, under Article 53 paragraph (4) stated that the components are funded include activities relating to the welfare of teachers, staff and the provision of education, infrastructure, teaching and learning, supervisory, coaching, monitoring, etc.

d. The Special School

Currently, the government of Nunukan has a Special School located in the village of Binusan, Nunukan. The school is starting from elementary, junior high school and high school by the number of elementary school students were 51 students, junior high school were 15 students, and high school were 15 students, meanwhile the educators were 9 teachers. Based on the interview team with Mr. Jet Simon, SP.d as the headmaster, so far the local government has endeavored to fulfill the rights of education for students with disabilities, such as the procurement of school bus and children's nutrition carried out three times per week, but there are still many

obstacles have been faced not only by local government but also the by the school, due to several things, namely:

1. The ration between students and teachers hasn't ideal
2. The School located in the village Binusan which is the last village in Nunukan, it is quite far from the city, it makes difficult for parents to drop off their children to school.
3. Facilities / infrastructure hasn't adequate, such as school buildings and learning tools to support vocational education for students with disabilities.
4. There are no official data of the children aged compulsory school in District of Nunukan, so this time the students in this school are the children who come from city of Nunukan, meanwhile the district of Nunukan scattered areas such as Sebatik, Sebuku, Krayan, etc.

#### IV. CONCLUSIONS

1. Regulation on the rights of persons with disabilities in Indonesia is a mandate of the constitution which is the obligation of the state to fulfill the rights of citizens, especially the rights of persons with disabilities. That mandate completed by various regulations, such as Law No 20 of 2003 on National Education System, Law No 35 of 2014 on the Amendment of Law No. 23 of 2002 on the Protection of Children, and specifically regulated in Law No. 8 of 2016 About persons with Disabilities.
2. The authority of Local Government to fulfill of Education rights for persons with disabilities described in Article 12 Paragraph (1) of Act No.23 of 2014 on local government where education included into the mandatory government affairs related to basic services, so that the educational affairs particularly for people with disabilities in the border region is a Government Affairs that should be convened by the Provincial Government of North Kalimantan.
3. The legal protection from Local Government related to the fulfillment of education rights for persons with disabilities in North Kalimantan Province pursued through several programs by relevant institutions. The program expected to encourage the desire of persons with disabilities to attend school as well as the responsibility of countries / regions in order to fulfill of human rights. It recognized that there are still obstacles to these efforts, one of these because of unavailability of regulations related to the fulfillment of rights for persons with disabilities.

#### REFERENCES

- [1] Law No.39 of 1999 on Human Rights
- [2] Law No. 19 of 2011 on ratification of CRPD
- [3] Law No 8 of 2016 on Person With Disabilities
- [4] Law No 20 of 2012 on Establishment of North Kalimantan Province
- [5] Law No 23 of 2014 on Local Government
- [6] Law No 7 of 2000 on Amendment of Law No 47 of 1999 on Establishment of Nunukan District, Malinau District, Kutai Barat District, Kutai Timur District and City of Bontang
- [7] Law No. 11 of 2006 on Ratification of the Covenant of ECOSOC
- [8] Local regulation of Nunukan No 05 of 2012 on Management and Implementation of Education Departemen Perdagangan RI, 2008, Pengembangan Ekonomi Kreatif Indonesia 2025: Rencana Pengembangan Ekonomi Kreatif Indonesia 2009 – 2015.

# PRINCIPLE PACTA SUNT SERVANDA RELATING TO THE CONTRACT DUE TO INTERNATIONAL BUSINESS LAW

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**Abstract.** The aim of research to analyze and explain the principle of pacta sunt servanda with the legal effect of the agreement (contract). Normative juridical research method. Results: pacta sunt servanda principle called the principle of legal certainty. The principle of pacta sunt servanda in Article 1338 (1) Civil Code: all agreements made legally valid as law for those who make it. The word "all" contain a statement to the public that: allowed to make agreements that contain any and all parties agreed, binding as law for those who make it. As a source of law in exercising its rights and obligations of the parties in international business. The principle of pacta sunt servanda with the legal consequences of the agreement: a contract is a collection of promises can be forced to implement. The parties must implement the agreement that has been agreed in the contract and does not meet their contractual obligations is the act of breaking a promise or breach of contract. Third parties, judges must respect the substance of a contract made by the parties, such as law, they did not intervene on the substance of a contract made by the parties. This principle is universal every legal system in the world to respect this principle.

Keywords: Pacta sunt servanda, due to international business contract law

## I. INTRODUCTION

Buying and selling is also called Business. Understanding Export and import is limited to the export and import of goods (visible goods). Generally, the procedure is no different domestic business with international business, international business just more difficult and more complicated, due to the following factors: The buyer or seller or importer and exporter separated by boundaries of state (geopolitical). Goods must be sent or taken from one country to another through various regulations, such as customs regulations, which is sourced from the restrictions issued by each government. From country to country there is a difference in language, currency, dose and consideration of its national law. These factors demand a business agreement or contract in order to avoid disputes or business disputes in case things are not desirable for both parties. Each country is different from other countries in terms of the angle of natural resources climate, geographical location, population, expertise, labor, the price level, the state of economic and socio-cultural structures. The differences are also differences cause goods produced, required fees, as well as the quality and quantum. Because of that there are countries that are superior and more special in producing certain results. This is possible because there are things that can only be produced in the region and in particular climate, or because a country has a combination of factors of production is better than other countries, so that the country can produce goods more competing power. if the advantages of a country in producing a type of goods due to natural factors, the country was said to have "absolute excellence" (absolute advantage). Rubber only grows in tropical areas such as Indonesia and Malaysia so that both have an absolute advantage against other countries.

Furthermore, if a country can produce a kind of goods better and cheaper due to much better combination of factors of production (natural, labor, capital and management) then the country could also obtain "advantages" due to high productivity. This is referred to as the advantage in cost comparison (comparative advantage / cost). Sometimes the production of a country can not be consumed entirely in the country, since centuries ago has encouraged people to trade in the production output to another country outside its borders. Trade or business goods from a foreign country to another country outside the national boundaries is what is meant by international business. Similarly, the domestic trade transactions "trade", then in the international business also performed the activity of "selling" the so-called export and activity "buy", commonly called import. International business or export-import based on the equality principle of pacta sunt servanda dealing with the consequences of the agreement (contract)

With their uniform arrangement that will govern the contract for the sale of goods by taking into account differences in social, economic, and legal systems to remove various obstacles and barriers in import-export contract law or international business . For the principle of pacta sunt servanda in the law of national and International Business Contracts to be very relevant scientific inquiry, relating associated with the consequences of the agreement (contract) is charged fairness and justice for the parties committed themselves.

Problem Formulation:

1. What is the principle of pacta sunt servanda?
2. Why is the principle of pacta sunt servanda relating to the contract due to International business Law ?

## II. METHOD

In this study, using normative juridical method .Objective: to analyze and explain the principle of pacta sunt servanda related to due on contract law business law. The method applied is normative, which are based on legal principles contained in the law, or set specific standards or norms against a phenomenon by reviewing secondary data or literature. For further sorted according to material sources of law as follows: primary legal materials consist of legislation, secondary law consists of the relevant libraries, and tertiary legal materials consist of a legal dictionary. A qualitative approach does not take advantage of statistical data and arithmetic.

## III. RESULTS AND DISCUSSION

The principle of pacta sunt servanda in the law of national and International Business Contracts

The parties involved directly or indirectly in International Business Law (purchase agreement) needs to know the source of law of the contract. Because the source of law is the driving force of the relevant contract.Sources laws that govern and control the operation of the contract.Starting from the time of formation of the contract up to his execution if there is a default of certain parties. Sources of commercial law or international business and essential matters of the sources of law in question is as follows:

Agreement or Contract (Contract Provisions), which is the basis and source of primary law for a contract of international business is the contract's provisions, namely what has been stipulated in the contract by both parties. Law looked at the contract as your own business. This means that the parties' free will organize its business origin is not contrary to public order and legal certainty in the contract. The law gives only signposts in order to achieve to protect from the higher interests, namely justice, public order, the interests of the state. Here reflected that the "contract" is the "law" for the parties to a contract.

However, if the provisions in the contract can not accommodate the aspirations of both parties, in the implementation of the agreement that are not regulated at all in the contract, then for it then the law would provide rules legally regulate (optional law) just to fill the legal vacuum in society , It can mean only the legal provisions are optional are excluded by both parties. Granting freedom of contract of the parties was then known as the Freedom of Contract. The principle of freedom of contract (freedom of contract) in Code of Civil lawt Books-III and Kitab Undang-Undang Hukum Dagang.

Applicability of the principle of freedom of contract, the necessary prudence of the parties to sign a contract, because this signed it will be legally binding as law. Contract or agreement is legislation for the parties who made it and did not fulfill the obligations agreed upon in the contract is the act of breaking a promise or breach of contract.

While understanding Pacta sunt servanda is derived from the Latin language, which means the promise must be kept. The pacta sunt servanda principle or basic principles in the

legal system of civil law. Basically this principle to a contract or agreement made between individuals. The principle of pacta sunt servanda [1] is sacralization or an agreement that is the focal point of the law of freedom of contract or agreement is known as the principle of autonomy. The principle of pacta sunt servanda also has religious roots in Islamic law which is in the Al-Quran Al Maidah ayat (1) letter, which essentially calls on humans to keep their promises to God and his fellow man. The embodiment of the principle of pacta sunt servanda in the law of treaties in Article 1338 paragraph (1) of the Civil Code: all agreements made in accordance with applicable laws as laws for those who make it. (2) the agreement was irrevocably apart with the agreement of both parties, or for the reasons specified by law. The embodiment of the principle of pacta sunt servanda in Article 2 paragraph (2) of the Unite Nations Charter, which stated the member states of the United Nations. Then there is the opening of the third paragraph of the Vienna Convention in 1969 and 1986.

The principle of pacta sunt servanda paired with the principles of good faith, in the event of Article 26 of the Vienna Convention of 1969 and 1986 were declared for the parties that have become parties to a treaty are bound to implement the agreement in good faith. Then Article 4 paragraph (1) Undang-Undang No 24 Tahun 2000 Tentang Perjanjian Internasional [2]: states the government of the Republic of Indonesia made a treaty with the State or more, international organizations, or subject to other international law based on the agreement and the parties are obliged to implement the agreement with the faith good.

**Table 1**  
ANALYSIS OF PACTA SUNT SERVANDA PRINCIPLE ASSOCIATED WITH THE RESULT OF LAW IN INTERNATIONAL BUSINESS LAW

No	Analysis of pacta sunt servanda principle associated with the result of Law in International Business Law
1	The principle of pacta sunt servanda is also called the principle of legal certainty. The principle of pacta sunt servanda is summarized in Article 1338 (1) Civil Code: all agreements made legally valid as law for those who make it. The word "all" contain a statement to the public that: allowed to make agreements that contain any and all parties agree. The agreement was binding as the Law for those who make it. As a source of law in exercising its rights and obligations of the parties in the national and international business.
2	The principle of pacta sunt servanda dealing with the consequences of the Agreement: for: <ol style="list-style-type: none"> <li>a. The essence of the contract is a set of promises that can be imposed implementation. The parties should implement the agreements that have been agreed and stipulated in the contract that does not meet the obligations agreed in the contract is the act of breaking a promise or breach of contract.</li> <li>b. Judge or a third party must respect the substance of a contract made by the parties as a law, they should not intervene on the substance of a contract made by the parties.</li> <li>c. This principle also are universal, every legal system in the world to respect this principle.</li> </ol>

Public Contract Law (General Contract Law) of the Civil Code, which is also one of the base and source of law for a contract, providing rules, among others, which is the General Contract Law. This means that many provisions in the Third Book Code of Civil law set in general, such contracts: purchase, lease, exchange. In case of an international sale and purchase of Indonesian law, the general provisions in Book Three Code of Civil law also be applied, because national law is the main source of law in international contract law. International contracts are contracts existing national foreign element means that the contract is subject to one of the national legal system. Code of Civil law of principles or principles of a contract, namely:

- a. About General Provisions;
- b. About Engagement to give something;
- c. About Engagement to do or not do something;
- d. About Substitution costs, damages and interest;
- e. About Engagement conditional;
- f. About Engagement with punctuality;
- g. About Engagement arbitrary;
- h. About Engagement joint liability;
- i. About Engagement can or can not be divided;
- j. About Engagement with the threat of punishment;
- k. About Engagement born of the agreement;
- l. About Engagement born of law;
- m. On the abolition of Engagement.

Overall these provisions exist which may be waived by the parties, and others can not be ruled out. These provisions as well as any other provision of different or mutually Code of Civil law vary from one country to another. It is therefore natural that the contract entered into between individuals of different countries, each of which are expected to understand the laws that generally affect the contract, even if the contract has a freedom for both parties to enable it. This fact again proves the difficulty of freedom of contract are fully maintained.

#### Special Contract Law (Specific Contract Law)

In addition to the general provisions of the contract contained in Code of Civil law then Code of Civil law also regulates specific provisions relating to certain contracts. Against the purchase agreement or international business, if applicable Indonesian law, it applies the provisions of the purchase agreement. Obtained in Code of Civil law. Provisions regarding the buying and selling [3] in this Code of Civil law. Code of Civil law in Article 1457 to Article 1540 Code of Civil law, which in principle regulate [4]:

- a. General Provisions;
- b. Seller's obligations;
- c. Buyer obligations;
- d. Right to Buy Back; and
- e. Special Provisions Concerning the Sale and Purchase Receivables and Rights of Other Intangible.

This provision will gain alignment with the laws of certain countries which are often different from the rule of law in Indonesia. For that a multilateral agreement will be a lot of coloring.

#### Habits In International Trade

In the law taught that the habit may be one source of law. Likewise, in business or trade habit. So what is the name of trade usage or custom has been one source of commercial law and is one of the guidelines in interpreting business contracts including international trade law. For example if there is a purchase order letterheads by the buyer of the printing, so if that is sent then only amounted to 960 only, it does not mean the seller or the printer has broken a promise. Therefore, it has become a habit in a business that has been widely accepted in the kind of business practices that against such reservations, lack or excess of not more than 5% can be tolerated. Unless the buyer has informed that the accuracy of the number became essential factors, such as buyers will pass on to exactly 1000, then in such a case, it is often interpreted to mean that the trade usage are not binding contracts concerned. That is, if less than 1000 pieces of the seller must add to it.

#### Jurisprudence

Sometimes what is found in everyday business practice was later confirmed in a jurisprudence, which is decided by the court then the decision is still gaining strength. Indeed, in the Indonesian legal system, as well as in countries with other Continental European legal systems, that the strength of jurisprudence is not as strong in the countries that embrace Anglo-Saxon legal system, with the theory of precedent such jurisprudence in countries with the Continental European legal system remained the legal basis, especially on matters that have not been regulated by law, or which require interpretations against a law. In the field of international business, the role of jurisprudence as a source of law are much less pronounced since many cases go until terminated by a court or sentenced by the non courts, such as arbitration. Such a decision was not open to the public, so it is not known by people. Therefore it is not used as a source of law jurisprudence.

For Indonesia and the countries adherents of other civil-law jurisprudence called jurisprudence persuasive, being in England and adherents of common-law is an absolute jurisprudence. Therefore jurisprudence rarely plays a role in the international trade practice.

#### Rule of International Law

Many are also the rules of private international law is used against an international sales contract. For, as other transactions involving parties from different countries, it is likely to arise a conflict between the laws in one country with laws in other countries of course are great. Example: which law should apply when there is a dispute if the contract does not expressly specified. For the law should apply, in international law in the field of business has developed several theories. But the theory is dominant and has been widely accepted is what is known as The Most Characteristic Connection Rule. According to this theory, the applicable law is the law of the parties who have a very characteristic achievement. In the field of international trading, then the law of the seller shall control because it contains most of these characteristics. Logically obvious that the seller faces many buyers so there must be provisions which are more common, if not, it will be many claims of certain buyers.

## International Convention

International Conventions are international agreements that have been, are or will be ratified by many countries in the world. Of course, the provisions contained in international conventions that also apply to the international purchase and sale agreement. Only the country of origin of the two parties are participating in conventions and certain conventions ratified it so that it becomes part of the law nasionalnya. Konvensi international conventions that specifically regulates the international trade in them are: United Nations Convention on Contracts for the International Sale of Goods.

Convention providing uniform rules on international trade are the result of the creation of the United Nations Commission on Trade Law (UNCITRAL) on the United Nations, which was later adopted by the Diplomatic Conference dated 11 April 1980.

Even though so, the actual preparation of the uniform law on international trade has been conducted since 1930 at the International Law Institute for the Unification of Private Law (UNIDROIT) in Rome. Broadly speaking, this convention contains things: Scope of Application and General Provisions;

- 1) Formation of Contract;
- 2) Sale of Goods;
- 3) Final Provisions.

Convention on the Limitation Period in the International Sale of Goods (New York, 1974)

The Convention also born from the labor of the UNCITRAL of United Nations [5], which was subsequently accepted by the General Assembly in New York on June 14, 1974. Later this convention amended in 1980, so that it becomes more aplikable. This Convention contains a uniformity of provisions on daluwarsanya a lawsuit related to buying and selling. Which is expected to solve the problem about that between one country and another, containing:

- 1) Scope of Application;
- 2) Duration and entry into force Period expired;
- 3) stop and Extension Period expired;
- 4) The total time for an expired;
- 5) the legal consequences of a lapse period expired;
- 6) other provisions and provisions cover.

The provisions enacted by the particular State

Other than provided under the provisions as mentioned above, there are more provisions in force and should be considered by those who will perform and be involved in an international trade transaction, for example: export-import, Letter of Credit, Insurance, Bill of Lading (bill of lading), Bill of Exchange (warsel), Customs and Taxation. In Principles of Contract Law:

### a. The principle of pacta sunt servanda

Based on these basic principles or rules, the perpetrators should implement the agreements that have been agreed and stipulated in the contract. This principle also are universal, every legal system in the world to respect this principle [6].

This principle relates to the result of the Agreement. The principle of pacta sunt servanda is also called the principle of legal certainty, this principle relates to the result of the Agreement. This principle of pacta sunt servanda, is the principle that a judge or a third party must respect the

substance of a contract made by the parties, as where appropriate, a law, they should not intervene on the substance of a contract made by the parties. The principle of pacta sunt servanda is summarized in Article 1338 (1) Civil Code: all agreements made legally valid as law for those who make it. The word "all" contains a declaration to the public that: we are allowed to make agreements in the form and containing any agreement that binds them and makes it such a Law.

The principle of pacta sunt servanda was originally known in Church law in the Code of Canon Law states that: the occurrence of an agreement if there is agreement by both parties and confirmed by oath. This implies that every agreement that is held by both parties is an act that is sacred and associated with religious elements. But in its development principle of pacta sunt servanda is given meaning pactum which means agree not need to be confirmed by oath and other formalities action.

Blacks Law Dictionary defines this principle as follows:

"Agreement must be kept". The rule that agreements and stipulations, esp. Reviews those contained in treaties must be observed [7]

### b. Principles of Good Faith (Goodwill)

This principle must be deemed to exist, at the time of the negotiation, execution of the contract until the settlement of disputes. This principle is important because with only the presence of this principle of trust that is needed in the business in order that the contract can be realized. Without the good faith of the parties to the contract can be made extremely difficult. Even if the contract has been signed, the implementation of the contract must be hard to run properly if this principle does not exist. In the contract, sometimes the parties expressly include the main principles of this rule. For example, in the contract the parties requires the necessity of good faith in resolving the dispute. However, this principle implies among different legal systems. Insight and understanding of good faith look different, especially between Continental Legal System and Common Law. According Subekti, the essence of the (principle) is one of the most important joints in the Law of Treaties [8].

According Sudargo Gautama, International Contract Law is none other than the existing national contract law foreign element, then these principles are relevant to the Contract Law. Good faith looks different, especially between Continental Legal System and the Common Law:

#### 1) Principle of Good Faith in Continental Legal System.

In the Continental Legal System, the approach to this principle is based on the philosophy of contracts that focus or concentrate on the relationship of the parties [9]. This relationship entails the obligation of good faith not only when the contract is signed, but also before the contract is closed. For example, the draft Civil Code Belgium, the country requires all contracts undertaken in good faith and interpretation (contractual) must be accompanied by the habit [10].

#### 2) Principles of Good Faith in Common Law System.

Particularly the UK, do not know the process of negotiations, the parties are bound by the principle of good faith. According to English law, the entry of the parties into negotiations does not necessarily bring forth the obligation of

good faith. According to English law, as long as the contract has not been signed, the parties are not bound to one another and do not have any obligation to the other party to the contract signed.

Like the law in the United States (US) are also of the same opinion, that good faith only after the contract is signed. In the Common Law System, the meaning of good faith is none other than "honesty" in behavior or honesty in trade transactions, including the honesty in fact and respect for the standards of fair trade and honest trade transactions.

### 3) Principles of Good Faith in International Agreements.

Recognition and obligation to implement the principle of good faith recognized in the principles of commercial contracts in countries that want to implement. According to UNIDROIT (The International Institute for the Unification of Private Law). UNIDROIT principles of Article 1.7 states:

- a) Each party must act in accordance with Good Faith and fair dealing in international trade
- b) The parties may not exclude or limit duty.

The norms that have been expressed in the abstract within the provisions of the article, then restated in the form of an explanation description, accompanied by examples, therefore called the restatement. According to the restatement of the above clause 3 (three) elements of the principle of good faith and an honest deal, namely:

- 1) The good faith and honest dealings as the basic principle underlying the contract;
- 2) The principle of good faith and honest dealings in UPICCS (UNIDROIT Principles of International Commercial Contracts) emphasized on the international trade practice;
- 3) The principle of good faith and honest dealings coercive.

From this article it can be seen the aim is to encourage the implementation of the principles of good faith (good faith) and fairness (fair dealing) in any commercial transaction that is international. Manifestations efforts to encourage harmonization of the laws appears when in the contract or national law can not be found necessary rules or have been a legal vacuum (gaps), the principles of UNIDROIT (The International Institute for the Unification of Private Law) can be used as a reference.

The United Nations on Contracts for the International Sale of Goods (CISG) applies to the contract of sale of goods which it chose the places of business in different countries. The scope of sale of goods restricted for commercial purposes and not personal goals or interests of the government. While the principles of UNIDROIT is a general principle of international commercial contracts that can be implemented into national law, or used by the makers of the contract to regulate commercial transactions as a legal option.

While business transactions as well as the current economic problems are transnational, accelerated by technology, so that new problems arise. UNIDROIT Principles is the principle of the law governing the rights and obligations of the parties at the time they apply the principle of freedom, if unregulated could endanger the weak party. Similarly, although it was realized that the principle of freedom of contract is flexible, that principle can be used to suppress the weaker side. To apply the balance principle, the Court or Arbitration should be able to critically look at the freedom of contract with the principles of UNIDROIT [11].

UNIDROIT Principles provide solutions to problems that arise when it is evident that it is impossible to use legal sources relevant to the applicable law in a country. Therefore UNIDROIT principles are used as a source of law referenced in interpreting the provisions of the contract were not clear. If the rule is not found in the applicable law (governing law) then additional principles because principles are drawn from a uniform customs and practices internationally. Most of the UNIDROIT principles counterweight set of rules intended for use throughout the world without regard to the legal traditions of political and economic conditions. Formal terms, this principle is to avoid the use of the terminology used in certain legal systems. In addition to this principle refers to the CISG so that in terms of substance UNIDROIT principles are flexible.

The same obligations are also within the United Nations on Contracts for the International Sale of Goods (CISG). Article 7 (1) CISG states as follows: (1) In the interpretation of Convention, regard is to be had to its international character and to the need to promote uniformity in its application and Observance of good faith in international trade. (In interpreting this Convention, attention should be directed to its international nature and the need to promote uniformity in its use and observations of good faith in international trade).

### c. Principle of Reciprocity (Reciprocal)

This principle provides that the parties to the contract shall exercise the rights and obligations of each on a reciprocal basis. According to this principle, the implementation of the contract must give a "profit" of reciprocity. One party should not be solely performing feats that are not balanced. In principle, where there is the right of a party, there is the obligation of the parties, and vice versa. Compared with the principle of *exceptio non adimpleti contractus* (principle of reciprocity).

According to Mariam Darus Badruzaman, call Principles of Balance. Their achievements reciprocity (reciprocity or often also called the reciprocal) This arises because of the mutual agreement. This principle among others affirmed by Chief Justice Lord Devlin, English Common Law as follows: "It is of the essence of every contract that there should be mutuality a contract is an exchange of promises for another ... a contract can consist of an exchange of promises on one subject. eg, payment against delivery; the if the seller does not delivery on the due date, the buyer may release himself from his obligation to pay [12].

Reciprocal nature or reciprocity is the most fundamental element of engagement which is born of the agreement and also can be said is the core not only of the Law of Treaties, but also of the whole law, included therein to Civil Law and Public Law. Presumably it can be said that the principle of reciprocity (reciprocity) is a universal phenomenon that can be encountered in all countries in every culture and in every level of human interaction [13].

Harmonisation of Contract Law of the facts mentioned above, a basic understanding of the Contract Law, namely:

Necessary understanding of the Law of Contract (Agreement) on a system of law of the parties. Example: Indonesian Law. An understanding of the national law (Indonesia) is relevant because national law is one of the main sources of law chosen by the parties to govern the contract.

Terms used in the choice of law, governing law, or law that can be used in the contract (The Law applicable to the contract). Sources of international trade law is the main source and foremost, as an agreement or contract is the law for those who make it. It is therefore very essential agreement or contract, the contract serves as a source of law is necessary and they must first make a reference important in carrying out their rights and obligations in international trade. The essence of the contract is a set of promises that can be forced to implement. In Contract Law we know the respect and recognition of the principle of consensus and the freedom of contract of the parties submitted to the parties and the law respecting an agreement is stipulated in the agreement. Although freedom of the parties is essential, but that freedom had its limits. He is subject to various restrictions that surrounded. First, restrictions on these freedoms must not conflict with the law, and in particular tariff to public order, morality and decency. Second, the status of the contract itself, the contract in international trade is nothing but a national contract that no foreign element [14]. This means that most contracts are not subject to and limited by national law (a particular country). That law is the regulations that are forcing, which determine human behavior in society, which is made by the official bodies of the authorities, a violation of the regulations which had resulted in action being taken by certain legal [15]. Thirdly, the restriction is an agreement binding on the parties or the trading habits that were previously done by the parties concerned. Power bind previous agreements though not in writing, but binding.

Necessary understanding of International Law (Private International Law Indonesia). Fact or illustration above shows the existence of two systems of law governing the personal status of the parties (in the case illustrated above, shows are Indonesian law and the laws of Singapore). In this situation there is a possibility of a legal conflict between the Indonesian law and the laws of Singapore. To determine which law is applied, then the role of Private International Law and Singapore that will be used to determine the law that will apply to the International Contract Law

Necessary understanding of the principles or rules of customary international law applicable in international contracts. Such principles could be written or unwritten. This principle provides that the parties to the contract shall exercise the rights and obligations of each reciprocally or Reciprocity Principle (Reciprocal). In principle, where there is the right of a party, there is the obligation of the parties, and vice versa. According to Mariam Darius Badruzaman, this is called the principle of balance that requires both sides to meet and implement the treaty. The creditor has the power to settle the achievements through the wealth of debtors, but also creditors bear the burden to implement the agreement in good faith. Can be seen here that the creditor strong position offset by its obligation to observe in good faith, so that the position of creditors and debtors balanced.

In international contracts, especially concerning large funds and associated with the development of an infrastructure, coercion clause include earthquakes, demonstrations, war. Charge of the events that belong to the coercion, such as natural disasters such as tsunamis flooding or natural disasters, has been generally accepted. Exposure recognizes the principle of Contract Law in various countries. But the

equation is just touching the substance is very common. The substance of any rule of national law, of course, have their own rules. Such a situation is not conducive to trade, there are different rules would only hinder the implementation of international trade transactions that require speed and certainty. For example, international trade practice very wills are legal harmonization in the field of transportation, marine, land, and air. Traders recognize, in the absence of harmonization between the laws in both countries on this field of law, trade transactions difficult to run smoothly and surely. In addition, national laws on principle only apply within the territory of a country, namely in the areas of national law was enacted. The law, the National Contract Law, in principle can not be applied outside the territory of a country. By their very nature are limited to the territory of a country or territory, Contract Law is not effective to regulate transactions are cross border or transnational.

Harmonization, according to Hannu Honka was uniform rules or substantive principles of contract law. According to Grace Xavier, reveals the reality of contract law in each country with his trademark respectively. For example, India and Malaysia have their own contract law. While English was not thinking about contract law in particular.

Therefore, efforts to harmonize the substantive rules is needed. Uniforms herein has several meanings:

- a. Uniform means the rules and principles of international contract law is at least equal or nearly equal ( 'Similar or almost Similar rules').
- b. Uniform means the application of the rules of international contract law does not lead to different results [16] .

The main aim of harmonization of law, is seeking uniformity or common ground of principles that are fundamental of the various legal systems (which would be harmonized).

The final goal of the International Business Contract Law in fact is the purpose of the existence of business law itself, revealed some field goals Contract Law International business is very positive, that the welfare of the member states and its citizens. To achieve positive goals should be aware of and understanding the rules of trade law itself.

Legal Resources Agreement (Contract) International

Meaning or source said Contract Law this is where we can find the law governing international contracts. This understanding is referred to as a source of formal law. These sources can be classified in the form of law, as follows:

- a. National law (including laws and regulations of a country, either directly or indirectly related to the contract);
- b. Contract Documents;
- c. Habits in the field of international trade related to the contract;
- d. The principles of Common Law;
- e. Court ruling;
- f. Doctrine; and
- g. International Agreement (the contract).

The description is arranged according to the degree of binding force, but the sequence is not absolute. For example, it is generally acknowledged that the national law is the main source of law. According Sudargo Gautama, International Contract Law is the law (contract) existing national foreign element [17]. However, in certain matters of national law may not set a specific shape or object, which becomes the

substance of the contract. National law in the form of legislation, for example a bit static, while the development of the dynamic nature of business transactions and fast. So that the handle is a reference into other sources of law such as the trading habits, court decisions, doctrine. Example: m Contract Documents are the primary source of law for the parties. Contract documents are drawn up in writing the agreement of the parties. Contract Document is a document statute for the parties. Other legal sources are the International Treaty, could be classed as the most important source of law after the national law and the contract documents. Nations of the world community to use international treaty instrument as a means of creating a new International Contract Law, harmonizing the law and customary law crystallize into formal shapes.

#### IV. CONCLUSIONS

1. The principle of pacta sunt servanda is called the principle of legal certainty ., The principle of pacta sunt servanda is summarized in Article 1338 (1) Civil Code: all agreements made legally valid as law for those who make it. The word "all" contain a statement to the public that: allowed to make agreements that contain any and all parties agree. The agreement was binding as the Law for those who make it. As a source of law in exercising its rights and obligations of the parties in international business.
2. The principle of pacta sunt servanda dealing with the consequences of the Agreement: for
  - a. The essence of the contract is a set of promises that can be forced to implement. The parties should implement the agreements that have been agreed and stipulated in the contract and does not carry out the obligations agreed in the contract is the act of breaking a promise or breach of contract.
  - b. Judge or a third party must respect the substance of a contract made by the parties, as where appropriate, a law, they should not intervene on the substance of a contract made by the parties.
  - c. This principle also are universal, every legal system in the world to respect this principle.

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Cindawati: Conceptual in study, data collections, draft of manuscript, review of manuscript, interpretation of results

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## **JURIDICAL ANALYSIS OF LEUSER ECOSYSTEM AREA IN NANGGROE ACEH DARUSSALAM**

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### **ABSTRACT**

Abundant Natural Resources is a priceless gift. In some region, maximum utilization of the natural resources is a must, but often without considering many other aspects including the environmental impact. The indication of natural resources exploitation can be seen from the creation of many regulations by the Indonesian Supreme Court. One of the regulation is the Regulation of Nanggroe Aceh Darussalam (NAD) Governor No. 5 Year 2014 about KEL. This research describes on how to manage the Leuser Ecosystem Area (KEL) viewed from regional autonomy aspect especially in NAD. This research is also based on writers' dissertation that was done in 2005. This research uses normative law methods, uses primer, secondary and tertiary data sources by doing literature and descriptive-qualitative review. This paper describes the environmental law which is connected with other fields. The result shows that the NAD government need to review and to reconsider their policy and regulation related to KEL in accordance to the Ministry of Home Affairs Regulation No. 53 Year 2011 about the Establishment of Regional Legal Products. It is expected that the natural resources exploitation will no longer be oriented only towards economical profit. The natural resources should be used to develop prosperous society. Some real, precise and fast action must be done immediately whether by the Indonesia government and the NAD government regardless of egocentric ideology of each party to save KEL that are belongs to the World Heritage.

**Key words :** KEL, NAD, Law Management

### **INTRODUCTION**

Abundant Natural Resources is a gift that is invaluable to a region in the era of regional autonomy as it is today. Utilization as much as possible is a must area in order to increase local revenue in order to realize the people's welfare. Unfortunately, the use of many who do not heed the environmental problems caused by it. Ranging from the lack of community participation in oversight, lax obtaining permission to ease the issuance of local regulations that are not characterized by siding with the effort to save the environment. This is compounded by the vagueness of the rules governing so it looks overlapping regulation mainly relating to the rights and obligations of local government and central government. It is evident from the many local regulations juridical review by the Supreme Court. One is the Regulation of the Governor of Nanggroe Aceh Darussalam (NAD) No. 5 of 2014 regarding Procedure Area Utilization Cultivation In The Leuser Ecosystem The Territory NAD were sued by WALHI to the Supreme Court and Register Number 42P / HUM / 2014 MA. The existence of this regulation is considered to threaten the sustainability of the ecology that is in them because of this regulation opens the opportunity for converting forests into plantations region, agriculture and mining. Since 2006, the Government of Aceh has been granted the privilege of authority to regulate its own territory, including how to manage the abundant natural resources. Regional autonomy envisioned to be the welfare of the area considered not able to meet the philosophical foundation of the autonomous region itself. According to the Leuser International Foundation and Fauna Flora Indonesia, forest damage NAD average number each year, reaching 23,124,41 hectares (2006-2012). Forests in Subulussalam have destroyed about 3,946 hectares, Nagan Raya district 2,581,90 hectares, and Gayo Lues district covers 2,064 hectares (theglobejournal.com) In addition, survey results refer to a number of timber industry players in NAD by Transparency International Indonesia in 2013, the destruction of forests NAD 99 percent due to rampant illegal logging (info.jpik.or.id). Therefore, it is necessary, it

seems to know how exactly this Leuser Ecosystem Management from the aspect of local autonomy, especially in the area of NAD.

## **RESEARCH METHODOLOGY**

This study is a continuation of the Dissertation Writers written in 2005 by the Legal Study Title Leuser Ecosystem Management Research type used in this paper is a normative legal research using secondary data through primary materials, secondary materials and tertiary materials. Collection and analysis of data using qualitative methods and descriptive literature. Because of this writing is the writing of environmental law related to other disciplines will be used supporting sciences such as political science, ecology, social science and science culture for the results obtained to solve the existing problems.

## **LEUSER ECOSYSTEM AREA (KEL)**

Leuser Ecosystem Located in the two northernmost province of Sumatra (Aceh and North Sumatra), with an area of 2.6 million hectares of very rich biodiversity. Stretches of lowland in East and West until the Bukit Barisan mountain peak of Leuser Mountain. This area covers the area of Leuser Mountain National Park conservation, protection and cultivation area. Where 80% of its territory is located in NAD by Ministerial Decree 190 / Kpt-II / 2001 with an area of forests and other land uses ± 2,255,577 Ha. This area covers 13 districts in NAD (Aceh Barat, Nagan Raya, Aceh Barat Daya, South Aceh, Aceh Singkil, Subulussalam, Southeast Aceh, Gayo Lues, Aceh Tengah, Bener Meriah, Aceh Utara, Aceh Timur and Aceh Tamiang). (Wikipedia)

The dramatic topography makes this area ecosystems function as a life-support system of more than four million people living in the surrounding area. The Leuser Ecosystem is one of the most important conservation areas in the face of the earth. This ecosystem is where the greatest protection from the rain forest Malesian undisturbed in the world. Leuser is also a rain forest that has a variety of animals and are well known in the world of science, such as species of mammals, birds, reptiles, fish, invertebrates, plants and other organisms. Leuser also has the highest number of fauna in the region. This ecosystem is home to 105 species of mammals, 382 species of birds and at least 95 species of reptiles and amphibians (54% of the terrestrial fauna of Sumatra) (wikipedia). This forest is considered as the last place in Southeast Asia that has a size and quality that is sufficient to maintain the population of endangered species, including tigers, orangutans, rhinos, elephants, and leopards. With two mountains and a variety of habitats, Leuser has many ecological functions, which is one of the most important is to provide a constant water supply to the surrounding area and local climate regulation. Other functions include the prevention of erosion and floods, pest control, carbon sequestration (for setting the global climate), natural beauty and biodiversity are spectacular (for tourism), hydropower potential, germ plasma (horticulture), pollination of commercial crops is important, filtration airborne dust (leading to soil fertility). Although the Leuser ecosystem of significant value both locally and globally, are the main challenges faced relating to the conservation and sustainable utilization of this region. Many groups have an interest in the area - for wood, rattan, wildlife, agriculture, and agriculture. While most areas designated as protected forest ecosystems and conservation areas, there are also plantations, timber concessions, community forests and some of the outlying villages. The data captured through remote sensing methods, namely the interpretation of satellite imagery, the LANDSAT (USGS / NASA) show in early 2005, forest cover in the LE of 1.982 million hectares, and the end of 2009 have been deforested so that the breadth was reduced to 1.946 million hectares. (Greenjournalist.net)

## **JURIDICAL ANALYSIS OF KEL MANAGMENT**

For the first time, the term Ecosystem found in the Decree of the Minister of Forestry No. 227/1995 which gives the right to the management of KEL Indonesian Leuser Foundation (YLI) for seven years (<https://suerdirantau.wordpress.com>) covering national parks, protected forests and production forests that are managed according to the function of forest area. KEL management supervision carried out by the Chief of BTNGL and Forestry Regional Office (Regional Office has not liquidated at the time) and the Forest Service.

KEL definition found in Presidential Decree No. 33/1998, is areas that are naturally integrated by factors landscape, the distinctive characteristics of flora and fauna, habitat balance in favor of biodiversity-life balance, and other special factors to form a unique ecosystem known as the Leuser

Ecosystem. According to the Presidential Decree, KEL area of 1.79 million ha are managed in cooperation with the central government on the basis of the LIF Management Agreement between the Ministry of Forestry and the LIF. The partnership covers the protection and safeguarding, preservation, restoration of function areas, and sustainable use. Unfortunately, the cooperation agreement did not exist but activities continue at the interpretation that LIF is KEL manager.

After the boundaries of KEL, then release the Forestry Minister Decree No. 190/2001 which confirms the delineation of KEL in Aceh area of 2,255,577 ha. While KEL 394,294 acres in North Sumatra approved by decree of the Minister of Forestry No. 193/2002. The total area of KEL was changed to 2,639,871 ha. In the two mentioned it was widely SK TNGL is 602,582 ha and 226,903 ha in Aceh in North Sumatra. Though widely TNGL by the appointment of Minister of Forestry Decree No. 276 / Kpt-II / 1997 is 1,094,692 ha. There is a significant difference.

Despite conservation efforts including ecosystems, species, and genetic, but the legislation does not recognize Indonesia "Ecosystem" as a conservation area. The law divides the area into Area Wildlife and nature conservation (nature reserves and wildlife sanctuaries) and Conservation Areas (national parks, forest reserves, and hunting parks). The presence of the minister's decision and decree of KEL, does not necessarily make KEL as a conservation area. Thus, the permanent protection status refers to the status of forest areas that are in the ecosystem.

Normally, no more KEL a work area of the LIF as government partners in forest management, conservation non-administrative area. PAs are in KEL like TNGL and Singkil Swamp Wildlife Reserve is managed by the Center remained TNGL and NRCA as a technical unit within the KEL become regulated in Law No. 5/1990 Article 16 and 34.

#### **MANAGEMENT OF KEL BY THE GOVERNMENT OF ACEH**

The existence of the Helsinki agreement between the Indonesian government and GAM result Leuser area located in the province of Aceh be transferred entirely to the NAD by Article 150 of Law No. 11 of 2006, states:

(Indonesian) government is willing to give the government the authority to manage the NAD in the Leuser Ecosystem contained in NAD as well as protect, maintain, preserve, rehabilitate and utilize the area as best as possible.

It is then interpreted by the Government of NAD that BAL provides enormous authority to the Government of NAD in managing forests in Aceh including KEL until Pj. Aceh Governor issued gubernatorial No. 52 of 2006 which established the Leuser Ecosystem Management Agency (BPKEK). Regulation was published with the feel the rush so did not wait for the election of a new governor of Aceh, even without any consultation with the House TNGL mostly located at KEL NAD.

In exercising its authority in the management of KEL governor was then issued a gubernatorial No. 5 year 2014 on the Procedures and Requirements Utilization Cultivation Area in the Leuser Ecosystem in Aceh Province. However, this regulation has been a judicial review by the Supreme Court based on the demands of WALHI. With this decision, the Minister of Forestry Regulation Number Available: P.03 / Forestry-II / 2007, TNGL is currently manager of Technical Implementation Unit (UPT) of the Directorate General of Forest Protection and Nature Conservation (Directorate) of the Ministry of Forestry of the Center for National Parks of Leuser Mountain (BBTNGL) led by head of Central (echelon II) that are in the field.

NAD's own government still assumed that the Leuser Ecosystem which are in the region is still the authority in accordance with the mandate of Law No. 11 of 2006 that the Governor Regulation will be revised and passed back. Moreover, the Government of NAD itself has entered into agreements with third parties in a carbon trading agreement in the Leuser Ecosystem. This Agreement constitutes the investment agreement, License and Profit Sharing in the Leuser Ecosystem (Leuser Ecosystem Investment, Licensing and Benefit Sharing Agreement) between the Forest Landscape Development Limited (FLD) with Leuser Ecosystem Management Agency (BPKEK) and the Provincial Government of NAD. Under this agreement, FLD will conduct a number of activities of long-term investments of US \$ 300 million, called Project Leuser Ecosystem through a series of activities where FLD essentially will establish various business entities environmentally sound inside and outside of KEL, undertake activities to reduce deforestation and forest degradation (REDD) KEL, including rehabilitation, where FLD as an exclusive partner for carbon rights activities and other activities.

In addition to issuing *Pergub* No. 5 In 2014, the Government also issued Governor Regulation No. NAD 19 Year 2013 on Spatial Planning and Regional Plan in support of the authorities on the LE.

This regulation also sued WALHI to juridical review by the Supreme Court because the decree allegedly has violated several laws and regulations thereon especially Act No. 32 of 2004 on Regional Government and Law No. 11 of 2006 on Governing Aceh (LOGA) itself. In particular, in Article 149 states that:

- (1) The Government of Aceh and district / city government is obliged to manage the environment in an integrated manner with due regard to zoning, protecting natural resources, natural resources non-biological, artificial resources, conservation of natural resources and ecosystems, cultural heritage and diversity biodiversity with regard to the rights of indigenous peoples and for the greater welfare of the population.
- (2) The Government, Aceh Government and district / city government is obliged to protect, preserve, maintain, and preserve the National Parks and protected areas.
- (3) The Government of Aceh and district / city government is obliged to manage the protected areas to protect biodiversity and ecology.
- (4) The Government of Aceh and district / city governments are obliged to involve non-governmental organizations qualified in the management and protection of the environment.
- (5) Completion of environmental disputes can be reached through the courts or out of court.
- (6) Implementation of the provisions referred to in paragraph (1), paragraph (2), paragraph (3), (4) and (5) shall be conducted in accordance with the legislation.

Government NAD appraised passed a law that instead of saving KEL worsening situation there. The presence of the dualism of forestry management authority under Law No. 41, 1999 and forestry management authority under the Act No. 32 of 2004 on Regional Government coupled with the rights of indigenous peoples through the Court's decision No. 35 In 2012, leading to confusion about who is the most competent of the Leuser Ecosystem in NAD's. NAD government is considered very lax in granting mainly in terms of transfer of forest land to plantations, agriculture and mining. Referring to data from the Office Administrative Permission NAD Province, in 2008, 201 companies obtain the right to use land and plantation crops. Concessions covering 540,839,955 hectares or 9.42% of the total forests of Aceh. (Theglobejournal.com)

It is not surprising based on the record of WALHI Aceh, in 2014 there has been a wide range of ecological disaster around KEL, ranging from landslides in Gayo Lues Takengon, raging animal elephant in the residential area of Central Aceh, fires in Gayo Lues, until the land drought and smog in Aceh Singkil. This ecological disaster occur in areas that fit into KEL itself. Not to mention the cases of forest encroachment is often done illegally, as was the case in Gayo Lues.

## **CLOSING**

The environment is a unity with all things space, power, and living circumstances and attitudes. This is to be maintained the integrity of its harmony. This will affect the continuity of life and human well-being and other living organisms. Proven disregard for the importance of protecting the environment, in the end result in the emergence of social conflicts and environmental conflicts. It's like holding structure imbalance and indigenous people who live in the area of natural resources feel neglected.

Exploitation of Natural Resources is too forward profit from an economic standpoint. SDA should be used for development in order to achieve the welfare of society. In fact, the exploitation of mining and logging only benefit the elite. Environmental aspects that should be considered much ignored. The facts show that there are unbalance between the economy and the environment. Environmental issues are still not getting proper portion.

The area as a whole legal community who have autonomous authority to regulate and manage the area in accordance aspirations and interests of the people does not contradict the national legal order and the public interest. In order to provide more space to the region to organize and manage the lives of its citizens the Central Government in shaping the policy should pay attention to local wisdom and vice versa Regions Regions when shaping policy in the form of legislation or policies should also pay attention to the national interest. Thus creating a balance between national interests synergistic and still consider the condition, distinctiveness, and local wisdom in organize overall governance. There are challenges for the government of NAD as an autonomous region in the face of this problem. For certain, to the utilization of natural resources required equal and sustainable development planning

measurable. Not only the advantage of a moment of investors, slowly natural resources will be damaged and contaminated in the concession, will trigger climate change and land a never-ending conflict. For the Government of NAD must review and reconsider the policies and rules related to development in accordance with the Regulation of the Minister of the Interior 53 Year 2011 on the Establishment of the Regional Legal Products. The real action, precise and fast should be taken by the central government and the NAD itself regardless of egocentric in the respective parties solely to save KEL which is a World Heritage.

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# Does Total Quality Management As An Intervening Variable Have A Positive Effect On The Human Resources Quality

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**Abstract.** The research purpose is to examine the concept of Total Quality Management in the construction company. The effect has a positively impact the process of improving the human resources quality with a particular leadership style and organizational commitment. The concept of Total Quality Management assists the company to improve the goals, and to make changes continuously. The data obtained through the questionnaires distribute to the employees of the company. The results showed the implementation of Total Quality Management has a positive impact on the company. However, the effectiveness of Total Quality Management takes the role of the leadership style of management and the organizational commitment. The company is considering the implementation of Total Quality Management for employees to follow and execute the entire activity by the procedures. Management is expected to provide the attention and raise the communication in the disclosed to employees with the correct pattern. In conclusion, the Total Quality Management is the suitable choice for the company, due to continuously improve management systems that do not fit with the company culture. The concept of Total Quality Management is beneficial for the development of the company in the future.

Keywords: Total Quality Management, Leadership Style, Organizational Commitment, Human Resources Quality.

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## I. INTRODUCTION

Total Quality Management has received considerable attention from the managers and proven able to improve the performance of the company and improve the quality as a business strategy involving the each function and members of the organization. Total Quality Management is an approach to continue to improve the quality of life on every aspect of the business, a continuous improvement for each, groups of people and the entire organization [1]. TQM aims to maximize the competitiveness of the organization of the product, services, man, the process and the environment [2]. The implementation of Total Quality Management involves cultural change and have an impact on the quality of human resources [3]. Human resource is a system that aims to improve the performance of the company, develop and maximize the company (Huselid, 1995 [4]). Because of the human resources is a factor that is precious, then the company should be responsible for keeping the quality of the work and build the workforce that is willing to contribute optimally to achieve the goal of the company. Human resources management involving , designing and implementing a set of internal policy that is consistent and practices that ensure the companies capital and (collective knowledge the employees, skills and ability) to contribute to the achievement of the performance of the business organization.

Besides, the leadership also has a critical role in improving the performance of the organization. This mean is due to the pattern of effective leadership gave guidance to the efforts of the workers to achieve the goal of the organization. The conditions as described previously can occur on property and construction companies. The fierce competition requires that the company optimize potentially and the quality of human resources owned. Such as in PT “XYZ” this company is the property business that rely on human resources as a prime

mover in reach organization goals. Sometimes, in the execution of the employees is not in line with what is desired by the company. As an example, issues regarding working discipline. Needed leadership role and the commitment of the organization to addressing the issue. Thus the expected that role could improve the quality of human resources in this organization. An attempt to resolve the issue of the item can make applying the concept of Total Quality Management. The concept of TQM as a management system that places the quality on each function and a member of the company. Total Quality Management is not a tool that is ready to use in the field but a philosophy, a concept with a set of principles which guide is the basis for an organization that wants to make improvements and enhancements continuously. Based on the explanation the author proposes the title “Does Total Quality Management as an intervening variable have a positive effect on the human resources quality”.

### The role important of TQM

Total Quality Management is the culture of an organization committed to customer satisfaction through continuous improvement. This culture varies both from one country to another and between different industries but has certain essential principles which can be implemented to secure greater market share, increased profits and reduced costs [3]. Total Quality Management is a philosophy and a methodology which assist institutions to manage the business change caused by the new external pressures [5]. According to [6] Total Quality Management is the systematic management approach oriented to the organization, customers, and the market through a combination to create increased significantly in quality management productivity is between the fact-finding practical and problem solving, in order to create a significant improvement in the quality of productivity and other performance of the organization.

The rationale for the need for TQM is very simple, namely that the best way to be able to compete and superior in global competition is to produce the best quality, both on the human aspects, of goods or services. Total Quality Management to introduce changes to the system aim at the company done with the systematic and continuous improvement of the process, human aspects, product; to make the changes are often not easy, especially when regarding extensive changes; to overcome the impact of the changes; the company expected to provide as much information as possible about the changes and continually do so that positive impact and effective improvement occurs.

Total Quality Management is not only a program or a group of certain engineering but is "management approach" and "culture," which means a shift in the minds of corporate organization and operation [7]. Total Quality Management Implementation examined through seven building blocks of TQM: management leadership, employee involvement, responsibility for quality at the source, effective teamwork, and coordination, focus on the customer, benchmarking and continuous improvement [8].

### **The principles of Total Quality Management**

According to Hensler and Brunell cited by [9], there are four main principles in TQM namely

- 1) Customer satisfaction, the concept of the quality and the customer extended. The quality is no longer only means compliance with the specifications of certain specifications, but the quality determined the customer. The needs of the customer trying to be satisfied in all aspects include the price, security, and timeliness. The quality of that produced by a company with the value given to improve the quality of life of the customer.
- 2) Respect toward everyone. Every employee viewed as the individuals who have talents and creativity distinct and unique. Thus the employees are the organization resources most valuable. However, everyone in the organization is treated well and given the opportunity to be involved and participate in the team decision makers.
- 3) The management based on the fact, every decision should be based on data, not just on a feeling. The concept of the point: a). Priority Schema (prioritization) which is a concept that the improvement could not be made on all aspects at the same time considering the limitations of resources is. Therefore using data the management team and in the organization can focus its business on certain situations is vital; b). Variability the performance of the worker. Data statistic can give the description about and its variability that is part of the normal from each system organization. Thus the management can predict the result of each decision and actions.
- 4) Continuous improvement, each company need to complete the process of systematically in implementing ongoing improvements. The concept is happening here is if PDCA (plan-do-check-act) which consists of the steps of planning, implementation of the plan, examination results of the implementation of the plan and corrective action against the results obtained.

### **The Role Important of Human Resources**

Human resources are the design of formal systems in an organization to ensure the use of human talent effectively and efficiently to achieve the goal of the organization.. Human Resources as a strategy of design, implementation, and maintenance to manage man for optimal business performance including development policy and process to support the strategy. Human resource is a central factor in the form of any organization and purpose, the organization made based on the various vision for the benefit of humanity and in the implementation of its mission is managed and maintained by man. Human is a strategic factor in a shadow being illegal activities/organization.

### **The Quality of Work**

Quality means conformance to requirements. Quality must be defined in measurable and clearly stated terms to help the organization take action based on real targets, rather than on bunch, experience, or opinions." quality means "compliance with requirements. [10]. Quality is defined as everything that determines customer satisfaction and efforts to change the direction of continuous improvement that is known by the term [6].

Quality is a continuous process that can be broken anywhere in the system of supply and customer service. By letting every person know how their activities help fulfil customer's requirements, the organization can motivate their employees and suppliers to provide quality consistently [2].

The quality of the work is a human resource in the city for the entire organization; the organization as a whole pressed on the quality of human resources that come from above, senior executive human resources must be caring [11]. To be able to improve the quality of the work there are several ways that can be done by the company which is to provide training or training, providing incentives or bonuses and applying or implementing technology that can help improve the efficiency and effectiveness of work. That it is important to create an environment to enhance the quality of the work that is the responsibility and the importance of leadership to create the improvement of the quality of the environment, although each organization has different views on the standards of the quality of the work Employees, but primarily the effectiveness and efficiency of a common size that the core of the quality of the work is a result that can measure the effectiveness and efficiency of a work that is done by the human resources or other resources in order to achieve the goal or target [12].

### **Leadership Style**

The survival of an organization of course always associated with the activities of the people who are in the organization and operation of the system to support the business of the organization. As part of the leadership in every activity of the organization had a significant role, where the leadership becomes one of the determining factors in the direction and purpose of the organization. The leadership is the ability to influence a group to achieve a vision or goal [13].

According to [13], there are four kinds of leadership style that are as follows:

- a. Charismatic Leadership is the leadership style that triggered his followers to demonstrate the ability of the

- heroic or extraordinary when they observe the behavior of their leaders
- b. Transactional leadership that is the leadership style guide or motivates his followers to the specified target with clarifying role requirements and tasks.
  - c. Transformational leadership is the leadership style that inspires followers to beyond their personal interests and to be able to bring a profound impact and exceptional individual on the followers.
  - d. Visionary leadership is a leadership style that can create and articulate a realistic vision, credible and compelling about the future of the organization unit or the growing organization and improved.

### Organizational Commitment

Organizational Commitment is defined as a state in which an employee identifies with a particular organization and its goals and wishes to maintain membership in the organization [13]. [14] defined organizational commitment is the degree to which an employee identifies with the organization and wants to continue actively participating in it.

According to [15] setting explain that there are some elements of the commitment of the organization namely:

- a) Affective commitment,  
Individuals with the affective commitment have the high emotional closeness that closely against the organization. That means the individual will have the motivation and desire to contribute using the organization.
- b) Continuance commitment,  
With continuance commitment is high will survive in the organization, not because of the emotional reasons, but because of the existence of consciousness in the individual will be great loss experienced if left the organization. Concerning this, then the individual is not expected to have a strong desire to contribute to the organization. If the individual still survives in the organization, then on the next stage of the individual can feel despair and frustration that can cause poor performance.
- c) Normative commitment,  
Individuals with a high normative commitment that will remain in the organization because they feel it is an obligation or task. The feelings would motivate individuals to behave a good and doing the right action for the organization. But the existence of normative commitment is expected to have a positive relationship with the behavior of the work such as job performance, work attendance, and organizational citizenship.

Based on the literature review, the author proposed the hypotheses as follow:

H1: Leadership style has an effect on total quality management

H2: Organizational commitment has an effect on total quality management

H3: Leadership style has an effect on the human resources quality

H4: Organizational commitment has an effect on the human resources quality

H 5: Total quality management has an effect on the human resources quality.

H 6: Leadership style has an effect on the human resources quality mediated by Total quality management.

H7: Organizational commitment has an effect on the human resources quality imediated Total quality management

## II. METHODS

The research approach used in this research is a quantitative approach. The research variables consist of leadership style, organizational commitment as independent variables, TQM is an intervening variable and human resources quality as dependent variable. The population is employee which numbered 32 people. The sampling technique used is a sample of the census or sample saturated. It means that all members of the population are used as the sample when the number of small population or less than 50 people. The data primary obtained from field research of respondents using the questionnaire.

## III. RESULT AND DISCUSSION

### Characteristics respondents

On the table showed that the majority of respondents was male, or 94 percent of the total respondents. While the level of the age of the majority of respondents 26 - 30 years or 47 % of the total respondents. Meanwhile, from the level of education, most respondents have a high school level or 69 percent of the total respondents. From the working period the most respondents have worked >3 years or of 78 % of the total respondents.

TABLE 1  
CHARACTERISTICS RESPONDENTS

No	Characteristics	Frequent	Percentage (%)
<b>Gender</b>			
1	Male	30	94 %
2	Female	2	6 %
<b>Total</b>		<b>32</b>	<b>100 %</b>
<b>Age</b>			
1	< 25 year	7	22 %
2	26 - 30 year	15	47 %
3	31 – 40 year	6	19 %
4	>41 year	4	12 %
<b>Total</b>		<b>32</b>	<b>100 %</b>
<b>Education</b>			
1	Primary school	0	0%
2	Junior school	2	6%
3	High school	22	69%
4	Diploma	2	6%
5	Undergraduate	5	16%
6	Postgraduate	1	3%
<b>Total</b>		<b>32</b>	<b>100 %</b>
<b>Working Period</b>			
1	>1 year	2	6%
2	2-3 year	5	16%
3	>3 year	25	78%
<b>Total</b>		<b>32</b>	<b>100 %</b>

### The quality of data

#### Validity Test

Based on the table that the validity test results from 29 statement shown all variables can be declared qualify or validity when correlation (R) is not less than 0.3.

TABLE II  
VALIDITY TEST

Statement	Corrected Item-Total Correlation	Correlation (r)	Testing Result of Validity
Leadership style (X <sub>1</sub> )	0,438	0,30	Valid
X1.1	0,420	0,30	Valid
X1.2	0,510	0,30	Valid
X1.3	0,331	0,30	Valid
X1.4	0,507	0,30	Valid
X1.5	0,341	0,30	Valid
X1.6	0,507	0,30	Valid
X1.7	0,533	0,30	Valid
X1.8			
Organizational commitment (X <sub>2</sub> )	0,637	0,30	Valid
X2.1	0,601	0,30	Valid
X2.2	0,512	0,30	Valid
X2.3	0,360	0,30	Valid
X2.4	0,781	0,30	Valid
X2.5	0,711	0,30	Valid
X2.6	0,798	0,30	Valid
X2.7			
Total Quality Management (Y <sub>1</sub> )	0,611	0,30	Valid
Y1.1	0,605	0,30	Valid
Y1.2	0,582	0,30	Valid
Y1.3	0,547	0,30	Valid
Y1.4	0,518	0,30	Valid
Y1.5	0,484	0,30	Valid
Y1.6	0,584	0,30	Valid
Y1.7			
Human resources quality (Y <sub>2</sub> )	0,536	0,30	Valid
Y2.1	0,602	0,30	Valid
Y2.2	0,431	0,30	Valid
Y2.3	0,551	0,30	Valid
Y2.4	0,608	0,30	Valid
Y2.5	0,426	0,30	Valid
Y2.6	0,490	0,30	Valid
Y2.7			

### Reliability Test

The reliability test showed cronbach alpha > 0.60 (Ghozali, 2005). Based on the table shows that all variables have been qualify reliability which variable values > 0.60. The value of Cronbach's Alpha for leadership style (X<sub>1</sub>) of 0,735; organizational commitment (X<sub>2</sub>) 0,766; Total quality management (Y<sub>1</sub>) 0,763 and human resources quality (Y<sub>2</sub>) 0,732.

TABLE III  
RELIABILITY TEST

Variable	Cronbach's Alpha	Result Test
Leadership style	0,735	0,60
Organizational commitment	0,766	0,60
Total Quality Management	0,763	0,60
Human resources quality	0,732	0,60

### Normality test of data in the first substructure and the second substructure

In this research, the normality test used one sample test of Kolmogorov-Smirnov using significant 0.05. The normality test result from One-Sample Kolmogorov-Smirnov shown the data was normally distributed on the first substructure and the second substructure, The result is caused by the total value of the asymp.sig is greater than 0.05 namely 0,989.and 0.833

TABLE IV  
NORMALITY TEST OF DATA IN THE FIRST SUBSTRUCTURE AND THE SECOND SUBSTRUCTURE

	One-Sample Kolmogorov-Smirnov	
	Unstandardized Residual First Substructure	Unstandardized Residual Second Substructure
N	32	32
Kolmogorov-Smirnov Z	.446	.623
Asymp. Sig. (2-tailed)	.989	.833

a. Test distribution is Normal.

### Multicollinearity tests for the first substructure and the second substructure

Based on the results of the tests shown the Variance Inflation Factor value(VIF) is smaller than 10; leadership style (2,618 < 10), orgnisational commitment (2,618 < 10) while the value of tolerance for leadership style (0,382 > 0.10) and organizational commitment (0,382 > 0.10). The multicollinearity test result indicates each variable for the first substructure is free from multicollinearity. While the multicollinearity test result for the second substructure shown the Variance Inflation Factor value (VIF) is smaller than 10; leadership style (6,172 < 10), organizational commitment (2,972 < 10), the total quality management (6,673 < 10) while the value of Tolerance leadership style (0,162 > 0.10), organizational commitment (0,336 > 0.10) and total quality management (150 > 0,150). The result proved all variables in the second substructure is free from multicollinearity.

TABLE V  
MULTICOLLINEARITY TESTS FOR THE FIRST SUBSTRUCTURE AND THE SECOND SUBSTRUCTURE

Model	Coefficients <sup>a</sup>			
	Collinearity Statistics First Substructure		Collinearity Statistics Second Substructure	
	Tolerance	VIF	Tolerance	VIF
(Constant)				
Leadershipstyle	.382	2.618	.162	6.172
OrganizationalCommitment	.382	2.618	.336	2.972
Total Quality Management	-	-	.150	6.673

**Testing results for the first substructure and the second substructure**

TABLE VI  
PATH ANALYSIS THE FIRST SUBSTRUCTURE AND THE SECOND SUBSTRUCTURE

Model	Coefficients <sup>a</sup>			
	Unstandardized Coefficients The First Substructure Equation		Unstandardized Coefficients The Second Substructure Equation	
	B	Std. Error	B	Std. Error
1 (Constant)	-.973	2.164	2.246	2.200
Leadership Style	.706	.113	.028	.175
Organizational Commitment	.233	.118	-.078	.127
Total Quality Management	-	-	.940	.188

The first substructure regression equation model;  $Y_1 = -0,973 + 0,706 X_1 + 0,233 X_2 + e_1$

The second substructure regression equation model;  $Y_2 = 2,246 + 0,028 X_1 + -0,078 X_2 + 0,940 Y_1 + e_2$

**Coefficient determination for the first substructure and the second substructure**

TABLE VII  
COEFFICIENT DETERMINATION FOR THE FIRST SUBSTRUCTURE AND THE SECOND SUBSTRUCTURE

Model	Model Summary <sup>b</sup>	
	R Square First Substructure	R Square Second Substructure
1	.850	.847

Based on the test results from the first substructure shows the number of R Square (R2) is 0,850 or 85%. This value shows the greatest effect of leadership style (X1) and organizational commitment (X2) to the total quality management (Y1). Meanwhile 15 % (100% - 85%) is determined by the other factors. The test result for the second substructure shown the large numbers of R Square (R2) is 0,847 or 84.7 %. This value shows the greatness effect of leadership style (X1), organizational commitment (X2) and total quality management (Y1) to the human resources quality (Y2). Meanwhile 15.3% (100% - 84.7%) is determined by the other factors from the outside of these variables. Thus in this research, the total value of the coefficient determination obtained through the value of e (error term) on the first and second substructure equation as follows:

$e_1$  first substructure equation:  $e_1 = \sqrt{1 - R_1^2}$

$$e_1 = \sqrt{1 - 0,850}$$

$$e_1 = 0,38$$

$e_2$  second substructure equation:  $e_2 = \sqrt{1 - R_2^2}$

$$e_2 = \sqrt{1 - 0,847}$$

$$e_2 = 0,39$$

Thus the total value of the coefficient determination:

$$R^2 = 1 - (e_1^2 \times e_2^2)$$

$$R^2 = 1 - (0,144 \times 0,153)$$

$$R^2 = 0,977$$

The total R Square value of 0,977, it means that the human resources quality variables described leadership style (X1), the organizational commitment (X2) and total quality management (Y1) of 97,7 percentage while 2,3 percentage explained by the other factors.

TABLE VIII  
MODEL FIT THE FIRST SUBSTRUCTURE AND THE SECOND SUBSTRUCTURE

Model	ANOVA <sup>b</sup>							
	Df (1)	Df (2)	Mean Square (1)	Mean Square (2)	F (1)	F (2)	Sig.(1)	Sig.(2)
Regression	2	3	137.709	88.584	82.257	51.541	.000 <sup>a</sup>	.000 <sup>a</sup>
Residual	29	28	1.674	1.719				
Total	31	31						

The test results in the table with the level of trust 95% or (alpha = 0.05) shown the value of F table 4,17. This result shown F-count > F table or (82,257 > 4,17) with significant (0,000 < 0.05). Based on test result, the simultaneity of the leadership style and organizational have positive effect and significant on the total quality management.

The test results in the table with the level of trust 95% or (alpha = 0.05) shown the value of F table 3.33. This result shown F-count > F table or (51,541 > 3.33) with significant (0,000 < 0.05). Based on test result, the simultaneity of the leadership style and organizational commitment have a positive effect and significant on the human resources quality.

**The partial testing result for the first and the second substructure**

The partial testing result for the first substructure shown:

- Leadership style has a positive effect and significant on the total quality management, in which ( $t_{count} 6,275 > t_{table} 1,69726$ ) and significant (0,000 < 0,05)
- Organizational commitment has not a positive effect and significant on the total quality management, in which ( $t_{count} 1,982 > t_{table} 1,69726$ ) and significant (0,057 > 0,05)

The partial testing result for the second substructure shown:

- Leadership style has not a positive effect and significant on the human resources quality, in which ( $t_{count} 0,161 < t_{table} 1,69913$ ) and significant (0,873 > 0,05)
- Organizational commitment has not a positive effect and significant on the human resources quality, in which ( $t_{count} -0,613 < t_{table} 1,69913$ ) and significant (-0,545 > 0,05)
- Total quality management has a positive effect and significant on the human resources quality, in which ( $t_{count} 4,996 < t_{table} 1,69913$ ) and significant (0,000 > 0,05).

TABLE IX  
THE PARTIAL TESTING RESULT FOR THE FIRST AND THE SECOND SUBSTRUCTURE COEFFICIENTS<sup>A</sup>

Model	t (1)	Sig (1)	t (2)	Sig (2)
(Constant)	-.450	.656	1.021	.316
Leadership style			.161	.873
Organizational Commitment	1.982	.057	.613	.545
Total Quality Management			4.996	.000

**Direct Effect**

TABLE X  
DIRECT EFFECT

Relation	Direct Effect	Indirect Effect	Total Effect
X1 → Y1	0.706		
X2 → Y1	0.233		
X1 → Y2	0.028		
X2 → Y2	-0.078		
Y1 → Y2	0.940		
X1-Y1-Y2		(0,706 x 0,940)=0,664	
X2-Y1-Y2		0,233 x 0,940 =0,212	
X1-Y1-Y2			0,028 + (0,706 x 0,940) = 0,692
X2-Y1-Y2			-0,078 + (0,233 x 0,940) = -0,134

**Indirect Effect**

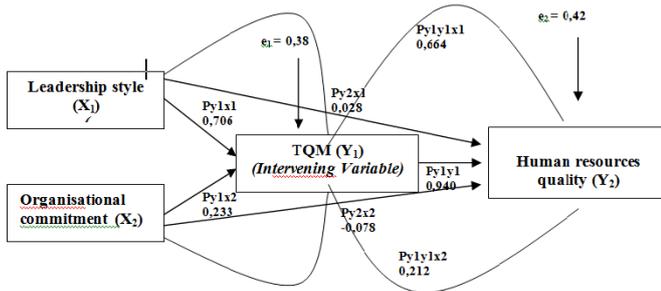
Leadership style (X1) has an effect to the human resources quality (Y2) mediated by Total quality management (Y1) is as follows:  $X_1-Y_1-Y_2 = (b_i \times b_4) = (0,706 \times 0,940) = 0,664$ . This result means that the indirect effect of leadership style to the human resources quality of 66,4%.

Organizational commitment (X 2) has an effect to the human resources quality (Y2) mediated by Total quality management (Y1) is as follows:  $X_2-Y_1-Y_2 = (b_i \times b_4) = (0,233 \times 0,940) = 0,212$ . This means that the indirect effect of organizational commitment to the human resources quality of 21,2 %

**Total Effect**

The total effect of leadership style (X1) to the human resources quality (Y2) mediated by total quality management (Y1) as follows:  $b_3 + (b_1 \times b_4) = 0,028 + (0,706 \times 0,940) = 0,692$ . This means that the total effect of leadership style (X1) to the human resources quality (Y2) mediated by total quality management (Y1) is 69,2%.

The total effect of organizational commitment (X2) to the human resources quality (Y2) mediated by total quality management (Y1) as follows:  $b_3 + (b_1 \times b_4) = -0,078 + (0,233 \times 0,940) = 0,134$ . The result means that total effect of the organizational commitment to the human resources quality mediated by total quality management is 13.4%.



The first substructure equation is  $Y_1 = -0,973 + 0,706 X_1 + 0,233 X_2 + e_1$

The second substructure equation is  $Y_2 = 2,246 + 0,028 X_1 + -0,078 X_2 + 0,940 Y_1 + e_2$

**Discussion**

H1: Leadership style has an effect on total quality management

Based on the results test, the coefficient value for the leadership style of 0.706 or 70,6%, where (t-count > t-table) or (6.275 > 1.70113) and sig value <  $\alpha$  (0.000 > 0.05), Therefore the results test shown H1 accepted that means the

effect of leadership style in the company has a positive and significant to the Total quality management. The result agreed that the role of the leadership style in continuous improvements and through create the quality of organization resources. Furthermore, with the Total Quality Management will support the company in managing the changes in the face of various external pressure as recorded by [5]. Besides, the implementation of Total Quality Management encourages leaders to influence the members of the organization for the achievement of the vision or purpose [13].

H2: Organizational commitment has an effect on total quality management

Based on the results test shown the coefficient value for the organizational commitment of 0.233 or, 23,3% where t count > t-table (1,982 > 1.70113) and the sig value >  $\alpha$  is (0.057 > 0.05). The results showed H2 is rejected, which means the organizational commitment has not direct effect and significant to the Total Quality Management. This case is opposite with noted [3] that the organizational commitment to continuous improvement through the TQM.

H3: Leadership style has an effect on the human resources quality

Based on the results test shown that coefficient value for the leadership style of 0.028% or 0.28 where t count < t-table (0.161 < 1.69913) and the sig value >  $\alpha$  is (0,873 > 0.05). The results showed H2 is rejected, which means leadership style has not direct and significant effect on the human resources quality. This result is the opposite of study by [13] that the role of the leader can influence of the quality of the workers increasing.

H4: Organizational commitment has an effect on the human resources quality

Based on the test results shown the coefficient value of organizational commitment of 0.078 or, 0.78% where t-count < t-table (-0.613 < 1.69913) and the sig value <  $\alpha$  is (-0.0545 < 0.05). The test results showed H4 is rejected, which means organizational commitment has not directly positive effect and significant on the human resources quality. This result is opposite from the organizational commitment was not supporting the human resources quality referring to [14] that organizational commitment will increase the willingness and the desire of employees to active participate in the organization

H 5: Total quality management has an effect on the human resources quality.

Based on the test results shown the coefficient value of total quality management of 0,940 or, 94.0% where t-count > t-table (4.996 > 1.69913) and the sig value <  $\alpha$  is (0.000 < 0.05). The results showed H5 is received. The result means that the total quality management has a positive effect and significant on the human resources quality.

H 6: Leadership style has an effect on the human resources quality mediated by total quality management.

Based on the test results shown that the path value that the indirect effect of leadership style on the human resources quality mediated by total quality management (0.706 x 0.940) = 0.664 or 66.4%. On the contrary, the previous hypothesis (H3) leadership style has not an effect directly on the human resources quality. Meanwhile, the total effect of leadership style to the human resources quality is: 0.028 + (0,706 x 0,940) = 0.692 or 69.2 percent. The test results proved that the

effect indirectly is smaller than the total effect of (69.2 percent > 66.4%) by a margin of 2.8%. The results of this research is proven that the role of TQM as intervening variable able to affecting between leadership style and the human resources quality.

H 7: Organizational commitment has an effect on the human resources quality mediated total quality management.

Based on the testing results shown the coefficient path value has not directly effect of the organizational commitment on the human resources quality mediated by total quality management ( $0.233 \times 0.940 = 0.212$ ) or 21.2 %. Meanwhile, the direct effect of the organizational commitment is not able affecting to the human resources quality (H4). The total direct and indirect effect of the organizational commitment (X 2) to the human resources quality is ;  $-0,078 + (0.233 \times 0,940) = 0.134$  or 13.4%. The testing result proven the direct has not greater than the total effect (21,2% > 13.4%) with the difference is 7.8%. The testing result to determine the role of TQM as intervening variables able to affected the organizational commitment and the human resources quality. The implementation of total quality management can improve the human resources quality in organization. But the implementation needed the leadership style to support the organizational commitment continually. The results in line with the [1] explained that total quality management as an approach to improve the quality of life on the business aspects and to continuous improvement for each, groups of people and the entire organization.

#### IV. CONCLUSIONS

Leadership style has an important role in improving the human resources quality. The human resources quality can be enhanced if the concept of total quality management can be implemented. The organizational commitment able to affect the improvement of the human resources quality when the total quality management concept can be received by the organization as a performance system in continuous improvement.

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# Association Career Women Parenting With Social Personal Development to Child of 2-5 Years

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**Abstract.** Mother Role Active to child of social personal development is needed important. This phase, there is a critical development because of social attitude basic and social behavior is formed. The development Child can develop optimally if their parents give parenting that needs children's on based . This research purpose was to identify association career women parenting with social personal development to child of 2-5 years in 2013. Research design was correlation analytic by using cross sectional approach. Population of all career women who has child of 2-5 years and 32 child respondents were age of 2-5 years . to used total sampling. Research instrument for parenting was questionnaire and social personal development was DDST observation. Data analysis uses Spearman Rank. Research result on Based showed most 26 respondents (81,25%) had democratic parenting and more a part of child social personal development was 21 respondents (65,62%) that they had normal development. Spearman Rank test on Based got  $p = 0,001 < \alpha = 0,01$ ,  $r = 0,641$  that  $H_0$  was refused and  $H_1$  was accepted. Data analysis showed there was strong correlation between care pattern of career women with social personal development of 2-5 years old children. Parents must be active in giving parenting that appropriates with children's needs by giving guidance, support, attention, compassion and to use good lessuare together with children although their mothers are career women. So, child had normal development.

Keywords: parenting, Career Women, Social Personal Development to Child Of 2-5 Years

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## I. INTRODUCTION

Social development children are a process of change that takes place continuously towards maturity that requires communication with people who need their communication with the public (MOH, 2005). The social behavior associated with the ability to independently like to wear their own clothes, go to the toilet alone, socialize and interact with their environment.

The active role of a mother to the development of children is needed, especially when they are still under the age of five years (toddlers). A newborn child is absolutely dependent on the environment, so that it can survive and develop its basic capabilities. The active role of the mother in question is a direct attempt against children and other crucial role in creating a home environment as the first social environment experienced by children (Triaseka, 2007 in Marlina et al., 2015)

According in Kediri District Health Office in 2009, number of infants who experience irregularities or impaired growth and development that is not in accordance with the age of 352 (2.7%) of 14 697 (100%) infants (BKKBN, 2008). A research conducted Bio Medical Library in University of Minnesota of 2004, showed that

children of mothers who work outside the home for 30 hours or more a week experiencing developmental delays. As a study published in Biston Globe in July 2004, revealed that children whose mothers work before they are 9 months old, has the mental ability and verbal lower at age 3 than children whose mothers stay at home and take care of immediate children (Sugeng, 2008).

From results of a preliminary study conducted by researchers in Morangan Village Minggiran Papar District of Kediri in January 2016, based on observations DDST done in 8 children aged 2-5 years, it was found that five children (62.5%) was known to be able to establish good relationships with friends, being closed and always dependent on their parents. And 3 children (37.5%) had a friendly attitude, want to play with their friends and was not always depend to their parents.

Based interviews to five mothers of children being able to not establish good relationships with friends, being closed and always depends on the parents, it can be seen that personal development of socially less caused by mothers do not understand about period of their children's development. Mothers have less time to pay attention, providing proper education to their children.

Delays areas growth and development of children cause lack of attention, guidance and knowledge of psychological and psychosocial development of children in each age level to parents. Mother chance to witness growth process of children also be incomplete, the mother is consequently less attention to degree of independence of children like to learn counting, independent ability of children to socialize and interact with their environment or social behavior from something observing (fine and gross motor movement). Abandonment of child's personal development will have an adverse social, as a result the child will grow into a child covered and tend to be individuals who engage in negative behaviors such as smoking, drug abuse and violence by others (Triaseka, 2007). Parents should pay attention to every need by the development of children, including food, health, love, nutrition and stimulation, a sense of security that is consistent, as well as games that allow children to use their imagination. Parenting provided should be based on the needs of children, so as to give children the opportunity to show that he is the majority of people in the environment, so that the child can develop optimally. Attention, guidance and knowledge of parents of psychological and psychosocial development of children in the age level are also given for being able to influence the level of social skills of children.

Based on the above researchers interested in conducting research on Association career women parenting with social personal development to child of 2-5 years

in Morangan Integrated Health Pos Minggiran village Papar District of Kediri Year 2016"

## II. METHODS

This research design was Analytical koresional with cross sectional approach. The study was conducted in January-March 2016. The population was all working mothers who have children aged 2-5 years in Morangan Integrated Health Pos Minggiran village Papar District of Kediri. The sample total were used 32 respondents. This research samples were taken total sampling technique. Instruments used variable parenting working mothers using questionnaires have been designed while variable personal social development using DDST observation instrument.

Data Collection and Processing Researchers done respondents, which include general data questionnaire results include maternal age, final Education, job, number of children and ages of children recorded in recording sheet results, editing and coding, tabulation data.

## III. RESULT AND DISCUSSION

TABLE I  
DISTRIBUTION FREQUENCY CROSS TABULATION WORKING MOTHER PARENTING RELATIONSHIPS WITH SOCIAL PERSONAL DEVELOPMENT CHILDRENT 2-5 YEARS IN MORANGAN INTEGRATED HEALTH POS MINGGIRAN VILLAGE PAPAR DISTRICT OF KEDIRI 2016.

CAREER WOMEN PARENTING	SOCIAL PERSONAL DEVELOPMENT								Total	
	Normal		Suspect		Abnormal		Untestable			
	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%
Otoriter	0	0	1	100	0	0	0	0	1	100
Demokratis	21	80,8	4	15,4	0	0	1	3,8	26	100
Permisif	0	0	4	80	1	20	0	0	5	100
Jumlah	21	65,6	9	28,1	1	3,1	1	3,1	32	100

Based on table 1 showed respondent data Working Mother Parenting Relationships With Social Personal Development total was 32 respondents found most of parenting democratic states that personal social development normal was 21 respondents (80.8%), respondents with authoritarian parenting stated development personalized social suspect that was as many as one respondent (100%), while respondents of permissive parenting was development personal social suspect of 4 respondents (80%) and personal social development of abnormal was 1 respondent (20%).

Based on the research results Working Mom Parenting in Morangan Integrated Health Pos that most respondents stated foster democratic patterns as many as 26 respondents (81.25%), while a small portion of respondents as many as 1 respondents (3.12%) stated authoritarian upbringing.

Parenting mothers working is an important factor to development child, in addition to motivation to learn can be generated from an early age, by providing a conducive environment for learning, reward or punishment is reasonable is to foster the motivation is strong in development of children in later life , In the process of socialization with the environment children need peers were also very influential on a child's development. In addition to school, love and affection, the quality of interaction

between children of parents can affect the growth process of children (Soetjtiningsih, 2012).

According to Taufik (2007) there are several factors that affect parenting parents were age, culture, parental education, social environment, religious values espoused and personality. The increasing age the more the experience and knowledge that is already in the can, so it is more sensitive in providing upbringing according to their needs.

In addition to age factors that affect parenting that mothers work. Based on the research work of the mother most of which as many as 18 respondents (56.25%) expressed his work as a private and a small part as a civil servant as many as four respondents (12.50%).

Factors affecting the social development of children associated with the family is the family unit, attitudes and habits of parents, family socioeconomic status and mental health of parents (Syamsu Joseph 2007). Work affecting socio-economic status in the family. Low socio-economic status will cause psychological *tekanan* in the elderly, consequently they seem to be more harsh or permissive parenting. Not only that children who have poor economic conditions will have less confidence. They have less opportunity to develop social skills on various occasions and different environmental conditions (Taufik R. 2007).

Based on the opinion of researchers from the question that is given to the mother works in *posyandu Morangan* about parenting show democratic parenting. It is influenced by the ability of the mother and the mother's knowledge in meeting the needs of the development of children as well as concern about the problems experienced by the child. The results showed that not all respondents were given parenting democratic parenting, but there is also a permissive parenting and authoritarian. This is because the respondents are not informed about appropriate parenting thus less able to meet the developmental needs of their children. Not only is it the personality of parents can also allow affect parenting. Parents who have a closed personality tend to be less able to communicate with his son, consequently granted parenting also tend to be closed and harder as a result of parents do not understand her needs.

So parents should also actively seek knowledge about appropriate parenting in meeting the developmental needs of children. So if there are

abnormalities or irregularities in growth and development, parents / families can immediately take appropriate action for the development of their children.

### **1. The development of social personal children aged 2-5 years**

Based on the results of the study showed that most respondents personal development of normal social was 21 respondents (65.62%), while 9 respondents (28.12%) was suspect that one respondents (3.13%) , personal social development was Untestable and abnormal.

According to Hurlock (2005) Social personal development of children is a process of change that continues over time towards the maturity of the child who is a man who grew and developed that will live in the midst of society. Such conditions can be affected by various factors such as the age of the child, the order of the child, gender, the child's personality, genetic factors, environmental factors, psychosocial factors and family factors. The more the child's age increases, physical maturity and psychological conditions is also increasing. Children will be able to consider social processes, giving and receiving advice of others. So that children are able to carry out tasks according to age well.

Besides the age factor that influence the development of social personal, child sequence factors also have a major influence on the development of personal social development. Conditions maturity first child will be better than the second. This is because parents give more stimulus to the first child compared to the second child. The first child will be more portray the social model than the middle child or the youngest child, so the child will be more independent.

Personal development social development will be optimized if the environment in which development of the child support them to develop in various aspects. Family environment as the first environment to give effect to the various social aspects of personal development of children. The education process aimed at developing the child's personality is more common by the family. Social patterns and how to put themselves to the wider environment in compliance with the applicable norms directed by the family (Sunarto and Agung, 2008)

The results showed that not all child's normal development of social personal, but also a dubious

and abnormal development. This is possible due to internal factors are differences of race or ethnicity, family, gender, genetic, chromosomal abnormalities, prenatal factors, confinement and post-natal factors. Not only is it possible also for child nutrition is obtained, because the nutritious food plays an important role in the development of the child.

According to the researchers, based on the results of the study the majority of personal social development of children is influenced by age and the environment in which growth and development. Therefore, parents should pay attention, guidance and affection that fit the needs of their children so that children are more comfortable and can increase personal social development. Stimulation in children can also increase personal social development of children though the age of the child is still relatively young. When the personal development of children's social well encourage the parents to maintain as much as possible to provide the needs and appropriate stimulation. The more the mother needs appropriate, children can feel more comfortable and be able to improve its development. For personal development of children's social dubious and can not be reviewed more frequently recommend that meet the needs of the development of children. While abnormal development immediately brought to the medical personnel to determine the cause so it can be detected as early as possible.

## **2. Relationships Parenting Working Mothers Against Social Personal Development Children 2-5 years Morangan Integrated Health Pos Minggiran village Papar District of Kediri**

The results of calculations with the help of computer software by using the formula of Spearman Rank obtained  $\rho$  value = 0,001 is no relationship between maternal parenting social work with personal development of children aged 2-5 years. With Coefficient Correlation value that is equal to 0,641, which means when the parenting provided by the mother worked, the better the social personal interest in the development of children aged 2-5 years is getting better and vice versa if parenting is given less then personal social development of children aged 2-5 years getting less.

If views of the independent variable, majority of respondents have a democratic parenting style that is 26 respondents (81.25%). In the dependent variable, the majority of personal social

development of normal was 21 respondents (65.62%). Most of the respondents aged 20-35 years old with 21 respondents (65.62), ie the most recent education junior high school was 15 respondents (46.87%), employment levels as much as 18 respondents (56.25%) stated that his job as private sector workers, the majority number of children the respondent that 1 child with the number of respondents was 13 (40.62%). While based on the age of the child most of the respondents, 12 respondents (37.50%) said their children 4-5 years old.

Based on research results seen from the cross tabulation obtained most of which are 21 respondents (80.80%) parenting and personal development social democratic also normal. Was 4 respondents (15.40%) who use democratic parenting and personal development of its social obtained was suspect, the first respondent (3.8%) with democratic parenting and personal social development can not be assessed due to the child cries, so that researchers can not afford examines personal social development. As well as one of the respondents (20%) stated upbringing given permissive parenting with abnormal development of social personal. The factors that influence the development of social personal based research due to maternal age, number of children, age of children, child sequence, pattern of care provided as well as prenatal factors experienced by the mother during pregnancy. Prenatal factors that influence the development of social personal psychological child is the mother. Mothers during pregnancy tend hamilnya receives less pay less attention to their needs whether it needs appropriate parenting, affection, nutrition or stimulation. As a result, the child's needs are not met properly and not optimal child development. Nother factor affecting the development of children aged 2-5 years is the work and the number of children she had. From the results, a good mother economic status of personal social development was normal. This is due to the economic status of mothers who either psychological pressure lower than the low economic status of the mother. As a result, mothers tend to be harder in educating so that the children do not have the confidence to develop social skills on various occasions and different environmental conditions. While the mothers of children with a modicum be able to provide parenting, and pindidikan more attention to the optimal

development of children. This is because women are more focus and attention and education is not riven (debri, 2008). Based on research in addition to jobs and the number of children who influence the development of social personal, parenting factors also have a major influence on the development of personal social development. Parents who provide parenting according to their needs without curb and taking into account the children's freedom would be good children. Kids were able to adjust to the environment, have the courage to take the initiative and creative, so the development of the child is able to develop properly (Debri, 2008).

Parenting provided to children must be appropriate to the developmental needs of children. Appropriate parenting able to give children the opportunity that he is most of the people in the environment so that the child can develop optimally. Attention, guidance and knowledge of parents of psychological and psychosocial development of children in the age levels should also be provided because it can affect the child's level of social skills.

If it found any abnormality in the child's development of social personal, should be immediately traced the cause before deciding what to do. When the cause for the problem parenting is not in accordance with the needs of children, the parents should be able to provide appropriate parenting with her needs. Attention and stimulation also needs to be given so that optimal child development.

Therefore the upbringing of children should be done with love and without force so as to create a fun environment for children. Besides the mother should take the time and use the time as possible to children under supervision, attention and affection, as well as communicate so that mothers are able to understand the developmental needs of their children. Because the relationship between the provision of parenting in accordance with the needs of the development will be able to create optimal child development. As well as for health workers need to participate in the monitoring of personal social development of children as do the child health care and screening using DDST observation of each month at the Integrated Health Pos , kindergarten or early childhood.

1. Working mothers who have children aged 2-5 years in the village of Morangan Integrated Health Pos Minggiran Papar District of Kediri 2016 majority or 26 respondents (81.25%) using democratic parenting.
2. The majority, or 21 respondents (65.62%) children were aged 2-5 years in the village of Morangan Integrated Health Pos Minggiran Papar District of Kediri 2016 have a normal social personal growth.
3. There is a strong association between maternal parenting social work with personal development of children aged 2-5 years in the village of Morangan Integrated Health Pos Minggiran Papar District of Kediri 2016.

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#### IV. CONCLUSIONS

# Organizational Commitment, Leadership and Work Productivity As Predictors Of Job Satisfaction and Its Effect on Quality of Revenue Department in Batam

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**Abstract.** This research means to analyze: 1) the impact of organizational commitment, leadership, and the work productivity on the satisfaction level; 2) the impact of organizational commitment, leadership, and the work productivity on the service quality; 3) the impact of the satisfaction job level on the service quality at Revenue Department of Kota Batam. The sampling method that is used in this research is non probability sampling with judgemental techniques (purposive). Based on the total amount population which are eligible to be sampled is about 130 respondents. Examined from the problems which are researched, this research is causality research, which means to analyze the relationship and the impact (cause - effect) of two or more problems by doing hypothesis examination. This analysis research methods is performed by using The Structural Equation Model Method (SEM). The software which is used for this structural analysis is AMOS 20 and from Arbuckle and also used for descriptive analysis which is used SPSS 20. The result of this analysis shows that the good model is obtained after extensive modification for two times, that is - to correlate some indicator errors which have Index Modification (M.I) > 15,00 and not to engage the indicator which has loading factor ( $\lambda$ ) < 0,7000. The structural equation models modified otherwise good, because it has met one criteria of eight cut of value, that is criteria, Relative chi-square.

Keywords: Job Satisfaction, Leadership, Organizational commitment, Service Quality, Work Productivity

## I. INTRODUCTION

Reforming the governance system towards better is a collective responsibility of all elements of the nation. No exception for implementing the government apparatus which there are the implementation process and the responsibility to implement the mandate of the embrace. When reform era that brought the nation of Indonesia to enter the atmosphere of the new life that is full of hope for the occurrence of various corrective measures in restructuring the system of regional autonomy departed from the idea to ensure the efficiency, effectiveness, transparency, accountability and bureaucracy, and the values of democracy in practice the implementation of Regional government. Hope it is empowering local governments to be able to build the region based on the ability and will of its own area.

Law Number 22 Year 1999 on Regional Government that has been updated by Law No. 32 of 2004 and Law No. 25 of 1999 on Financial Balance between Central and Local Government which has been updated as well with Law No. 33 of 2004 is decentralized form of autonomy to regions which began effectively implemented in January 2001, the district and the city are autonomous. With the existence of Law, the government has given broad authority, real and accountable to local proportionally.

The authority is realized by setting, sharing and utilization of national resources and the financial balance of central and local. With the principles of democracy, participation, equity and justice as well as the potential and diversity carried out in the framework of the Unitary State Republic of Indonesia. The

conduct of the renewal of legislation whose zeal is deemed no longer relevant to the development of politics and government system in Indonesia, not only because the old regulation is seen to play down the existence of autonomous regions, but also does not match with the principles of democracy and democratization in the region.

The implementation of decentralization strategy of regional autonomy as a step taken by the government in the era of globalization with the dynamics of change so rapidly, both within the local (regional), national and international. This leads to the area to be able to organize the administration, development and service to the community. To support the implementation of regional autonomy in order to respond to changes, challenges and the progress of society's demands needed resources bureaucratic apparatus of quality and adequate sources of funding and support community participation continues to increase.

Therefore, essence of the Law No. 32 of 2004 and Law No. 33 of 2004 is to give more authority to the districts and municipalities to manage governance, development, public service and revenue sources of finance for local, decentralized autonomy granted the area will become a force for the city and district governments to manage, organize and conduct his own household, but at the same time be responsibilities and obligations of the regions with the consequence of increasing burden of financing the needs of the area which can be a challenge for the autonomous region. But on the other hand, regional autonomy is an opportunity for the district and the city to explore, manage and utilize resources / owned real potential for regional development interests extend to remote areas. Similarly, the autonomy, the district and the city have

the right to have such authority in the form of regional institutions, government policies and development and financial management. With the three authorities of district and city regions can take the initiative in accordance with the interests and needs in the area, both related to equipment, organization and financing.

One of the main elements in the implementation of regional autonomy is local independence through support financial capability sourced from local revenue district and the city, because local governments will not be able to perform its function effectively and efficiently without considerable cost to provide services and development. Finance is one of the basic criteria to determine the real capabilities in the area manage their own household. In addition, the local finance as one of the indicators used to assess the ability of the region to manage their own household. then to support the wheels of government, development and service to the community autonomy today require sufficient funding to support successful implementation.

Revenue sources of local revenue based on the Law of the Republic of Indonesia Number 33 of 2004 on Financial Balance between the Central Government and Local Government stated that (1) Revenues region from PAD, Balance Funds and other lawful income, (2) Financing sourced from the remainder of last year's budget, Acceptance Loan and Municipal Bonds and Revenue of Lending Return.

In connection with the efforts to seek and cultivate sources of local revenue, increasing acceptance of PAD can not be separated from the main tasks and functions of the Department of Revenue Batam. The role of organizations of Batam Revenue Department is not just pursuing the targets that have been set, but also must be able to adjust and anticipate the symptoms of an internal organization and external environment changes organizational shared.

The basic effect of measuring the effectiveness of the organization at Revenue Department of Batam today is still focused on the successful achievement of revenue targets and retributions, not on the ability to serve the public. Such measurements for non-profit organizations / institutions of government are less suitable because of their dual role is recipient institution as well as a public servant. Therefore for the institution of Revenue Department that can not reach the revenue target in a given period are not necessarily called fail. Required one measure the effectiveness of organizations considered relatively objective.

#### Formulation of the Problem

Underlying the description of the background of so formulation of the problem in this research are: 1) Is are organizational commitment as predictors on the level of job satisfaction in Revenue Department of Batam? (2) Is leadership as a predictor on the level of job satisfaction in Revenue Department of Batam? (3) Is work productivity are as a predictor on the level of job satisfaction in Revenue Department of Batam? (4) Is organizational commitment, leadership, work productivity together as predictors on the level of job satisfaction in Revenue Department of Batam? (5) Are organizational commitment as predictor of service quality in Revenue Department Batam? (6) Are leadership as predictor of service quality in Revenue Department Batam? (7) Are work productivity are as predictor of service quality in

Revenue Department Batam? (8) Are organizational commitment, leadership and productivity work together as predictors of service quality in Revenue Department Batam? (9) Does the level job satisfaction affect the quality of service in Revenue Department Batam?

#### Organizational Commitment

[1] defined organizational commitment as the power level of individual identification and attachment of individuals to an organization that has all three characteristics. First, have a strong belief and accept the values and objectives of the company; Second, a strong will to try or work hard for the organization; Third, the desire to remain a member of the organization. Organizational commitment in question is an understanding or appreciation of the organization's objectives. Entanglement means is feeling involved in a job or a feeling that the work is fun. Organizational commitment is a strong belief in and support of the values and goals to be achieved by the organization.

According to [2] stated that there are three components of organizational commitment, are:

- a. Effective commitment occurs when employees want to be part of the organization for their emotional attachment.
- b. Continuance commitment occurs when employees remain in an organization because it requires a salary and other benefits, or because the employees did not find any other job.
- c. Normative commitments arises from employee values. Employees survived to become members of the organization because there is awareness that is committed to the organization is the thing to do.

Strong organizational commitment to each employee in an organization can serve to bridge all existing problems. The existence of high organizational commitment to each of our employees, so state of the company will be well-organized, because the employee ownership of the company work. The opinions of experts can be concluded that in fact the intrinsic value that is owned by the employees also affects the level of commitment of the employee organization.

The commitment of the organization itself has been a lot of concern for practitioners and studied by scientists. Some researchers such as [3] focusing on organizational commitment because commitment of the organization has demonstrated itself as an important element related to the output of organizations such as absenteeism, turnover and laziness. The existence of high organizational commitment of, control that arises tend to be internal, meaning occurs through self-discipline, the responsibility of individuals between groups on the tasks in hand. [4] suggest that organizational commitment becomes a multidimensional variables that influence the development of organizational psychology, especially the relationship with the turn over.

#### Leadership

The definition of leadership implies that leadership involves the use of influence, and that all relations could involve leadership. The second element in this definition involves the importance of being an agent for change, able to influence the behavior and performance of subordinates. Last, this definition focuses on the achievement of objectives.

Effective leaders should focus on the goals of individuals, groups, and organizations.

The effectiveness of the leader is specifically measured by the achievement of one or some combination of these objectives. Individuals can view their leaders as effective or not, based on the satisfaction they get from the overall work experience. In fact, the receipt of the direction or request of the leader largely depends on the his expectation that an appropriate response can lead to the final outcome of interest.

The original formulation of leadership theory include three components: idealized influence (charisma), intellectual stimulation, and individualized attention (individualized consideration) [5]. A new revision of the theory of transformational leadership, adding transformational behavior of other so-called inspirational motivation [5]. Overall there are four dimensions in transformational leadership, are:

- a. Charisma (idealized influence / charisma). Charismatic leaders will be able to cultivate enthusiasm and loyalty among members of the organization, encouraging them to express their opinions and their views freely and be able to direct their attention to the vision to anticipate the situation and conditions in the future.
- b. Intellectual stimulation. Leaders who have the intellect to invite the members of the organization to think rationally and use the data and facts in solving various problems faced and in meeting their needs. The subordinates are also encouraged to think in their own way, meet challenges, and consider creative ways to develop themselves.
- c. Individual attention (individualized consideration). Leaders always give attention to the problems faced and the needs of the members of the organization and would help solve the problem and trying to meet those needs. The subordinates are treated differently but fair on the basis of attention one by one. Not only are their needs recognized and enhanced their perspective, but leaders also provide a means to achieve goals more effectively, and also given the challenging work to subordinates. With individualized attention, the tasks given to subordinates to provide learning opportunities.
- d. Inspirational motivation, often overlapping with the notion of charisma, depending on how much subordinate tried to identify themselves with the leader. Assign symbols and simplify the emotional appeal to raise awareness and understanding of common goals.

#### Work productivity

Employee productivity implies the ability of employees to be able to produce goods or services that is based on a mental attitude that today should be better than yesterday, tomorrow must be better than today. Thus working attitude will remain embedded in employees who have a high labor productivity. Assessment of employee productivity can be carved through the implementation of a relatively good job, work attitude, levels of skills and work discipline. And to measure employee productivity itself should include aspects of quantity and quality of work.

According [6], labor productivity is the ability to benefit from the facilities and infrastructure available to generate optimal work even if the maximum possible. Ability referred to in this definition are not only related to facilities and

infrastructure, but also relates to the use of time and human resources.

#### Job satisfaction

[7] have categorized theories of job satisfaction to the three main set, are: 1). Theory mismatch (discrepancy), 2) the theory of justice (equity theory), 3) Two Factor Theory. The following will be described in more detail regarding these three theories, are:

- a. The theory of discrepancy.

According to Locke (1996) satisfaction or dissatisfaction with aspects of the work depends on the difference (discrepancy) between what was considered to have been in getting to what is desired. The amount of the "desired" of the characteristics of employment is defined as the minimum amount required to meet the needs. A person will be satisfied if there is no difference between the desired conditions to actual conditions. Getting bigger in shortage and many important things desired, getting bigger in discontent too, if more number of factors work minimally acceptable and the excess benefit (for example: wages extra, working hours are longer) the person concerned will be the same satisfied when there is a difference from the desired amount.

[8] defines satisfaction as the difference of the amount of things that "there should be" with many "what is". This conception is basically the same as the model of Locke (1996), but "what should be" according to Locke means more emphasis on equitable considerations and shortage on the needs of the many factors because determinants of work preferred.

Conclusion a discrepancy theory emphasizes the difference between the desired condition with the condition of the actual (reality). If there is much difference between wants and shortcomings are to be met by the fact so people become dissatisfied. But if the conditions desired and disadvantages that are to be met was in accordance with the reality of this research, will be satisfied.

- b. The theory of justice (Equity Theory).

The theory of justice detailed the conditions that underlying a work would consider fair and reasonable incentives and profit in its work. This theory has been developed by [9] and this theory is a variation of the theory of social comparison processes. The main component of this theory is input, the result, the comparative and justice and injustice. Input is something of value to someone who is considered to support its work, such as: education, experience, skills, the amount of effort devoted, hours of work, and personal equipment or supplies used for work.

[9] states that the result is something that is considered valuable by an employee who obtained jobs, such as: wages / salaries, fringe benefits, a symbol of status, recognition, and the opportunity to succeed or self-expression. According to this theory, a fair judge the outcome by comparing the results, are: the ratio of inputs to outcomes: input ratio of a person / number of the comparison. Any person may appeal from the people in the organization as well as other organizations and even by himself with the works of his predecessors.

- c. Two Factor Theory.

This theory was introduced by Frederick Herzberg in 1959, based on research conducted on 250 respondents in nine

companies in Pittsburg. In research, Herzberg (1996) wanted to examine the relationship between satisfaction and productivity. Two-factor The theory states that job satisfaction is qualitatively different to dissatisfaction with work.

According to this theory, the job characteristics can be grouped into two categories, one is called 'dissatisfier "or" hygiene factors "and the other is called' satisfiers" or "motivators". Hygiene factors include such things as: salaries / wages, supervision, interpersonal relations, working conditions and status. A certain number of hygiene factors are necessary to meet basic biological drive as well as the needs of someone such as: security needs and groups.

If these needs are not met, a person is not satisfied. However, if the amount of hygiene factors are sufficient to meet these needs, a person will not be disappointed again but not necessarily satisfied. The investigation of Herzberg (1996) proved that the answer to those who feel a good job, quite different from those who feel less good job.

### Service Quality

According to [10] public services or public services can be defined as any form of services, either in the form of public goods and public services which in principle is the responsibility and implemented by government agencies in the center, in the area, and in the State Owned Enterprises (BUMN) or Regional Owned Enterprises (BUMD), in an effort to meet the needs of society as well as in the implementation of the provisions of the legislation.

[11] defines service is an activity or sequence of events that occur in the direct interaction between a person with another person or a physical machine, and providing customer satisfaction. In an Indonesian large dictionary described the service as a business serving the needs of others. Serving is to help set up or take care of what is required of a person.

According to Minister of State for Administrative Apparatus No. 81/93 states that public service is any form of service provided by central or local government in order to meet the needs of the community, and or legislation applicable. Service comes from the people and not from the company. Without giving a value on yourself, it will not have any meaning. Similarly, the organization or company which is essentially a collection of people. Therefore, high self-esteem is the most fundamental element for the success of organizations which provide a quality service.

The word quality has many different definitions and ranging from the conventional to the more strategic. The conventional definition of quality is usually describes the characteristics of a product such as: performance, reliability, easy of use, esthetics, and so on. In the definition of strategic stated that quality is everything that is able to meet customer needs and requirements (meeting the needs of costumers).

Based on the notion of quality, both conventional and more strategic by [12] stated that in essence quality refers to the understanding of the following principal quality is composed of a number of product features, either privilege directly, or privilege attractive that meet customer desires and thus give satisfaction use of the product. Quality consists of everything that is free from flaws or damage.

### Framework of thinking

As explained above, then briefly in this research can be described a frame of thinking as the following chart:

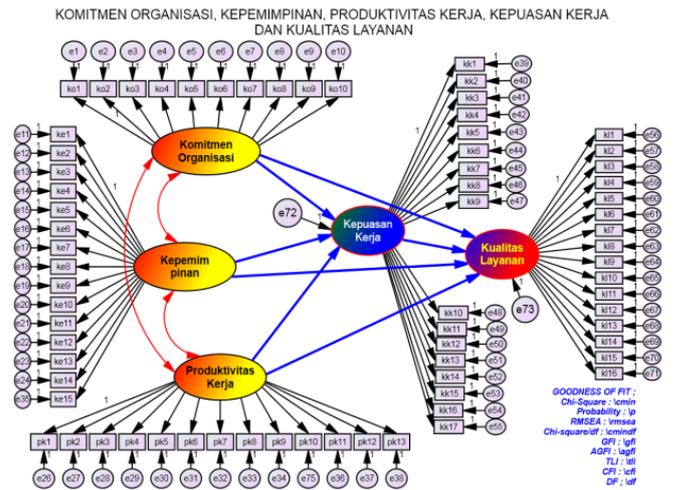


Image 1  
Frame of thinking

Based on the image above can be explained that organizational commitment, leadership and productivity of work in the independent variables are predictors that make up the level of satisfaction, while satisfaction levels have an influence on service quality. Based on these descriptions can be explained that organizational commitment, leadership and productivity are independent variables, as well as a mediating variable (intervening), namely job satisfaction and the quality of service are the dependent variable (variable fixed).

### Hypothesis

Based on the observation of phenomena, the formulation of the problem and the conceptual framework of the research, the research hypothesis is:

- H1: Organizational commitment as predictor on the level of job satisfaction.
- H2: Leadership as predictor on the level of job satisfaction.
- H3: Productivity of work as a predictor on the level of job satisfaction.
- H4: Organizational commitment, leadership and productivity work together as predictors on the level of job satisfaction.
- H5: organizational commitment as predictor of quality of service.
- H6: Leadership as predictors of quality of service.
- H7: Productivity of work as predictor of the quality of service.
- H8: organizational commitment, leadership and productivity work together as predictors of quality of service.
- H9: The level of job satisfaction as predictor of quality of service.

## II. METHOD

### Population and Sample Research

The population is a collection of the whole object to be measured in the research [13]. The population in this research are all employees of the Department of Revenue Batam. The large number of population is as much as 182 people. The sampling technique used in the category of non-probability sampling (Sekaran, 1992: 235; [14]; [13]).

In accordance with the characteristics, the required sample, that is all structural employees, the technique of non-probability sampling selected is a technique judgmental (purposive). This technique is selected to ensure that only the samples that have certain elements that have been established by researchers who will be taken as a sample (Black and Champion, 2001: 264).

Sample is an element of the population selected to represent the population in the research [13]. In this research, sample size adapted to the analysis model used is Structural Equation Model (SEM). In this regard, the sample size for SEM using the model estimates the maximum likelihood estimation (MLE) is 100-200 samples [15][16], or as much as 5-10 times the number of parameters estimated [17]. In this research the number of respondents who earned as much as 182 respondents. Of these eligible to serve as a sample of 130 respondents.

The data collection is done by using the tools in the form of questionnaires filled out by the respondent made in the form of questions / statements, which in the questionnaires have been provided alternative answers to each item in the form of a statement by Likert rating scale score with a score of 1 to 5. Variables used in this research are the dependent variables, independent variables and intervening variables / moderating are.

- a. Organizational commitment, is broken down into the following dimensions.

$X_{1,1}$  = affective

$X_{1,2}$  = continuant

$X_{1,3}$  = normative

- b. Leadership is broken down into the following dimensions.

$X_{2,1}$  = Energy and courage

$X_{2,2}$  = Vision

$X_{2,3}$  = Challenge and encourage

$X_{2,4}$  = Take a risk

$X_{2,5}$  = Loyalty

$X_{2,6}$  = Pride

- c. Labor productivity is broken down into the following dimensions.

$X_{3,1}$  = Quality of work

$X_{3,2}$  = Quantity of work

$X_{3,3}$  = Punctuality

$X_{3,4}$  = Spirit at work

$X_{3,5}$  = work discipline

- d. Job satisfaction is broken down into the following dimensions.

$Y_{1,1}$  = Satisfaction with the boss

$Y_{1,2}$  = Satisfaction with colleagues

$Y_{1,3}$  = Satisfaction with job

$Y_{1,4}$  = Satisfaction with promotion opportunities

$Y_{1,5}$  = Satisfaction with income

- e. Quality of service is broken down into the following dimensions.

$Y_{2,1}$  = *Tangibles*

$Y_{2,2}$  = *Empathy*

$Y_{2,3}$  = *Responsiveness*

$Y_{2,4}$  = *Reliability*

$Y_{2,5}$  = *Assurance*

#### Validity test

Validity and reliability of the questionnaire (a list of statements) is performed to determine the ability of a list of statements to measure what should be measured and consistency. A list of statements used in this research is unknown level of validity and reliability. For that test the validity and reliability of each item statement from a list of statements used in this research. Criteria for validity testing is to compare  $r_{count}$  with  $r_{table}$ , at significant level of 95% or  $\alpha = 5\%$ . According to [18], the statement item is valid at significant level of 95% or  $\alpha = 5\%$  if the item has a statement  $r_{count} > r_{standard} = 0.30$ . According to Santoso (2005: 277), which is intended  $r_{count}$  for every item in question is the coefficient of product moment correlation between the scores of each item in question with a total score of all items for a variable which is denoted by Corrected Item Total Correlation on the calculation results SPSS for each statement items of a variable.

From the calculation results obtained  $r_{count}$  value for each variable bigger than  $r_{table}$  at 95% significance level, every item has a coefficient  $r_{count}$  statement (Corrected Item-Total Correlation)  $> 0.3$ . Thus it can be stated all variables statement items organization commitment, leadership, labor productivity, quality of service, and job satisfaction are valid. That is, all the items that variable declaration are valid for measuring the variables, so everything dikutsertakan on further analysis.

#### Reliability Tests

Reliability test is intended to measure the level of consistency of research instruments. In this research tested through Confirmatory Factor Analysis, and if the value of Cronbach's alpha bigger or equal to 0.70 means that the instrument is reliable [16]. However, this measure can be biased in some circumstances [17] so that values below 0.70 can be permitted, especially for exploratory the research [15]. According to sekaran (1992: 287) if the value of Cronbach's alpha is smaller than 0.60 considered poor; in the range of 0.70 (0.60 to 0.80) considered acceptable; and above 0.80 are categorized either. Calculation of product moment correlation coefficient and Cronbach's Alpha were performed with SPSS for Windows version 20.0 Special sub-menu in the menu Analyze Scale. Results of processing / calculation correlation coefficient Corrected Item-Total Correlation and Coefficient Cronbach's Alpha.

TABLE 2.1  
Reliability Tests criteria

Variable	Item	Koefisien Cronbach's Alpha	Information
Organizational commitment ( $X_1$ )	10	0,975	Reliable
Leadership ( $X_2$ )	15	0,975	Reliable
Productivity ( $X_3$ )	15	0,967	Reliable
Job satisfaction ( $Y_1$ )	17	0,985	Reliable
Quality of service ( $Y_2$ )	16	0,981	Reliable

Based on the results of these calculations, because there is no value construct reliability whose value below 0.60 then all constructs in this research feasible for use in the model. Thus, all the attributes in these variables were consistent and trustworthy (reliable) and can be used for further research. With the reliability test is then obtained information that the respondents' answers to the questionnaire show consistency, so that the results of the acquisition score questionnaire answers can be used and analyzed further.

### Data Analysis Method

Data analysis was performed using Structural Equation Model (SEM). The software used for the structural analysis is AMOS 20 from Arbuckle and for descriptive analysis using SPSS 20. There are seven steps involved in modeling SEM, are:

- Development Model based on theory
- Making flowcharts (path diagram)
- Converting flowchart into series of structural equation
- Selection of input matrix and estimation techniques models built
- Assessing possible problems of identification
- Evaluation of criteria for goodness of fit
- Interpretation and modification of models

## III. Result and Discussion

### Evaluation Of SEM Assumptions

Evaluation of the SEM assumptions preceded by an evaluation of normality to determine the normality of the data. Analysis normality of the data to determine whether the data obtained and collected normal distribution. Normality of data used for analysis of critical value skweness and kurtosis value. The normal distribution analysis is necessary if the number of data (n) <100 pieces (Nunnally (1992: 109). However, for samples of > 100 was still deemed necessary normality test. The data were normally distributed enables parametric analysis carried out.

For the evaluation of the normality skwenees test and kurtosis test. Skweness test used to view the skewness / heeling dissemination of data, while kurtosis to see kurtosis distribution data. According Suharyadi (2003: 117), the data has a spread has slanted / inclined when a critical value (c.r.) for skweness is above  $\pm 3.00$ , the data have pointed deployment if critical value (c.r.) for kurtosis is above > 3.00. According to Ferdinand (2006: 97) Normal spread data can be declared if a critical value (c.r) for skweness and kurtosis are not bigger than  $\pm 2.58$ .

Normality test is done to the data of each latent variable, they are variable data of organizational commitment, leadership, work productivity, job satisfaction and quality of service. Based on the results of the computer program Amos for Windows version 20.0 of research data for any latent variables obtained processing results assessment of normality as obvious that all variables that have nothing to skweness above c.r  $\pm 3.00$ . This means that the distribution of data for all indicators are normal in terms of skewness. Judging from kurtosis (kurtosis), there are no indicators on all variables that have a value c.r. above > 3.00. This means that, when viewed from kurtosis (kurtosis) can be said that the dissemination of

data to all of the indicator variable of organizational commitment, leadership, work productivity, job satisfaction and quality of service are normal distribution (not sharp). That is, for subsequent analysis, latent variables represented by the indicator.

### Testing Confirmatory Factor Analysis (CFA)

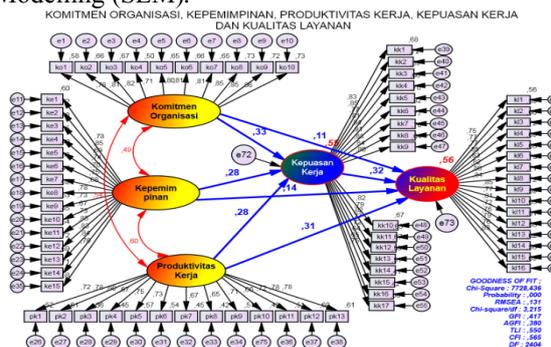
Confirmatory factor analysis was used to test unidimensionalitas of dimensions that explain the latent variables of the model, if all the indicators used in the research is forming a latent variable organizational commitment, leadership, service quality, job satisfaction, and quality of service.

Confirmatory factor analysis is also intended to analyze the validity of the existing data in this research. That is, whether the indicators used have sufficient significance to define the latent variables are formed. According to [17] a significant indicators confirm if the latent variable has a coefficient lambda ( $\lambda$ )  $\geq 0.50$  and critical value (C.R)  $\geq 2.00$  and a probability value of <0.05.

Based on the results of Confirmatory Factor Analysis (CFA) to the indicator variable organizational commitment, leadership, work productivity, job satisfaction and quality of service in the form of a diagram or in tabular form, it is known that the Standardized Regression Weight ( $\lambda_i$ ) for all indicators is bigger than 0, 50 as well as the coefficient CR bigger than 2.00 and a probability value of the 10 indicators is less than 0.05 (\*\*\*) means <0.001). Thus it can be said in terms of the CFA, that the whole are a strong indicator to confirm / explain the latent variable organizational commitment, leadership, work productivity, job satisfaction and quality of service. For the whole indicator can be included in further analysis.

### Effect Analysis With SEM

From the data processing on an analysis Full Model Structural Equation Modelling (SEM). For purposes of analysis, it is first displayed image processing result Structural Equation Modelling (SEM).



Based on image 2 can be done Goodness of fit analysis, structural model analysis, determination analysis, analysis of measurement model with parameter lambda to the effect of Organizational Commitment, Leadership, Work Productivity, Work on Job Satisfaction and Quality of Service.

Referring to Image 2 shows that the number of each indicator latent variables in Organizational Commitment = 10, Leadership = 15, Work Productivity = 13, Job Satisfaction = 17, and Quality of Service = 16. Scores of respondents' answers to each of these indicators are presented in a list of data SPSS version 20.0. Scores of respondents further processed with statistical Full Model Structural Equation

Modelling (SEM) using AMOS software for Windows version 20.0.

Testing Analysis Model Parameter Measurement with Lambda ( $\lambda_i$ )

Testing parameters lambda ( $\lambda_i$ ) is intended to determine the validity of each indicator research. To test the parameters lambda ( $\lambda_i$ ) used standardized value estimate (regression weight) in the form of loading factor. If the value of the standardized estimate (regression weight) ( $\lambda_i$ ) > 0.50, CR > table = 2.000, and Probabilily  $<\alpha = 0.05$ , the lambda parameter loading factor ( $\lambda_i$ ) the indicator was significant (Ferdinand, Agusty, 2002: 97). This means that the indicators are valid From the calculation results of all indicators of latent variables have standardized regression weight form factor loading or lambda ( $\lambda_i$ ) > 0.50, the critical value C.R > 2,000 and has a probability of less than 0.05 (\*\*\*). Thus it can be said that all indicators of the latent variables are valid / significant.

Analysis of Structural Equation Model

Model testing was performed using the regression coefficients for the variables Organizational Commitment (X1), Leadership (X2), Work Productivity (X3) on Job Satisfaction (Y) and Quality of Service (Z) through the table output from the sub menu view / set as Annex 15 (contd ). Based on the calculation of regression coefficient (regression weight) that can be seen in Appendix 15 (continued) The table can be made to a standardized output direct effect as presented in the following table:

	Estimate	S.E.	C.R.	P	Information
KK <--- KE	,254	,080	3,179	,001	Significant
KK <--- PK	,269	,091	2,954	,003	Significant
KK <--- KO	,247	,064	3,842	***	Significant
KL <--- KO	,081	,065	1,238	,216	Not Significant
KL <--- KE	,126	,082	1,534	,125	Not Significant
KL <--- PK	,308	,098	3,146	,002	Significant
KL <--- KK	,329	,103	3,198	,001	Significant

positively significant, are the effect of organizational commitment (X1) on Job Satisfaction (Y), the effect of Leadership (X2) on Job Satisfaction (Y), the effect of Work Productivity (X3) on Job Satisfaction (Y), the effect of job satisfaction (Y) on the Quality of Service (Z), and the effect of Work Productivity (X3) on the Quality of Service (Z).

There are three indirect effect positively significant, namely the effect of organizational commitment (X1) on the Quality of Service (Z) through job satisfaction (Y), the effect of Leadership (X2) on the Quality of Service (Z) through job satisfaction (Y), and the effect of Work Productivity (X3) on the Quality of Service (Z) through job satisfaction (Y). Meanwhile, there are two variables that are not significant positive effect, are:

direct effect of organizational commitment (X1) on the Quality of Service (Z), and the the direct effect of Leadership (X2) on the Quality of Service (Z).

Analysis of Goodness of Fit

Based on test criteria, Chi-square ( $\chi^2$ ), Relative Chi-square ( $\chi^2/df$ ), RMSEA, GFI, AGFI, TLI and CFI at the top and Goodness of Fit value processing results Amos for Windows version 20.0 can then be made the following table

Goodness of Fit Index	Cut-of Value	Results Model	Information
Chi-square ( $\chi^2$ )	expected to be small	7728,436	Not good
Relative Chi-square ( $\chi^2/df$ )	$\leq 3,00$	3,215	Marginal
Probability	$> 0,05$	0,000	Not good
RMSEA	$\leq 0,08$	0,131	Not good
GFI	$\geq 0,90$	0,417	Not good
AGFI	$\geq 0,90$	0,380	Not good
TLI	$\geq 0,95$	0,550	Not good
CFI	$> 0,95$	0,565	Not good

Observing the cut-of-value and goodness of fit of model results in Table 4:23, seen no one who met the criteria of the eight criteria used, only a marginal is Relative Chi-square. Because no one met the criteria of the eight criteria required, then the model above can be expressed as a model that has not been good (Solimun, 2002: 80 and Solimun, 2004: 71).

Analysis of the Measurement Model of Determination

Analysis of measurement model with determination is used to determine the contribution of exogenous variables on endogenous variables. The magnitude Square Multiple Correlations can be seen in the following table.

	Estimate
KK	,551
KL	,560

Square Multiple Correlations whose value respectively 0.551 and 0.560 as shown in the table above, according to [17] values Square Multiple Correlations for variable job satisfaction (KK) is identical to R2 in SPSS by 0.551, the amount of Determination is the value Square Multiple Correlation for job satisfaction variables times 100% = 0.551 x 100% = 51.5%. Thus it can be stated that the change of job satisfaction (KK) is affected by the commitment of the organization (KO), Leadership (KE) and Work Productivity (PK) of 51.5%.

Multiple Correlation Square value for the variable Quality of Service (KL) is identical with the SPSS R2 of 0.560, the amount of Determination Square Multiple Correlation is a

value to a variable Quality of Service (KL) times 100% = 0.560 x 100% = 56.0%. Thus it can be stated that the changes in Quality of Service (KL) is affected by the commitment of the organization (KO), Leadership (KE), Work Productivity (PK) and job satisfaction (KK) amounted to 56.0%.

From the above analysis we can conclude all the indicators for organizational commitment (KO), Leadership (KE), Work Productivity (PK), job satisfaction (QC) and Quality of Service (KL) are Valid / significant. When viewed from a structural equation model above shows the three variables that have significant positive the direct effect on Job Satisfaction (KK) and two variables have significant positively the direct effect on the Quality of Service (KL).

There are two variables that have the direct effect not significant to the Quality of Service (KL). Evaluation of the results of Goodness of Fit showed none of the eight criteria Goodness met, only one is marginal. The above models can not be expressed as a good model (not meet Goodness of fit). Thus it is deemed necessary to hold a model modification to improve the suitability model (Goodness of fit) (Solimun, 2004: 71 and Solimun, 2006: 19).

To increase the value of goodness of fit can be done in a way did not include indicators that have relatively small  $\lambda_i$  or correlate to some indicators that have a value of Modified Index (M.I.) large [17].

#### Modification Model (Stage 2)

In the second stage model Modifications were correlated few errors that have modification coefficient index (M.I.) > 15,000 with the hope to improve Goodness of fit model. Of the modified models by correlating multiple error indicator then do a comparison

Goodness of Fit between the modified model 1 model modified 2. Comparisons were made include: the coefficient of Goodness of Fit, Weight Regression coefficients between endogenous to exogenous variables, and Square Multiple Correlation a reflection coefficient of determination. When viewed from the goodness of fit, looks the model modification results showed improvements in all indicators. Model of modification 1 that originally there was one indicator of marginal Goodness of fit into a single indicator that qualifies is Relative Chi-square ( $\chi^2/df$ ), thereby modification stage model 2 is more qualified. When viewed from Regression Weight exogenous variables with endogenous variables turns on the modification of the model Stage 2, there is increasing in four regression coefficient (Standardized Regression Weight) and the other three declined. When viewed from Square Multiple Correlation, seen both increased.

Goodness of Fit Index	Cut-of Value	Model of Modification 1	Model of Modification 2	Information
Chi-square ( $\chi^2$ )	Diharapkan kecil	614,176	4609,721	Better
Relative Chi-square ( $\chi^2/df$ )	$\leq 3,00$	3,510	2,710*	Better
Probability	$> 0,05$	0,000	0,000	Not good
RMSEA	$\leq 0,08$	0,139	0,115	Better
GFI	$\geq 0,90$	0,440	0,525	Better
AGFI	$\geq 0,90$	0,398	0,472	Better

TLI	$\geq 0,95$	0,569	0,706	Better
CFI	$\geq 0,95$	0,586	0,727	Better
KK $\leftarrow$ KO ( $\gamma_{yx1}$ )		0,357 <sup>++</sup>	0,375 <sup>++</sup>	Better
KK $\leftarrow$ KE ( $\gamma_{yx2}$ )		0,317 <sup>++</sup>	0,248 <sup>++</sup>	Worse
KK $\leftarrow$ PK ( $\gamma_{yx3}$ )		0,200 <sup>++</sup>	0,267 <sup>++</sup>	Better
KL $\leftarrow$ KK ( $\gamma_{zy}$ )		0,349 <sup>++</sup>	0,319 <sup>++</sup>	Worse
KL $\leftarrow$ KO ( $\gamma_{zx1}$ )		0,113 <sup>-</sup>	0,138 <sup>-</sup>	Better
KL $\leftarrow$ KE ( $\gamma_{zx2}$ )		0,151 <sup>-</sup>	0,148 <sup>-</sup>	Worse
KL $\leftarrow$ PK ( $\gamma_{zx3}$ )		0,271 <sup>++</sup>	0,280 <sup>++</sup>	Better
Square Multiple Correlation KK		0,523	0,547	Better
Square Multiple Correlation KL		0,545	0,550	Better

#### Discussion

Statistical hypothesis test results that have been presented above can prove variable organizational commitment, leadership and productivity influential work directly and indirectly to the quality of service through employee satisfaction in Batam City Regional Revenue Office. From the results of the analysis carried out above it can be seen the best model obtained after the modification the model held twice, is by correlating multiple error indicators that have Modify Index (MI) > 15.00 and did not include indicators that have loading factor ( $\lambda$ ) < 0.7000.

From the structural equations indicate Regression Weight ( $\gamma$ ), there are five variables that effects are direct positively significant, are the effect of Commitment Organizational (KO) on Job Satisfaction (KK), the direct effect of Leadership (KE) on Job Satisfaction Work (COW), the direct effect Work productivity (PK) on Job Satisfaction (KK), the direct the effect of job satisfaction (KK) on the Quality of Service (KL) and the the direct effect Work productivity (PK) on the Quality of Service (KL). As well as the indirect effect Organizational Commitment (KO) on the Quality of Service (KL) through Job Satisfaction (KK) and indirect effect of Leadership (KE) on the Quality of Service (KL) through Job Satisfaction (KK).

In addition, there is no significant positively the direct effect Organizational Commitment (KO) on the Quality of Service (KL) and not significant positively direct effect of Leadership (KE) on the Quality of Service (KL). This means variable Organizational Commitment (KO) will be able to improve the Quality of Service (KL) significantly if there is an intervening variable Job Satisfaction (KK). The same thing, variable Leadership (KE) will be able to improve the Quality of Service (KL) significantly if there is an intervening variable Job Satisfaction (KK).

Structural equation model modified otherwise good, because it has met the criteria of eight cut of value, are criteria, Relative chi-square. There is a positive effect of Organizational Commitment (KO), Leadership (KE) and Work Productivity (PK) on Job Satisfaction (KK) of 54.7% while the rest of 100% - 54.7% = 45.3% effected by other factors not addressed on this occasion. This is consistent with previous research conducted by [19], which states there is positive variable in organizational commitment, leadership, productivity on job satisfaction.

There is a positive effect of Organizational Commitment (KO), Leadership (KE), Work Productivity (PK) and job satisfaction (KK) on the Quality of Service amounted to

55.0%. while the rest of 100% - 55.0% = 45.0% effected by other factors not discussed in this occasion. It is also in accordance with previous research conducted by [20], which states there is a positive influence between the variables of leadership, productivity, and job satisfaction on service quality. Variable selection of organizational commitment, leadership and productivity connect properly with job satisfaction can produce excellent quality of service, as well as a measure of achievement of organizational goals to increase service quality

#### IV. CONCLUSIONS

The good model is obtained after extensive modification for two times, that is - to correlate some indicator errors which have Index Modification (M.I) > 15,00 and not to engage the indicator which has loading factor ( $\lambda$ ) < 0,7000. The structural equation models modified otherwise good, because it has met one criteria of eight cut of value, that is criteria, Relative chi-square.

#### Suggestion

After researching and knowing the problems that exist in Batam Revenue Department, and here are some suggestions that can give authors, are:

1. The Department of Revenue Batam Agencies can use structural equation model modified 2 in analyzing the problems on Organizational Commitment, Leadership, Work Productivity and Job Satisfaction related to Quality of Service.
2. Organizational Commitment, Leadership, Work Productivity and Job Satisfaction Working together have positively significant effect on the Quality of Service Employees, it is suggested to the leadership in order to continue to implement policies related to Organizational Commitment, Leadership, Work Productivity, and Job Satisfaction in order improve quality of service.

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# Democracy In Indonesia Constitutional Life

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**Abstract.** Democracy is an ideal system of constitutional life and that comes from the West. Democracy implies power or government by the people, from the people and for the people. When the Western democracy is transformed into the non-West countries with different history and culture, democracy will take time to adjust to the situation, and subjects to various changes in the application in accordance with the new different environment. A frequent problem that emerges in the practice of democracy is how the government by the people, of the people and for the people is effectively implemented in constitutional practice. This paper provides thought concerned with the concept of democracy, including democratization in the development of constitutional practice.

Keywords: democratization, state administration.

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## I. INTRODUCTION

No term or system that receives big attention of mankind like democracy. Democracy by Aristotle (Greek philosopher), previously given negative sense, is now claimed by many nations or states as a system or principle in national and constitutional life. Nevertheless, democracy continues to experience growth despite visible differences in the application by each nation.

Democracy can be viewed from two aspects of democracy in material sense and democracy in formal sense. Democracy in material sense is a democracy characterized by philosophy or ideology embraced by a nation or state. The various democracy embraced by each state indicates a fundamental difference in the practice of democracy. Therefore, some terms like Pancasila Democracy, Guided Democracy, Liberal Democracy, Socialist Democracy, and the People Democracy and centralism Democracy are known.

Democracy in formal sense has evolved from direct democracy as carried out in City State in Ancient Greece into indirect democracy. Democracy is also indirectly called as representative democracy, a democracy performed by the representatives of the people sitting in institution or the representative body of the people.

The notion of democracy itself experiences growth. In his search for country aspiration or ideal state, a Greek philosopher Aristotle put forward a theory of cycle. Monarchy as good type of government, for one thing experiences degeneration called tyranny. This second type of government then receives reaction from good people around. Therefore, the type of tyrannical rule is later changed to the aristocracy. Since men are not immortal, this type is then changed again into a democracy, which is also called nobocracy or the rule of the mob. Thus Aristotle democracy received negative sense. This differs from the definition given at the present time.

## II. DISCUSSION

### The origin of Democracy

The term democracy comes from two words of origin, which refers to a system of Ancient Greek government

called 'demokratia', the 'demos' and 'kratos or kratein'. Literally democracy comes from the word demos means people and kratos or kratein means government ruled by the people. Democracy implies political power or government of the people, by the people and for the people [1]. People are conceptualized as citizens. Thus, from its original meaning, democracy means ruled by the people. In the practice democracy is conceived and executed differently.

In the time of Ancient Yimani, the word democracy is used to refer to 'government by the many' (rule by the people), as opposed to 'government by the few' (rule by a group of people). [2] in the Government by the People, proposes democracy as, "A system of government in which those who have authority to make decisions (that have the force of law) acquire and retain this authority either directly or indirectly as the result of winning free elections in which the great majority of adult citizens are allowed to participate.

[3] in An Introduction to Democratic Theory, provides the sense of democracy as, "A democratic political system is one in which public policies are made on majority basis, by representatives subject to effective popular control at periodic elections which are conducted on the principle of political equality and under conditions of political freedom.

The formulations provide general understanding of the nature of a country which adheres to the democratic system, they are:

1. democracy is a system of government with interlinked and inseparable elements;
2. those who hold power in the name of democracy may take decisions to establish and enforce the law;
3. the power to regulate in the form of laws is acquired and maintained through free elections and is followed by the majority of adult citizens.

Of the three properties of the common understanding, a democratic country has three main understanding covering the nature, processes and objectives of democracy [4]. Huntington sees democracy in three general approaches, namely: the source of authority for the government; destinations served by the government; and the procedure for forming a government.

Democracy is a system indicating that public policy is determined on the basis of a majority of the representatives

who are monitored effectively by the people in periodic elections based on the principle of political equality and held in an atmosphere of guaranteed political freedoms [3]. In other words, democracy is a system of government formed through elections to regulate the common life based on the rule of law in favor of the people. [1] in *Our Democracy at Work* provides the formulation of the notion of democracy as “*a government of the people, by the people, for the people*”. [5] *Black’s Law Dictionary* states that democracy “*government by the people, either directly or through representatives*”.

From the understanding of democracy above, the implementation of democracy has consequences to be considered, which provide opportunities for the people as citizens to exercise rights and obligations of the state. Presented by [6] in *On Democracy* that “*democracy provides opportunities for effective participation; equality in voting; gaining enlightened understanding; exercising final control over the agenda; inclusion of adults*”.

That is, democracy will provide an opportunity to the people for effective participation; equality in voting; clear understanding; ability to supervise the end of the agenda; and inclusion of adults. The consequences of democracy will provide a common size standard in view of a country as a democracy. In other words, when opportunities as a consequence of democratic general size standards is not executed, the country cannot be qualified as a democracy.

The concept of democracy originally emerged from a thought about the relationship of state and law in Ancient Greece and practiced in institutional life between 4<sup>th</sup>BC to 6<sup>th</sup> AD century. The democracy practiced in that time was direct democracy, which means that the rights of people to make political decisions are executed directly by all citizens who act in accordance with the procedure majority.

In its development the form of democracy has experienced twice democratic transformation, the first is transformation of the democratic city states in 5 BC ancient Greece and Rome as well as some city states in Italy in the medieval period. The second is transformation that occurs from the democratic city states into democracies region of nation, state, wide nation or state [7].

The two forms of the democratic transformation have fundamentally changed the order form of democracy as a result of the displacement of the city-state to nation states. Robert A. Dahl suggests eight consequences of the implementation of democracy in the territory of the vast nation, namely: representation; unlimited expansion; the limits of participatory democracy; diversity; conflict; poliarchy; social and organizational pluralism; and the expansion of personal rights. This indicates that the shape and structure of democratic state at the time of Ancient Greece is very different from the shape and structure of democracy at the present time.

In the city-state the form of democracy is carried out directly (direct democracy), the people gathered at a place called 'ecclesia' to directly solve problems together [8]. Therefore democracy in a city-state at the time of the Ancient Greeks is also known as participatory democracy while representative institutions not recognized [9]. In modern countries developed models of indirect democracy through representative institutions [10]. Representative institutions play an important role in arranging the wheels of

government for modern democracies, though at the beginning the existence of representative institutions was not intended as a device democratic system. This is the fundamental difference between city-state and nation state in the governance process. "The practice of democracy in the city-states does not use representative institutions as democracy is citizens meeting to discuss the matter together.

An important event regarding democracy in the Middle Ages is the emerge of 'Magna Charta' document, a charter which contains some agreement between some nobles and King John in England, that the King recognized and guaranteed certain rights and 'privileges' of his subordinates in return for funds handover for the purposes of war and others. The emerge of this charter, although not applicable to common people, can be regarded as the emergence of new milestone for the development of democracy. This is because of the charter had seen the two basic principles, the limitation of royal power and that human rights are more important than the rule of the king [11].

Criticism and revamp toward absolutism of monarchy is based on the theory of rationalistic as a 'social contract' with one of the hopes is determination that the world is ruled by law arising out of nature (natural) which contains the principles of universal justice, valid for all times and all the good king, nobles, and commoners [12].

This indicates that theory of natural law is an attempt to overhaul the absolute rule and set the political rights of the people in a principle called democracy (people's government). Two great philosopher, John Locke (1632-1704) of England and Charles Louis de Secondat, Baron de La Bre'de et de La Montesquieu (1689-1755) of France, greatly contributed to the notion of democratic governance. John Locke argued that people's political rights include the right to life, liberty and the right to have (live, liberty, property). Meanwhile Montesquieu proposed basic systems which according to him can guarantee the political rights through the theory of 'separation of powers' or 'triad of politico by separation of powers in a state into legislative, executive, and judicial branches, each of which must be exercised by the themselves independently, which means that in principle all of the power should not be held only by one man.

The idea of government of the people (democracy) emerged from the idea of 'political rights of the people' and 'separation of powers'. However, until now today democracy has spawned two democratic concepts pertaining to the role of the state and the role of society, namely constitutional democracy of XIX century and constitutional democracy of XX century, both are always associated with the concept of a constitutional state.

The existence of representative institutions in modern democracies is very important in a nation state [13]. The form of representative institutions, according to John Stuart Mill is an ideal form of government choice. According to Liberty Utilitarianism by [14], a representative system in a modern democracy is "... but since all cannot, in a community exceeding a single small town, participate personally in any but some very minor portions of the public business it follows that the ideal type of a perfect government must be representative.

Through a representative institution, complex issues facing society will be resolved. Thus a representative institution serves to bridge the aspirations of the people in the governance process. Therefore, in general the representative body has a function of legislation, monitoring and as a means of political education [10]. These functions are performed by representative institutions in order to realize the ideals of modern democracy followed by most countries in the world today.

Despite the simple meaning of the words, there is still no common view about the limits of democracy. This is caused by two things: (1) democracy has two kinds of meaning; (2) democracy itself has been and will continue to experience growth. This is partly raised by [15], stating that 'democracy' is a form of government that is never completely Achieved. Democracy grows into its being ".

From the meaning of words, democracy means the people rule. In other words the number of reigns is abundant yet the number of the ruled is fewer. Can this happen? In fact is the opposite, fewer rule abundant.

Regarding the problem, Maurice Duverger in his book *Les regimes Politiques*, argued that, " Sociologists of Durkheim confirmed that during the beginning of the revival of human civilization, there was no difference between the ruling and those who are ruled. Power was not run by certain people yet evenly by the herd entirely, everyone is subject to general standards considered and determined by the whole group. At that time everybody ruled and no one was ruled. Then, some people from the mob seemed to unite themselves, made themselves the embodiment of the collective benchmark as well as the rule on behalf of the hordes, that is what is called 'power' [16].

The French scholar further quoted the opinion of Jean Jacques Rousseau as follows: "If the word is held as general meaning, democracy is truly never existed and will never exist. Is contrary to the nature of nature, that the greatest number rule, while least should be governed. "

As has been stated, democracy can be viewed from two aspects, as stated by Bonger in his book entitled *Problemen der Democratie*. Meanwhile in English literature another term was proposed by Robert K. Carr. Marver H. Bernstein, Donald H. Morrison, in his book *American Democracy- in Theory and Practices*, using the term 'democracy as an ideology' and 'democracy as an actual governmental mechanism'. [17] uses the term 'democratic in philosophy' and 'representative in form.'

The fundamental difference of democracy adopted by each nation or state is situated on the first. Meanwhile in the second meaning there are many similarities. The question arises, why are fundamental differences about the meaning of democracy from country to country and is situated on the first meaning, what causes the differences?

There are some foundations of philosophy used by democracy, including:

1. democracy which is based on freedom and equality;
2. democracy which is based on the progress in social and economic affairs;
3. democracy which is based on freedom and equality, and on social and economic progress as well.

### **Democracy Based on the Independence Equation**

Throughout history, ideology of freedom and equality arise in constitutional life as a reaction to the ideology of absolutism, which is an ideology in which absolute power in the state are in the hands of one person (king, emperor, dictator) or a single body. In these situations there is a striking difference between the ruling class and those who are not in power. Everything is run by the ruling class is intended only for the sake of his own faction.

With regard to the ideology of independence, Emery Reves in his book *A Democratic Manifest*, suggests liberalism as follows: "Political ideology attempting to realize our ideals into social life is liberalism. Liberalism is the essence of the programs, which in the late 18th century was attractive with most influential powers in the United States, Britain, and France.

The United States Constitution, French Revolution, and the beginning of modern industrialization in the UK then gave tremendous impetus to the ideology of. Then the elements of progressive of all democratic countries were then united in political parties that aims to develop country and economic life based on individual liberty, ensure the independence of nations and create the greatest possible independence in relation to the exchange in the international field. "

From Emery Reves's view, the question arises, what is freedom or liberty?

In the history of mankind, the struggle for independence is a motor that has a very important meaning. This is due to the following facts:

1. that all wars were made for independence,
2. that all revolutions were begun for independence,
3. that human trials in the field of science, economics and engineering, received impetus from the desire to achieve greater independence.

The points indicate that the ideals of freedom are the sources of all ideals, both in political, social, cultural, economic, and other fields. However, as well known, the interpretation and understanding are different. Therefore, it is understandable why concept then leads to chaos than the ideals of freedom itself. In pure sense, manifestations of independence are:

1. Freedom of thought and embrace the belief itself.
2. Freedom to unite with friends who has the same ideology and has a specific purpose.
3. The freedom to set their own livelihood, not as ordered by the powers above it.

Thus independence also means respect to a person, rights given to a person, no arbitrary action against a person or group of people. The consequence is the development of personality of each person freely. Independence as an ideology and ideals leads to chaos is also expressed by Montesquieu before the French revolution as follows: "*There is no word that has been given varied meanings and evoked more varied emotions in the human heart than liberty* Kemudian Montesquieu mengatakan lebih lanjut, sebagai berikut: '*Some have taken it as a means of deposing him on whom, they had conferred a tyrannical authority; Other again have meant by liberty the privilege of being government by a native of their own country, or by their own laws; Some have annexed this name to one form of government exclusively of others; Those who had a republican taste applied it to this species of*

*government; Those who liked a monarchical state gave it to monarchy.* “ [18]

In this case freedom and equality are two things that cannot be separated. Thus, speaking of independence means also speaking about equality. The unity of freedom and equality is a condition that does not make sense.

Freedom and equality are two ideologies or a principle that cannot be separated is also evident in history. When French revolution was raged (1789), leaders echoed the now-famous slogan, namely *liberte, egalite and fraternite*. The motto is the cry of the circumstances that occurred in France at that time and Europe in general. The slogan represents the ideals of the French revolution over by E. Barker called the three sisters. E. Barker proposed the name as he thought that freedom, equality, and brotherhood are three things that cannot be separated from one another. However, from another angle *fraternite* is a logical consequence of their *egalite* in relation to human nature. Indeed, freedom without equality is difficult to think about. However, the equation also raised the issue of whether the real equation is there. Is there absolute equality among all human beings in the world?

The equation between man and man, between groups or nation in the world, in principle and in fact contrary to nature, therefore such equality actually does not exist and cannot exist.

This means, too, that freedom in pure and perfect sense will show the exact opposite of any kind of independence. Although it is has been known that the two ideals are impossible absolutely, the ideologies are still strived

Ideology of independence also has influence in political, economic, social and cultural field. In accordance with the principles of freedom and equality, everyone is free to implement its goals and objectives, as well as defend its interests. Yet ultimately the freedom and equality does not mean anything at all, because it cannot be removed from areas of economic life.

The absence of similar capabilities in the areas of economic life led to the dependence of a person or group of people to the party a strong economic position. The principle of freedom and equality, especially in the economic field, causes free competition. Everyone is free to implement and achieve their objectives. Despite the principle of equality, without same capabilities, those who successfully compete are only those who are well-established, particularly one that dominated the economic life. By mastering the field of economy, strong group then seeks to master other areas of life, such as politic. This creates two classes if the haves and have not, according to Marx and Engels they are called the bourgeois and the proletarian class. [19]

Ideology of freedom and equality as stated above may not be fully implemented. Therefore, it is understandable why Emery Reves argued, that kind of independence as the ideals of humanity should be a synthesis between freedom and coercion or between independence and attachment.

A power that comes from outside prohibiting a person or any person kills another person or seizes property rights of others, is a limitation of personal freedom. Power that limits independence will give protection to any person against the threat of murder or robbery to be done by someone. With the power, everyone is confident and believe that the protection of murder and extortion will further increase the feeling of personal freedom or everyone. Thus the ideal of independence

is an ideology that is relative and depends on two factors: first, to what extent a person cannot act freely; second, to what extent a person is treated by others acting freely.

It can be argued that the state of the so-called independence among human beings can actually be created with synthesis between freedom and coercion or between independence and attachment. Therefore, according to history, democracy in the formal sense (which is based on freedom and equality) as a result of the exercise of the ideology espoused and absolutism in the country, which is then performed as democracy in the political field. With the ouster of power in the hands of a person or entity in the country sat representatives layers of people in the people's representative institutions. Democracy thus it then has consequences:

1. the necessity of people's representative body;
2. the necessity of election, either through free and confidential elections
3. the necessity of political parties;
4. the necessity of an institution that has the task of implementation, and responsible to the people through the representative body of the people.

As the consequence, the implementation of constitutional field will not be the same in countries that embrace the ideology of freedom and equality. Therefore, the implementation will show various possibilities as system adopted in the United Kingdom, France, Germany, the United States, and others.

#### **Democracy Based on Social and Economic Progress**

As noted, the basis of democratic freedom and equality has consequences of requirement for free competition in economics. Due to lack of the same capabilities of those who run the free competition, there is huge gap between the haves and the have not class. In practice, this second group of state administration cannot participate in determining constitutional affairs.

This fact is caused by the weak position of the have not, in addition it is also fact, that people's representative institutions controlled by the have group. The differences were then reinforced with industrial revolution, in which human labor no longer has significance in the production process. What then happened is the replacement of human labor with mechanical power the occurred. In a further development, unemployment occurred everywhere. Due to the expansion, the unemployment eventually leads to a variety of social problems.

Therefore, new discoveries in the field of engineering and industry occurred to enhance the means of production. This then resulted in doubling of production results flooding the communities. In accordance with the enactment of the laws of economics, the goods are thrown into the society becomes degenerate in price, which then leads to lower profits earned by the bourgeois.

This is the analysis of Marx and Engels (Ibid.). However this bourgeoisie will try to defend themselves in order to defend its interests, such as gain, control of the market value of their harvests, industrial production must inevitably be reduced. The consequence of the actions is massive dismissal of workers. It eventually leads to extensive unemployment.

After knowing and understanding the above ideology, a question arises, how is the basic application or ideology in the field of constitutional? To determine the application as well as the realization of democracy based on the ideology of communism, one must see it from the constitution of communist socialist countries. From the constitution of the communist countries it can be seen that the democracy embraced is embodied in the form of the dictatorship of the proletariat. In the system of the proletarian dictatorship, power in the state is represented by the proletarian class, the communist party except for certain differences as a result of a variety of specific or general factors, the principle of democracy in communist states is realized in the same pattern. (Marx and Engels, *Ibid.*)

### **Indonesian democracy**

Indonesia was born after World War II, a war that involved democracies and fascist or national-socialist states. As a nation that has experienced Dutch occupation for more than 350 years and Japan for more than 3.5 years, the Indonesian people really appreciate the meaning of independence and equality and democracy. Therefore there is a unity of views among the founders of the state of the system or principles that must be adhered to in the country to be established.

Indonesia declared its independent nation through a proclamation on 17 August 1945. However, the Constitution draft had been prepared earlier. In fact on June 1, 1945 the leaders sitting in Investigation Agency for Efforts and Preparation of Indonesian Independence have agreed on the basis of the adopted country. On June 1, 1945, Ir. Sukarno had uttered a speech known as the emergence of any ideology. The investigative bodies approved the establishment of Pancasila as the state foundation/philosophy.

At the time of Indonesian Independence Preparatory Committee established the Constitution of the State on August 18, 1945, the basic state is encapsulated in the fourth paragraph Preamble of UUD 1945. In the same section also establishes that body of popular sovereignty as the basis of the composition of the Republic of Indonesia. What is stated in the Preamble of the 1945 Constitution is also found in Article 1 (2) that sovereignty is in the hands of the people.

If sovereignty is defined as the highest authority in the state, the sovereignty of the people also means that the highest power in the state belongs to the people. In other words, there is no other authority to overcome the power of the people. Nevertheless the people's sovereignty must be based on God, just and civilized humanity, the unity of Indonesia, democracy led by the inner wisdom of deliberations/representatives, as well as to achieve social justice for all Indonesian people. In other words, sovereignty embraced by the people of Indonesia is based on Pancasila. If sovereignty is synonymous with democracy, then democracy embraced by Indonesian people is as stated in the Act of 1945 is Pancasila Democracy. The question is then on the meaning of Pancasila in relation to the Indonesian state.

When studied in depth, two pearls are found, they are unity in diversity and diversity in unity. If associated with human, human nature as a creature of God is a personal being and also social beings, this means that human nature is individual as well as social beings. According to the state ideology of Pancasila, human nature as a unity that should be

developed in balance and harmoniously. Thus Pancasila considers that human happiness will be achieved, if it can develop a relationship that is in harmony and balance between man and society. Because humans include physical dimensions and nonphysical dimensions, then the need for any human being consists of physical and non-physical aspects. Thus Pancasila Democracy is viewed from the aspect of material not only base itself on freedom and equality alone, or just basing ourselves on the progress in social and economic fields, but rather basing ourselves on both at once.

Pancasila Democracy is shared both by the Constitution of the Republic of Indonesia States as well as by the Constitution in 1950. The question is, how the implementation of Pancasila democracy in practice?

As is known, the Act of 1945 applied in the period 1945 to 1949 and 1959 to the present. In the first period coming into effect, it may be noted the prominence of the implementation of freedom and equality, especially in the political field. This becomes more prominent after the change of the prevailing system of government, namely ministers originally responsible to the President be accountable to the Central Indonesian National Committee which had previously been given legislative powers. This is further strengthened by a multi-party system. Thus liberal democracy was implemented in the period 1945 to 1949. The fact also occurs when the enactment of the Constitution of the Republic of Indonesia States in 1949 for approximately 8 months.

Why the form union state is applies only approximately 8 months? From the history of the state administration may be noted that the Indonesian people in general do not want the union state form. That is why the people of the regions, regional dissolve and join the State (Regional Section) of the Republic of Indonesia. In the end, of the 16 regions of the area there were only three part: State of the Republic of Indonesia, the State of East Indonesia, and the State of East Sumatra. As the realization of a desire to return to a unitary state the enactment of the Federal Law No.7 of 1950 consisting of 2 (two) articles, namely: Section I contains the Constitution While 1950; Article II contains the promulgation of the Basic Law.

As has been stated above, democracy adopted was the Constitution of 1950, as well as those adopted by the United Republic of Indonesia is Pancasila Democracy. The question is, how is the application of democracy in practice?

Because the period of validity of the Constitution of the United Republic of Indonesia is relatively short, the period was abandoned and the implementation of Pancasila democracy in the period of enactment of the Constitution of 1950 was carried out.

As a result of wide opportunity, political parties were established in 1945 (Government edict of November 3, 1945), then in the period of enactment of the Provisional Constitution of 1950, multi-party system was also implemented. The implementation was better after the issuance of Law No. 7 of 1953, on the first general elections in Indonesia.

The law is adhered to a proportional electoral system, and electoral system resulted in the enactment of multi-party system. Thus, the lack of freedom (freedom) to establish political parties is followed by elections by proportional electoral system causing disintegration of Indonesian

community in a variety of political groups, each with a different principle.

This means that in the period of enactment of the Provisional Constitution of 1950, democracy on the freedom and equality still exists in political life in Indonesia. There are four major political parties that time yetas there was no single political party that controls more than half the seats in the House of Representatives, plus the use of parliamentary system of government, the cabinet was no longer than two years. The lack of stability in the government sector has also brought impact due to lack of stability in the political field. As the consequence the work program of every cabinet or government experienced problems in the implementation. Therefore, it is understandable when the President of the Republic of Indonesia submitted its conception, namely on the establishment of the Mutual Cooperation Cabinet and the National Council.

In the end, the failure of constituent to establishes the basic state, the consequences may not be the enactment of the basic law that remain, the government offered to the constituent assembly in order to set 1945 as the Constitution as fixed law. This bid was not supported by at least 2/3 of the members of the constituent under the terms must be present and approve. For the second time a constituent did not successfully perform their duties. That is why on July 5, 1959 the President issued a decree including the setting of the re-enactment of the 1945 Constitution.

In the second period of the enactment of the 1945's, Pancasila Democracy was again not implemented. The Guided Democracy, a democracy in which all power in the state is self-centered President of the Republic of Indonesia was used. This continued until the issuance of supersemar, 1966, which is the beginning of the existence of the New Order.

One of the New Order's determination is that the will to implement the Act of 1945 purely and consequently, including Pancasila Democracy. As democracy in general, Pancasila Democracy is also a form a government that is never completely achieved. To borrow the words of Mac Iver in his book *The Web of Government*, Pancasila Democracy also grows into its being. This means that democracy embraced by the Indonesian people will continue to grow, which will inevitably be influenced by factors internal and external. Thus, globalization will also give color to Pancasila Democracy.

Originally Human Rights and Fundamental Rights of Citizen of Indonesia was considered a problem. then as a consequence of globalization, it colored the implementation of Pancasila Democracy. Therefore [20] formulated Pancasila Democracy as follows:

1. Pancasila democracy bases itself on freedom and equality and progress in the socio-economic as well;
2. Pancasila Democracy implies that the supreme power belongs to the people, which in the period between one elections to another was carried out entirely by the Assembly of the People.

The formulation of Pancasila Democracy in determining the direction and purpose in life of the nation under the auspices of NKIRaims to create prosperous society based on Pancasila, with prosperity and social justice (5<sup>th</sup> principle) based on the direction of the policies carried out by deliberation by elected representatives (4<sup>th</sup> principle) to

maintain the unity of Indonesia (3<sup>rd</sup> principle) and uphold the values of humanity that is fair and civilized (2<sup>nd</sup> principle), and based upon belief in one supreme God (the 1<sup>st</sup> principle) that the community justice and prosperity will be realized. At this level, this representative role order of a democratic system became the decisions related to state affairs and governance in Indonesia in the future.

### III. CONCLUSION

We can conclude that democracy is the participation of all people in taking political decisions and run the government. Political decision in question is a deal that is set to be a rule that will govern the lives of all the people itself. Involvement and participation of the people is very fundamental in a democracy, because democracy is not only related to the purpose of an assessment is generated by a government, but also to the whole process of making provision itself. For example, a government arbitrary (despotic) can also make decisions in accordance with the will of its people as possible in accordance with the needs of the people, but it cannot be called a democracy, because never involve citizens in setting each policy.

Basically, democracy as a form or system of government that involves all people to participate and govern through the intermediary of their representatives, idea or view of life that promotes equal rights and duties and equal treatment for all citizens, through a process of democratization.

Democratization is a process for realizing or enhances democratic life. There will be a problem if a state aspiration as a democratic state is not yet realized as expected. Therefore, democratization is defined as a process to overcome discriminatory restrictions. Overcoming discriminatory restrictions that citizens and groups or segments of society is not hindered by status or social rights is necessity, and participation can be performed in various activities involving public affairs and government.

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# CREATIVE ECONOMY DEVELOPMENT STRATEGY FOR ECONOMIC GROWTH TO PONTIANAK

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**Abstract.** This study aimed to analyze the policy development of creative industries in Pontianak using qualitative-descriptive analysis. In determining the sample, this study used a primary data of business creative industries in the Pontianak. This study described the development of creative industries in Pontianak viewed from the aspect of trading, aspects of the industry in general and aspect of employment. The result of this study showed that the creative industries were potentially developed in the Pontianak. From the potential of the creative industries could be known how the crucial policies and strategies were decided in the development of creative industries in Pontianak, which was compiled from the research findings in developing the policy development of creative industries in the Pontianak.

Keywords: Creative Industries Development Strategy, Growth and Policy

## I. INTRODUCTION

After rolling around in recent years in Indonesia, Creative Economy and Creative Industry increasingly hotly discussed both by the government, private sector and the culprit himself. In particular the government has increasingly put his attention. At least there is the Ministry of Commerce, Ministry of Industry, Ministry of Culture and Tourism, the Ministry of Communication and Information, and the Ministry of Labor. Because the term "industry" in the Creative Industries, cause a lot of interpretation, how contextually match between the Creative Economy, Creative Industries with Law No. 5/1984 on Industry. As a material for contemplation, are presented a variety of viewpoints on the Creative Economy and Creative Industry.

In the Indonesian Creative Economy Development Plan 2025, which was formulated by the Ministry of Trade explained their evaluasi creative economy. Based on this plan document can be seen that the shift from the agricultural era to the industrial era to the information age, along with the many discoveries in the field of information and communication technology and economic globalization. Development of industrialization creates employment patterns, patterns of production and distribution patterns are cheaper and more efficient.

A target of a cheaper and more efficient in the process of production and distribution of industrial concentration resulted in a shift from the West to developing countries like Asia because it can no longer compete with cheaper costs in the People's Republic of China (PRC) and Japan. This phenomenon directs industries in developed countries to optimize human resources and creativity. For that since the 1990s the world economy began to shift toward an economy that is supported by creativity in terms of the creative economy through creative industries.

Export development of creative industries in Indonesia as shown in Table 1. Based on the table it can be seen that the industry and the craft mempunyai nilai fesyien highest export. On average during the years 2010 - 2014 the export value of these two sectors respectively is Rp 56,184,906 million and Rp 29,146,592 million. This means that the role of these two industries is quite big in Indonesia export transactions for the creative industries.

TABLE 1  
Indonesia Creative Industry Development Year 2010 - 2014  
(Millions Of Rupiah)

No	Creative Industry Business Field	2010	2011	2012	2013	2014	Rata-Rata
1	Architecture	210	57	236	67	112	145
2	design	1.843.686	2.169.720	2.214.047	2.396.026	2.396.026	2.018.189
3	fashion	45.563.824	51.042.260	54.714.623	57.908.311	71.695.510	56.184.906
4	Film, Video and Photography	7,56	2,55	1,187	448	1,071	2,21
5	Craft	21.741.500	22.673.162	27.292.605	34.351.715	39.673.977	29.146.592
6	Computer Services and Software	-	-	-	-	-	-
7	Music	37,926	226	238	131	77,821	263,604
8	Market and Art Goods	38,665	60	78	82	108,409	32,653
9	Publishing and Printing	93,734	180,506	161,14	133,652	173,35	133,753
10	Advertising	51,675	39,365	64,626	72	132,478	51,304
11	Interactive games	53,784	68,388	64,626	132,2	170,233	81,702
12	Research and	-	-	-	-	-	-
13	Performing	-	-	-	-	-	-
14	Television	-	-	-	-	-	-
<b>TOTAL</b>		<b>69.773.900</b>	<b>76.462.033</b>	<b>84.840.178</b>	<b>95.208.601</b>	<b>114.924.970</b>	<b>79.602.789</b>

Source :BPS, 2015

From table 1 can also be obtained information that Indonesia is one country that has the potential in the development of creative industries both in the ASEAN region and the world market. It is inseparable from raw material potential in Indonesia is abundant. Nevertheless, the ability of Indonesian human resources in the transfer of technology and creativity is still relatively low. This resulted in the development of creative industries tend to be sluggish.

Based on the development of creative industries trade above be interesting to deepen the development of creative industries in Indonesia. This study will describe the development of creative industries in Indonesia, especially the city of Pontianak viewed from the aspect of trade, aspects of the industry in general and employment. Information about the development of creative industries is expected to be one of the policy reference in positioning the creative industries as a future industry that have a significant role in the growth of the economy of the city.

Creative Industry by reference to the following foreign: Creatives Industries as those industries which have their origin in individual creativity, skill & talent, and which have a potential for wealth and job creation through the generation and exploitation of intellectual property. This includes: advertising, architecture, the art and antiques market, crafts, design, designer fashion, film and video, interactive leisure software, music, the performing arts, publishing, software and computer services, television & radio.

This definition of the Ministry of Trade to explore further how to calculate it, so he found one method of calculating quickly by using secondary data that is based on ISIC (data from BPS). From the data, there were 14 sub-sectors which can be described figures kotribusi economy. Other definitions relating to creative industries is the creativity, skill and talent, namely:

- Creativity (or creativeness) is a mental process involving the generation of new ideas or concepts, or new associations between existing ideas or concepts.
- A Skill is the ability or talent to perform a task well or better than average.
- Talent is a personal gift/skill.

There is also an opinion stating creative economy together with the creative industries. Research by the New England Foundation for the Arts (NEFA) mentions : Therefore, our definition of the creative economy is represented by the 'cultural core.' It includes occupations and industries that focus on the production and distribution of cultural goods, services and intellectual property. Excluded are products or services that are the result of non-culturally based innovation or technology. While a broader notion of the creative economy is valuable to examine, we concentrate on what could be considered the cultural component of the creative economy. The center circle, labeled "Cultural Core," represents NEFA's new research definition and is nested within a broader circle of creative industries. The band around the core labeled "Cultural Periphery" represents the occupation and industry categories that may be added to the core to customize a particular local creative economy study being done.

Table 2  
Provides Information On The Types Of Creative Industries In Indonesia

No	Creative Industry Business Field	Information
1	Advertising	Creative activities relating to the creation and production of advertising, among others: market research, advertising communications planning, advertising luarruang, production of advertising material, promotions, public relations campaigns, display advertising in print and electronic media.
2	Architecture	Creative activities related to the production daninformasi building blueprints, among others: architectural garden, perencanaan kota, construction cost planning, conservation bangunan warisan, tender documentation, etc.
3	Market Art and Antiques	Creative activities relating to the creation and trade, employment, antique and decoration products through auctions, galleries, shops, supermarkets, and internet.
4	Craft	Creative activities associated with the creation and distribution craft products include handicraft items made of: precious stones, accessories, goldsmith, silver, wood, glass, porcelain, fabric, marble, limestone, and iron.
5	design	Creative activities associated with the creation of graphic design, interior, product, industry, packaging, and consulting identitas perusahaan.
6	Fashion design	Creative activities associated with the creation of clothing design, design footwear, and other fashion accessories design, produksi pakaian fashion and accessories, consulting fashion product lines, as well as the distribution of fashion products.
7	Video, Film and Photography	Creative activities associated with the creation of production video, film and photography, as well as the distribution of video recordings, movies. Termasuk didalamnya scriptwriting, dubbing the film, cinematography, soap operas, films and exhibitions.
8	Interactive games	Creative activities relating to the creation, production, and distribution of computer and video games that are fun, agility, and education
9	Music	Creative activities relating to the creation, production, distribution, and retail voice recordings, recording copyrights, promos musik, lyricist, composer or music, pertunjukan musik, singers, and musical compositions.

FIGURE 2.

FACTORS DRIVING ACTOR AND CREATIVE INDUSTRIES

No	Creative Industry Business Field	Information
10	Performing Arts	Creative activities pertaining to business associated with content development, production of the show, ballet, traditional dance, contemporary dance, drama, traditional music, musical theater, opera, including a tour of ethnic music, design and manufacture fashion show, stage layout, and layout exposure.
11	Publishing & Printing	Creative activities related to content writing and publishing of books, journals, newspapers, magazines, tabloids, and digital content as well as the activities of news agencies
12	Computer Services and Software	Creative activities related to the development of information technology, including computer services, software development, systems integration, systems analysis and design, architectural design software, design of infrastructure software and hardware, as well as the design of the portal.
13	Television and Radio	Creative activities related to business creation, Production and packaging, broadcasting and transmission of television and radio.
14	Research and development	Creative activities related to its innovative business offering science and technology invention and application of science and knowledge for product improvement and creation of new products, new processes, new materials, new tools, new methods, and new technologies that can meet the needs of the market

Source: Ministry of Trade (2008)



Source: Ministry of Trade (2008)

The significance of the presence of the creative economy as seen in Figure 1 would require the actors and the various factors that would lead to titikyang expected by all parties. There are three main actors in the development of creative economy, namely: government, business and scholars. Harmonization and integration of these three actors will be the "energy" is very large in accelerating the development of creative industries in Indonesia, especially in the city of Pontianak. Further explanation can be observed in Figure 2. Based on the images could be unknown factors that will drive the development of creative economy in Indonesia, namely:

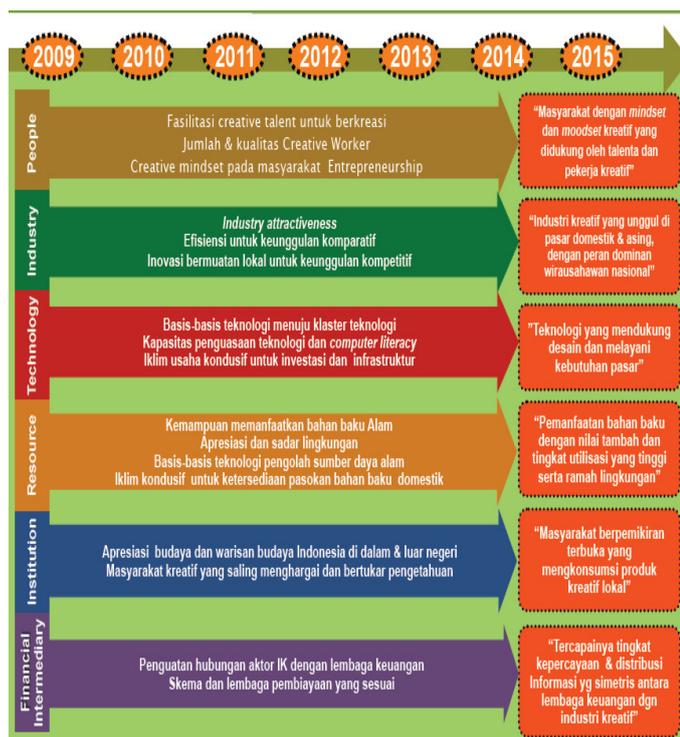
- From the government side: the direction of educational, creative beings and conservation awards, and incentives.
- From a business standpoint: entrepreneurship, business coaching and mentoring, financing schemes, marketing and business matching, creative community.
- From the scholars: creative-oriented curriculum and entrepreneurship, freedom of the press and academic, innovative multidisciplinary research, education and training institutions.

FIGURE 1. THE IMPORTANCE OF CREATIVE ECONOMY



Source: Ministry of Trade (2008)

FIGURE 3.  
ROADMAP TO DEVELOPMENT OF CREATIVE INDUSTRY  
IN INDONESIA



Sumber: Departemen Perdagangan RI (2008)

Figure 3 provides information on the Roadmap to Development of Creative Industry in Indonesia in 2009 - 2015. In this roadmap mentioned there are six pillars that will be developed with each target until 2015. The six pillars are:

- People; end target in 2015 is a society with a creative mindset and moodset supported by talented and creative workers.
- Industry: target the end of 2015 is a superior creative industries in domestic and foreign markets by the dominant role of national entrepreneurs.
- Technology; end target in 2015 is a technology that supports the design and serves the needs of the market.
- Resource; end target in 2015 is the use of raw materials dengannilai-added and high utility rates and environmentally friendly.
  - People; end target in 2015 is a society with a creative mindset and moodset supported by talented and creative workers.
  - Industry: target the end of 2015 is a superior creative industries in domestic and foreign markets by the dominant role of national entrepreneurs.
  - Technology; end target in 2015 is a technology that supports the design and serves the needs of the market.
  - Resource; end target in 2015 is the use of raw materials dengannilai-added and high utility rates and environmentally friendly.
  - Institution; end target in 2015 is an open-minded people who consume local creative products.
  - Financial intermediary; end target in 2015 is to achieve the level of trust and symmetrical distribution of information between financial institutions and the creative industries.

## II. METHOD

Methods of data analysis used in this study includes qualitative and quantitative data analysis (descriptive analysis and SWOT).

### Descriptive analysis

The use of descriptive analysis (descriptive analysis) for the purpose of presenting or describing field findings. The main purpose of statistics is to draw conclusions from the sample to the entire population. In calculating the appropriate statistics to summarize the sample, can be used the way the frequency (tables and graphs) and a distribution center.

### Frequency distribution (Tables and Graphs)

The frequency distribution is a bunch of data that showed the same category, the number of observations in each class. How to calculate the frequency can be done by grouping samples behavioral observation based on specific categories. This method allows the observer to see the size and distribution of the sample frequency in each category. Observation of the frequency distribution can be done discretely and continuously. The observations will be more easily identified by using tables and graphs.

The steps in making frequency distribution is:

1. Determine the intended question.
2. Collecting raw data.
3. Organize or group data (frequency distribution).
4. to showing the data (graph).
5. Make conclusions.

Frequency distribution graph can be shaped;

1. The line (line)
2. Rod (bar)
3. Cake (pie)
4. The frequency polygon (consisting of a line connecting the middle class and the class frequency).

A distribution center (center of distributions) can be described using three tools, namely mode, the middle value (median), and the average value (the mean). The mode is defined as the value that appears most frequently in the observation of the sample. Mode is the easiest way to obtain the size of a distribution center. However, the mode is not the best way to describe the size of the distribution center, because it depends on the pattern of grouping data. The median or middle value can also be used as a way to obtain the size of a distribution center, but also highly dependent on the pattern of grouping data.

The arithmetic mean is the sum of the sample values divided by the number of samples. Mathematically form:

$$\bar{X} = \frac{\sum x}{n}$$

A measure that could explains a distribution center well is the average value (mean), because the average value does not depend on the pattern of grouping data. Nilai average is obtained by adding up all the data sample observations and dividing by the sample size (n),

The average deviation is the arithmetic mean of the absolute price deviation from the arithmetic progression. Mathematically form:

$$MD = \frac{\sum |x - \bar{X}|}{n}$$

Variance is the arithmetic mean of the squared deviations from the average. Mathematically form:

$$s^2 = \frac{\sum (x - \bar{X})^2}{n - 1}$$

Standard deviation is the square root of the variance. Mathematically form:

$$s = \sqrt{\frac{\sum (x - \bar{X})^2}{n - 1}}$$

### SWOT analysis

SWOT methods used to formulate the qualitative and holistic both internal and external environment of the object being observed. In the internal sphere, the analysis will explain in detail the aspects of weakness (weakness) and business strength (strength). Meanwhile, in the external scope of this analysis will be explained in detail on various aspects of chance (opportunity) and constraints / threats / challenges (threat) of business that will be encountered

FIGURE 4.  
Diagram Swot Analysis



Sumber: Rangkuti (2008)

#### Quadrant 1

This is a situation that is very menguntungkan. Perusahaan the memilikipeluang and strength so that it can take advantage of the opportunities that ada. Strategi yang should be applied in these circumstances is to support aggressive policy pertumbuhan yang.

#### Quadrant 2

Despite facing various threats the company still has kekuatan dari internal aspect. The strategy should be applied is menggunakan kekuatan untuk take advantage of long-term opportunities by way diversifikasi produk strategy / market.

#### Quadrant 3

The company faced enormous market opportunities, but on the other hand ia menghadapi constraints / internal weaknesses.

Business conditions in the third quadrant is mirip dengan Question Mark on BCG's corporate strategy matrik. Fokus adalah meminimalkan internal problems so that it can merebut peluang good market.

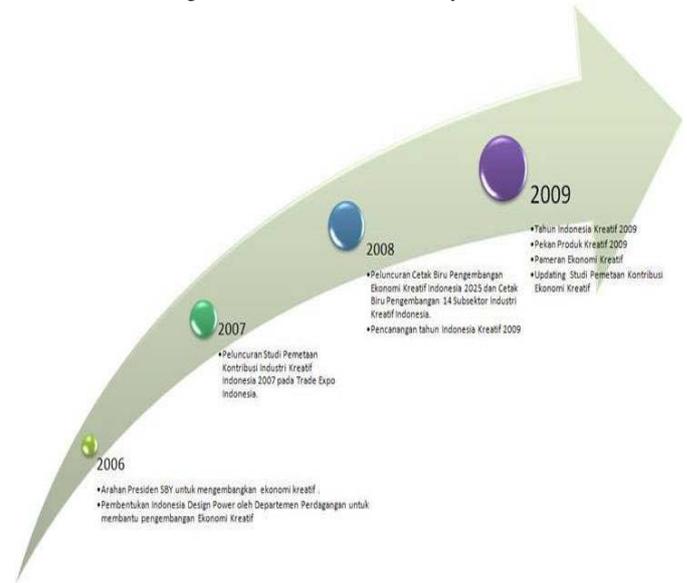
#### Quadrant 4

This is a situation that is not very profitable company tersebut menghadapi various threats and internal weaknesses.

## III. RESULTS AND DISCUSSION

Creative Economy concept is increasingly a major concern in many countries echoes the Creative Economy started from the problems of the importance of enhancing national saing produk to face the global market. Government through Departemen Perdagangan in collaboration with the Ministry of Industry and the Ministry of Koperasi dan Small and Medium Enterprises (SME) and supported by the Chamber of Commerce then formed tim Indonesia Design Power 2006-2010 which aims to put products Indonesia menjadi products of international standard but still has a national character yang diterima in the world market. Once aware of the magnitude of the contribution of the creative economy to the state government subsequently conducted a study more intensive and blue meluncurkancetak creative economic development. Figure 5 describes the design power ekonomikreatif Indonesia

FIGURE 5.  
Design Power Of Creative Economy Indonesia



Based on the directive from the President in 2006, the department associated with creative economic activities directly follow up on the policy development of creative industries in Indonesia to form a special team named Indonesia Design Power. The team aims to develop the creative industries in Indonesia. The Government through the Ministry of Commerce (MOC), Ministry of Industry (Ministry of Industry) and the Ministry of Cooperatives and SMEs (SMEs) continue to conduct the study as the basis for the development of creative industries. Given the magnitude of the contribution potential of creative industries to the economy, the government continued to hold the event (events) to stimulate the growth of creative industries such as: (1)

Launch Study Mapping Contributions Indonesia's Creative Industry in 2007 in the event the Trade Expo Indonesia in October 2007, (2) The declaration of the Year Indonesia creative in 2009, (3) creative Product week 2009, and (4) creative Economy Exhibition.

Table 3 shows the development of the growth of creative industries in Pontianak during the years 2012 - 2014. According to this table can be seen that on average the highest growth occurred in the culinary industry. Value growth in each of these industries was 1,948 in 2012, 2,057 in 2013 and 2,166 in 2014. Looking at this phenomenon and the government needs to formulate a policy setting that directs the culinary industry in the important role of the industry in the economy.

Table 4 provides information on the percentage of the development of creative industries in Pontianak during 2013 - 2014. Information from this table to explain that on average the culinary industry has the largest percentage growth in Pontianak.

Table 5 describes the development of the growth of creative industries in Pontianak during the years 2012 - 2014. In terms of total growth seen that the highest growth occurred in the culinary industry. The average value of the industrial growth was 10.7%. It mengindiskan that the culinary industry became the target of developments in society. In the long term this condition need serious attention from the government and industry players culinary in Pontianak.

TABLE 3  
Growth Of Creative Industries In Pontianak Year 2012 – 2014

No	Creative Industry Business Field	2012	2013	2014
1	application and game development	129	137	145
2	architecture and interior design	27	29	31
3	visual communication design			
4	product design			
5	fashion	324	343	362
6	film			
7	video animation			
8	photography	4	5	6
9	craft (handicraft)	161	170	179
10	culinary	1948	2057	2166
11	music	18	20	22
12	publishing	52	57	61
13	advertising			
14	performing Arts			
15	art	5	7	9
16	television and radio	52	59	63

Source: City Disperndag Pontianak (processed)  
Google Translate for Business: Website translationPrivacyHelp

The development of the creative industry sector contributed 16 to the total imports of the creative industries in Pontianak can be seen in Table 4. In this table, it appears that on average over the years 2012-2014 industry subsector art provide a substantial contribution to the development of the creative industry in Indonesia, namely amounted to 9.52%. This indicates that the sub-sector who belong to the creative industries in Pontianak City has the potential and a very large

role in the economy Kota.Potensi and this role does not stop at the target the economy (economic growth), but also in the global of competition that emphasizes the technology and creativity.

TABLE 4  
CREATIVE PERCENTAGE IN PONTIANAK CITY  
INDUSTRIAL DEVELOPMENT  
YEAR 2012 – 2014

No	Creative Industry Business Field	2012	2013	2014
1	application and game development	8	8	1,95
2	architecture and interior design	2	2	2,30
3	visual communication design	-	-	-
4	product design	-	-	-
5	fashion	19	19	1,85
6	film	-	-	-
7	video animation	-	-	-
8	photography	1	1	6,67
9	craft (handicraft)	9	9	1,76
10	culinary	109	109	1,77
11	music	2	2	3,33
12	publishing	5	4	2,94
13	advertising	-	-	-
14	performing Arts	-	-	-
15	art	2	2	9,52
16	television and radio	7	4	4,02

Source: City Disperndag Pontianak (processed)

Based on data Disperndag Pontianak City can be seen that the creative industries in Indonesia (some 16 industry) provides a big role. During the years 2012 -2014. It indicates that the creative industries can be one solution in addressing unemployment and poverty in the city of Pontianak in the long term.

TABLE 5  
DEVELOPMENT OF CREATIVE INDUSTRIES IN PONTIANAK  
YEAR 2012 – 2014

No	Creative Industry Business Field	2012	2013	2014
1	application and game development	129	137	145
2	architecture and interior design	27	29	31
3	visual communication design	-	-	-
4	product design	-	-	-
5	fashion	319	343	362
6	film	-	-	-
7	video animation	-	-	-
8	photography	4	5	6
9	craft (handicraft)	158	170	179
10	culinary	1948	2057	2166
11	music	18	20	22
12	publishing	52	57	61
13	advertising	-	-	-
14	performing Arts	-	-	-
15	art	5	7	9
16	television and radio	52	59	63

Source: City Disperndag Pontianak (processed)

TABLE 6  
CREATIVE INDUSTRY SUB-SECTOR OF DATA PER SUB-DISTRICT  
IN THE CITY OF PONTIANAK IN 2014

No	districts	N or th	E as t	Sout heas t	Wes t	Sout h	Ci ty	Am ount
1	application and game development		4	17	1	23	10	145
2	architecture and interior design				3	13	15	31
3	visual communication design							
4	product design						19	
5	fashion	4	58	33	40	41	0	362
6	film							
7	video animation							
8	photography			1	1		4	6
9	craft (handicraft)	21	22	25	32	23	77	179
10	culinary		43				82	216
11	music		8	253	168	481	6	6
12	publishing	1	5	5	11	12	28	61
13	advertising						10	10
14	performing Arts							
15	art		5				4	9
16	television and radio		7	6	3	5	42	63
	<b>TOTAL</b>							<b>3054</b>

Source: City Disperndag Pontianak (processed)

The development of creative industries in Pontianak relatively well. This development is inseparable from the existence of Indonesia as a potential area of the country that has abundant natural resources and relatively cheap in the creative industry development potential of a region / country to be important for the creative industry is an industry that rely on the availability of efficient resources and their creativity. Creativity is one of the capital to compete in the national and international markets. In addition to creativity, the creative industries are also required to be able to do good business efficiency in the production process as well as in marketing activities / distribution. To that end, there should be more scrutiny of what the internal and external aspects of the creative industries in Indonesia. Figure 12 provides information about the internal and external analysis of the industry.

FIGURE 12.  
MATRIX INTERNAL AND EXTERNAL ASPECTS OF CREATIVE  
INDUSTRY IN INDONESIA

Internal and External Aspects	Strength (S)	Weakness (W)
	Backed by relatively high human creativity	Quality control systems is not maximized
optimal utilization of information technology	Marketing of products to foreign countries is not optimal	
The linkage between the activities of the industry is relatively good	Limited capital for business expansion	
Opportunities (O)	Strategy S-O	Strategy W-O
Produk diminati oleh konsumen	Peningkatan kreativitas SDM untuk menghasilkan produk sesuai permintaan pasar	Memaksimalkan sistem quality control
Permintaan selalu ada (domestik dan luar negeri)	Optimalisasi pemanfaatan teknologi informasi dan komunikasi	Aktif mengikuti pemarkan dagang dan kerjasama perdagangan luar negeri
Di dukung oleh adanya perguruan tinggi dalam penyediaan SDM yang berkualitas dan sesuai kebutuhan industri	Peningkatan kerjasama antara industri kreatif dengan perguruan tinggi	Kerjasama dengan lembaga keuangan
	Peningkatan kerjasama antara industri kreatif	Mencari alternatif sumber-sumber pembiayaan usaha
Threats (T)	Strategy S-T	Strategy W-T
Competition relatively tight with a kind on a national and international level	Increase creativity and efficiency of production and marketing	The existence of market information and a complete marketing on international markets
Raw material prices tend to rise	Looking for raw materials quality and affordable	Maintain market share that has been dominated mainly high consumer loyalty
The availability of energy sources tend to be smooth	The availability of adequate and sustainable energy, including the possible use of alternative energy sources	

Source: Results of the study, 2016

#### Aggressive Strategy (Strengths - Opportunities)

1. To increase the creativity of human resources to produce products according to market demand,
2. Optimizing the utilization of information and communication technology,
3. Increased cooperation between the creative industries and universities,
4. Increasing cooperation between the creative industries.

#### Strategy Turn - Around (Weakness - Opportunities)

1. Maximizing the quality control system,
2. On trade shows and foreign trade cooperation,
3. Cooperation with financial institutions,
4. Finding alternative sources of business financing.

#### Diversification Strategy (Strengths - Threats)

1. Enhance creativity and efficiency of both production and marketing,
2. Finding quality raw materials and the price is affordable,
3. The availability of adequate resources and sustainable energy, including the possible use of alternative energy sources.

#### Defensive Strategies (Weaknesses - Threats)

1. The existence of market information and a complete marketing on the international market,
2. Maintaining market share which has been controlled (especially loyal customers).

#### IV. CONCLUSIONS

Based on the analysis and discussion in this study, it can be concluded the following important issues:

1. On the average, the highest growth in the industries of art. For greatest contribution to the culinary industry. As for the highest growth occurred in the culinary industry.
2. In general, the creative industries in Pontianak has a considerable role to economic growth.

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# The Factors Affecting Stock Prices On Go Public Industry Company Listing Of Indonesia Stock Exchange (Food and Beverages, Pharmaceuticals and Consumer Goods)

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**Abstract.** Concerning on many factors which can influence stock price, this research will be limited on some factors. They are: deposit interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity. The hypothesis of this research is formed as follow: (1) deposit interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity influence the stock price, (2) deposit interest rates influences stock price (3) stock trading volume influences the stock price, (4) Leverage ration influences the stock prices, (5) Dividend payout ratio influences stock price, (6) Return on equity influences stock price. There are 8 industry companies as a sample in this research, they come from Fod and Beverages industry and Consumer Goods which Go Public in Indonesia Stock Exchange, in reseach periode time on 2003 until 2006. The conclusion of result of this research anlysis and discussion are: (1) All independent variables which consist of: : deposit interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity have no significant impacts on stock price; (2) The deposit interest rates has no significant impact on stock price; (3) Stock trading volume has no significant impact on stock price; (4) Leverage ratio has significant impact on stock price; (5) Dividend payout ratio has no significant impact on stock price; (6) Return on equity has no significant impact on stock price.

Keywords: Stock Prices, Pubric Industry Company Listing, Indonesia Stock Exchange

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## I. INTRODUCTION

### Background to research

Stock market activity in its development not only has function to increase potential people funding resources in a midle or longterm for the company which need it, but also as an alternative extra income for new investment that is so limited in Indonesia.

Stock price change in Indonesia Stock Exchange can be influenced by the economy condition, the strengthness and the weakness of the companies which are member of go public, that reflects on finance report, investor action, policit situation, and the activities in the Indonesian Stock Exchange it self.

The interest rates determine much in investing at the stock market. The increasing of the interest rates will increase opportunity cost for investor which will invest money on the stock. While in the flagging economy, the increasing of interest rates will make bigger the loan of company then will influence the company in paying deviden to the stock holder. The effect of decreasing deviden paying to the holder can influence holder interest of investor to be, in buying stock which is traded on the stock market.

The stock trading volume tends to run into down in more flagging economy condition. It can be showed by the reaction of investors who feel there is less investment benefit and can affect the stock price change.

When the demand is bigger than the stock offering, it will push the increasing of stock price traded in the stock market. In other hand when the demand is smaller than stock offering, this will push the decreasing price on stock traded.

The understanding of stock price and factors that affect are so significant because it can give information for investor and potential investorin investing stock.

The normative purpose which wants to be reached by the company is to maximize the prosperity of company owner. The company ownership is showed by stock that is owned by the investor. To maximize the prosperity of company owner or company maximize the company value by increasing the prosperity of stocks holder.

Concerning on many factors that can affect stock price, this research will be limited in some factors:

- a. Deposit interest rates
- b. Stock trading volume
- c. Leverage ratio
- d. Dividend payout ratio
- e. Return on equity

Based on the problems, the writer is interested in conducting research about "THE FACTORS AFFECTING STOCK PRICE ON GO PUBLIC INDUSTRY COMPANY IN INDONESIAN STOCK EXCHANGE"

### Statement of Problems

Based on the explanations above, it can be stated some problems. There are: a) Do the interest rates, stock trading volume, leverage ratio, dividend payout and return on equity affect stock price? b) Does the deposit of interest rates affect stock price? c) Does stock trading volume affect stock price? d) Does leverage ratio affect stock price? e) Does dividend payout affect influence stock price? f) Does return on Equity affect stock price?

### Research Purposes

The purposes in this research are : a) To determine whether the interest rates, stock trading volume, leverage ratio, dividend payout and return on equity affect stock price b) To determine whether the deposit of interest rates affect

stock price c) To determine whether stock trading volume affect stock price d) Does leverage ratio affect stock price e) To determine whether dividend payout affect influence stock price f) To determine whether return on Equity affect stock price

### Stock Market

Stock market is also called Capital market or Stock Exchange, is primarily a common platform for the buyers and sellers funding.

Stock market is one of alternative longterm funding sources for companies which are going public, as a platform for investor who has excess funding sources and another party who needs the longterm funding. Stock market for the party who needs funds is one of trading sources, while for the investor, it is an alternative for investing. Stock market will have more functioning if the party who needs funds make it as an efficient trading source, and for the potential investor, it is as profitable investment alternative.

Some advantages of stock market according to [1], are:

1. To provide funding sources (longterm) for business world and also possibly to allocate funding sources optimally.
2. To give investment mode for investor and also possibly to diversify effort
3. To provide leading indicator for economic country trend.
4. To expand company ownership to middle layer of people.
5. To expand company ownership, transparency and profesionalism, create the good condition business.
6. Create the job vacancy / interesting job.
7. To give the opportunity in owning the health and potential company.

### Approach of Stock Prices Value

The funding sources from internal and external finance has to be managed efficiently and effectively in reaching the expected goal.

The main duty of a finance manager has to be able "to plan, for obtaining, and use funds to maximize the value of a firm" [2].

The value of a company is reflected from stock price in stock exchange for companies which are go public. Furthermore the development of stock price of a company or firm reflects the development of company value.

Indonesia Composite Index ( IDX), is firstly knows in April 1st,1983 as movement indicator of stock prices which is noted in Indonesian Stock Exchange as a common stock or preference stock. Counting basis day of IDX is in August 10, 1982, the value is 100, with 13 total stocks noted at that time. Since the day all stock transactions refer to the point. If today IDX is 500 point and the next day will be 505 point, it means that there is 5 point increasing. The regular increasing indicates investment condition and economy country are in the good condition. Otherwise, the decreasing means the not-healty of investmen climate.

[3] explains the IDX (IHSG) counting using certain formula which are combination of all transactions of sectoral stocks. Because of different total and stock price each sectoral, sometimes IDX does not reflect the real movement of

stock. For the high value and volume stocks will get bigger wight. To count IDX (IHSG), it can use this formula as follow:

$$IHSG = \frac{Nilai\ Pasar = Jumlah\ saham\ tercatat \times H\ arg\ a\ terakhir}{Nilai\ Dasar = Jumlah\ saham\ tercatat \times H\ arg\ a\ perdana} \times 100 \quad (1) \quad [4]$$

It explains:

IHSG = Indonesia Composite Index ( IDX)

Nilai Pasar (Market Price): the average price of market price ( total of stock in the market is multiplied by the market price each pieces) from common stock and preference stock in day -t.

Basic Price (Nilai Dasar) : same as market price but starts in August 10,1982

Or can be written as:

$$Indeks = \frac{\sum Nilai\ Pasar}{\sum Nilai\ Dasar} \times 100 \quad (2)$$

Explanation:

Nilai Pasar (Market Price) : Number of stock price multiplied by market price (market capital)

Basic Price: Number of stock in basic day multiplied by stock price on basic day

According to [1], fundamental aspect is the identified factors than can affect stock. Analysis of fundamental is techniques which try to estimate future stock price, it si done by:

1. Estimating the fundamental factor value that affect the next stock price.
2. Applying the factors relation in order to obtain stock price estimation.

Fundamental Analysis is often called firm analysis, because of using company finance data in counting stock intrinsic value . Stock price reflects intrinsic value of that stock., it explains how to define stock price based on a future company ability.

[5] states The DOW Theory, it is the oldest and the most famous technical analysis in defining price major trend in stock exchange. The technical analysis studies stock and stock exchange based on offering and ordering. The technical analysts use price history graphic and transaction volume to predict next movement.

### Stock Price Approach Model

Basicly stock price is influenced by the ordering and offering strength , but to do estimation stock price wel, it also nedds company operational data., audited finance report, next company performance and economy condition.Defining stock price is a complicated process, in which all analyst estimate intrinsic value of stock.

In this research, stock price are influenced by 5 independent variables.

- a. The deposit interest rates is an investment platform which usually supposed to no have risk. Theoretically it can be explained that if the interest rates is high in Bank, it causes lower investment activity in stock, because investors tend to deposit or save his money to obtain high interest rates than invest the money for stock in stock exchange, this investsment has high risk with relative profit.

b. Stock trading volume is result from measurement of offering and ordering of traded stock price in stock exchange that can lead on the increasing of stock itself.

$$V P S = \frac{\text{Volume Trading Shares}}{\text{Volume Listed Shares}} \times 100\% \quad (3)$$

c. The leverage ratio shows how far the company is funded by external party or show proportion on the use of debt to fund company investment.

$$L e v = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100\% \quad (4)$$

d. Dividend policy is a decision whether the obtained earning of the company will be shared to investor as dividend or hold in retained earning to fund next investment. The relation between dividend policy and stock price shows that bigger dividend payment tends to increase the stock price. The increasing of stock price means the increasing company value [6].

The earning estimation which will be accepted by the investor measured by dividend payout ratio.

$$D p r = \frac{\text{Expected dividen}}{\text{Required rate of ratio}} \times 100\% \quad (5)$$

e. Return on equity is an ability from personal capital to make return for investor. Each personal capital will make net return available for stock holder [7]

$$R O E = \frac{\text{Net Income}}{\text{Total Equity}} \times 100\% \quad (6)$$

### Conceptual framework

Conceptual framework which reflects The Factors Affecting Stock Price On Go Public Industry Company In Indonesia Stock Exchange (Food and Beverages, Pharmaceuticals and Consumer Goods), is drawn as:

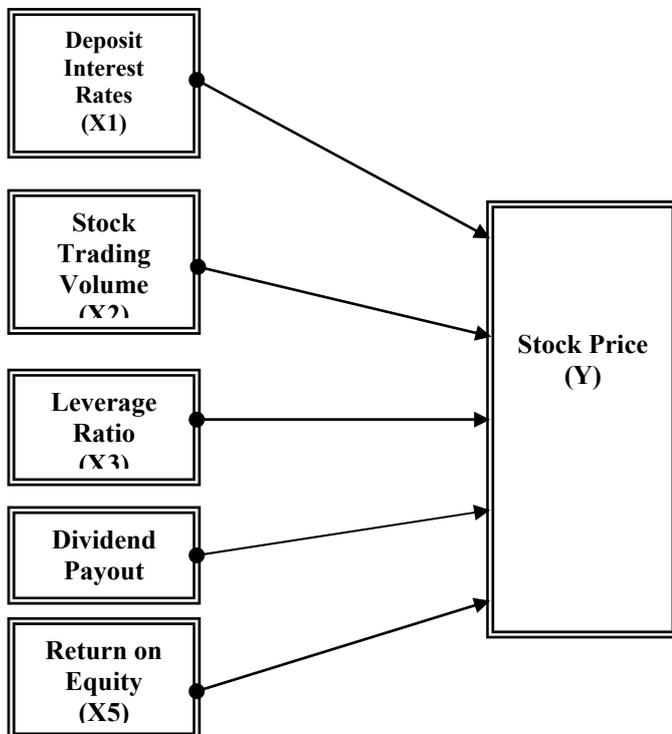


Fig. 1 Conceptual Framework

### Research Hypothesis

Based on the explanation about conceptual framework of this research, it can be defined these hypothesis: a) The deposit of interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity affect stock price. b) The deposit of interest rates affects stock price. c) Stock trading volume affects stock price. d) Leverage ratio affects stock price. e) Ratio payout dividend affect stock price. f) Return on equity affects stock price.

## II. METHODS

### Action Research

The research is conducted in Food and Beverages industry company, Pharmaceuticals and Consumer Goods which go public in Indonesian Stock Exchange with 4 years reseach period (2003 until 2006).

Research data is obtained from finance report posted by company and noted in Indonesian Stock Exchange.

### Population and Research Sample

Population are all industry companies which go public in Indonesia Stock Exchange. Sample selection is done by Purposive Sampling method; not randomly sampling taking and sample is choosen based on consideration and certain criteria. Company is selected according to the annual finance report post and relating activity with variable item researched during 2003 to 2006 in which there are 8 companies as sample.

### The definition of Research Variable Operational

In this research, independent variables are the deposit of interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity while the dependent variable is stock price. The definition of operational can be explained as follow:

1. The deposit of interest rates (X1)  
To define the average of interest rates, the minimum duration time is one year required by investors on the stock investment, if comparing with interest rates in Government Bank in that year, measured by percent unit.

2. Stock Trading Volume (X2)  
It is as comparison between stock trading volume each year with available stock trading volume traded in that year, counted for each different stock among one company to others, measured by percent unit.

$$V P S = \frac{\text{Volume Trading Shares}}{\text{Volume Listed Shares}} \times 100\% \quad (7)$$

3. Leverage ratio (X3):  
It is funding which measured in a decimal unit or percent.

$$L e v = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100\% \quad (8)$$

4. Dividend payout ratio (X4):  
It is a comparison between paid total dividend and net earning measured measured by percent unit.

$$D p r = \frac{\text{Expected dividen}}{\text{Required rate of ratio}} \times 100\% \quad (9)$$

5. Return on equity (X5):  
It is a company effectivity measurement in using own capital with percent unit measurement.

$$R O E = \frac{\text{Net Income}}{\text{Total Equity}} \times 100\% \quad (10)$$

6. Stock Price (Y)  
The variable which indicate stock price change in rupiah unit based on annual Closing Price of every company.

#### Data Collection Procedure

Data used in this research is secondary data obtained from Indonesian Stock Exchange and another book reference source, reseach objective report,academic journal and magazine. Type of data collected is development data of company finance report of Food and Beverages, Pharmaceuticals dan Consumer Goods company industry during 2003 to 2006.

#### Research Assumption

Based on the background and research hypothesis, the research assume: "The deposit of Interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity affect stock price".

#### Reseach Limitation

The researcher only do research on things that relate with deposit of interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity and reseach duration from 2003 to 2006.

#### Data Analysis Technique

Based on collected data character, this research uses finance analysis tool, which conduct analysis by using finance formulations and statistic method.

#### Multiple Linear Regression Analysis

Multiple Linear Regression Analysis is an analysis of research data that have linear relation of two or more variables. In this research uses regression equation as:

$$Y = a + b_1 X_1 + b_2 X_2 + \dots + b_5 X_5 + e \quad (11)$$

Where:

- Y = Stock Price
- a = Constant Value
- b = Regression coeeficient
- X<sub>1</sub> = deposit of interest rates
- X<sub>2</sub> = stock trading volume
- X<sub>3</sub> = Leverage ratio
- X<sub>4</sub> = Dividend payout ratio
- X<sub>5</sub> = Return on equity
- e = random mistake

#### Classical Assumption Test

Classical Assumption Test aims to test whether model used is good or not in thisresearch, the goodone will get Best Linear Unbias Estimator (BLUE) with assumption:

- a. Non Multicollinearity Test
- b. *Homoscedaticity*
- c. Non-Autocorrelation
- d. Normal Distribution

The regression model in this research will be tested by Multicollinearity Test, heteroscedasticity, autocorrelation, and normality.

##### 1. Multicollinearity Test

Multicollinearity is presence ofperfect linear relation (almost perfect) among independent variable of regression model [8]. Detection of Multicollinearity according to [9] can be seen from TOL or *Tolerance* and VIF (*variance inflation factor*). If TOL approaches 0 (zero) and VIF > 10, then multicollinearity is in the model, otherwise if TOL approaches 1 and VIF < 10, there is no multicollinearity.

##### 2. Heteroscedasticity

This test aims to see whether there is variant inequity from residual in another research in the regression model used.If variant of residual in a research is constant, it is called homoscedasticity, if variant is different, it is Heteroscedasticity

The approachment of this test can be seen from unhappened heteroscedasticity. The detection of this test by seeing the presence of certain pattern in a graphic. [9] There are some basis in taking decision in this test.

- a. If there is a certain pattern, as dots found in the graphic (scatterplot) form regular certain pattern (wavy, widen, then then narrow), can be concluded that there is heteroscedasticity
- b. If there is a clear pattern and dots spreading on and under number ) on Y tinder, it means there is no heteroscedasticity

##### 3. Autocorrelation Test

Classical assumption deviation test that needs to avoid is the presecnce autocorrelation in model, in other words good model procted of autocorrelation used presence. It means correlation of member sample which is sorted based on time.

The consequence of autocorrelation presence on used model is sample variant value cannot describe population variant. Furthermore, regression model result which cannot be used to define dependent variable value on certain independent.

To see the autocorrelation presence in used model is by doing Durbin-Watson (D-W) test.

Autocorrelation detection according to [6], can be seen in number of Durbin-Watson (D-W). Generally, it has been obtained a directive value as follow:

- a. If number of D-W is under -2, it means that there is positive autocorelative.
- b. If number of D-w is between -2 to +2, it means there is no autocorrelation.
- c. If number of D-W is on +2, it means that there is negative autocorellation.

#### 4. Normality test

This test aims to test whether a regression model, independent variable, and dependent variable or both of them have normal distribution data. A good regression model means having normal data distribution or close to normal [9]. As a decision taking basis in this test is: If residual from distribution is normal then data distribution values will be located on straight line, normality test needs to fill one of multiple regression assumption.

#### Hypothesis Test

Hypothesis test in this research is using inferencial statistic which is used to analyse sample data and the result used for population, used to call as inductive statistic or probability statistic (Sugiono,1998). Based on the result of this test, there will define a conclusion from sample data which will be conducted on population that has mistake and validity (trust) opportunity in percentage, it also called as significant level. The method aims to test influence between dependent variable and independent variable.

##### a. Simultaneous Test (F-Test)

This test to know whether there is significant of all independent variables collectively on dependent variable.

##### b. Partial Test (t-Test)

This test is needed to see influence each independent variables individually on dependent variable.

##### c. Determination Coefficient Test ( $R^2$ )

It is a test to know how far the realation between independent and dependent variables.

To conduct all the data analysis process in this research, used software tool *Statistical Product and Service Solution* (SPSS) as statistic analysis tool.

### III. DISCUSSION

In this part, the discussion is conducted based on research hypothesis which has mentioned in Unit 3 and analysis of the research result in Unit 5.

##### a. Hypothesis 1: The deposit of Interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity affect stock price.

Based on the result of F-test count equal 1,953 with significant number 0,120 or probability  $>0,05$ , it indicates  $H_0$  is accepted or  $H_1$  rejected, means that variable of deposit interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity collectively, do not have significant affect of stock price.

##### b. Hypothesis 2: The deposit of interest rates affects stock price.

Based on t-test result, obtained significant value of variable regression coefficient of deposit interest rates that is bigger than 0,05 (Sig.  $> 0,05$ ) or probability  $> 0,005$ . It can be concluded that interest rates variable has no significant influence stock price.

##### c. Hypothesis 3: Stock trading volume affects stock price.

Based on t-test result, obtained significant variable regression coefficient of stock trading volume bigger than 0,05 (Sig.  $>0,05$ ) or probability  $> 0,05$ . It proves that stock trading volume has no significant impact on stock price.

##### d. Hypothesis 4: Leverage ratio affects stock price.

t-test result obtains significant value of regression coefficient of leverage ratio variable lower than 0,05 (Sig.  $<0,05$ ) or probability  $< 0,05$ . It can be concluded that leverage ratio variable has significant impact on stock price.

##### e. Hypothesis 5: Dividend payout ratio affects stock price

t-test result obtained significant value of regression coefficient of dividend payout ratio variable bigger than 0,05 (Sig.  $>0,05$ ) or probability  $> 0,05$ . Dased on the test, it can be said that dividend payout ratio variable has no significant impact on stock price.

##### f. Hypothesis 6: Return on equity affects stock price.

t-test result gets significant value of regression coefficient of return on equity variable more than 0,05 (Sig.  $> 0,05$ ) or probability  $> 0,05$ . It prove that return on equity variable has no significant impact on stock price.

According to all research hypothesis explained above, there is only 1 (one) that is accepted, it is fourth hypothesis: Leverage ratio affects stock price while others hypothesis are rejected because they don't have requirements of F-test and t-test. Although those hypothesis rejected, the independent variable still has stock price but not significantly, it is supported by the result of multiple linear regression analysis and the corelatin below:

Regression equity and correlation coefficient to the research is:

$$Y = 16482,347 - 350,389X_1 + 474,229X_2 - 339,027X_3 + 105,366X_4 + 59,7711X_5, \text{ with correlation value } (R) = 0,523.$$

It means the deposit interest variable and Leverage ratio affect negatively and trading volume variable, Dividend payout ratio and Return on equity affect possitively on dependent variable which is stock price.

To know the variables that affect stock price actually is not enoung by just seeing the fives variables, it is because there are others variables according to researcher, that have enough significant and really influence investor in making investment decision, but it is not in this variable research. Those are securiry stability, politic situation, and national leadership.

From the background, it surely can be understood that most of the research result that are explained by the researcher in which the data taken in 2003 to 2006 at that time there was a preparation of democracy party Election 2004 and President Ellection 2004 and there is a national leader change.

All the national occasions very influence every investment decision in stock market in the country or abroad.

### IV. CONCLUSIONS

1. All independent variable that consist of: deposit interest rates, stock trading volume, leverage ratio, dividend payout ratio and return on equity do not significant affect stock price.
2. Deposit interest rates does not affect stock price significantly.
3. Stock trading volume does not affect stock price significantly.
4. Leverage ratio affects stock price significantly.
5. Dividend payout ratio does not affect stock price significantly.
6. Return on equity does not affect stock price significantly.

The conclusion is , based on all research hypothesis result, there is only 1 (one) significant thing that affects stock price while the others hypothesis do not significantly affect the stock price.

With the result that there are some others variables that have enough significant impact and really influence investor in making investment decision, but it is not in this variable research . Those are security stability, politic situation, and national leadership.

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# An Analysis Of The Impact Of Service Quality, Price And Location On Customer Satisfaction

## (A Study of Herry Motor Sampit Workshop)

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**Abstract.** Competition in business world is getting stricter. It is experienced by the businessman in motorcycle service field such as the owners of workshops in Sampit. Herry Motor workshop is one of workshop that is located in Sampit. Herry Motor workshop needs to know factors that affect customer satisfaction. Herry Motor has to make development and innovation which can increase customer satisfaction. The research aims to analyse how much the impact of service quality, price and location on customer satisfaction. The sampling method in this research uses *Accidental Sampling Method*. The sample in this research are 70 customers of Herry Motor Sampit workshop and then conducted analysis on obtained data by using data analysis quantitative and qualitative. Quantitative analysis includes : realiability and validity test, multiple regression analysis, hypothesis test by doing t-test and F-test, and also determination coefficient ( $R_2$ ) analysis. Quantitative analysis is an intepretation from obtained data in the research and the result of data making which are conducted by giving explanation. The data which fill validity test, reliability test made in order to produce regression of equation as:  $Y = 0,112X_1 + 0,114X_2 + 0,280X_3$ . Where Customer Satisfaction variable (Y), Service Quality variable ( $X_1$ ), Price variable ( $X_2$ ) and location variable ( $X_3$ ). Hypothesis test using t-test shows that three of independent variables which have been researched, are proved significantly and parsially in influencing dependent variable which is Customer Satisfaction. Through F-test can be known that the three of independent variable researched simultaneously has impact on dependent variable of Customer Satisfaction. Number of Adjusted R Square equals 0,069 indicates that 6,9 percent of Customer Satisfaction can be explained by the three of independent variables in regression equation. While the remained number equals 93,1 percent is explained by another variables beside the ththree of variables used in this research.

Keywords: Service Quality, Price, Location and Customer.

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### I. INTRODUCTION

#### Reseach Background

In this business era, the competitions in business world is getting harder and strict. The strict competition requires all the businessman able to maximize their performance in order to compete in the market. Company has to work hard to learn and understand what customers need and want., then it will give important feedback for the comapany in planning marketing strategy in creating satisfaction for the customer [1].

Company has to place orientation on customer satisfaction as a main goal. This reflects on more companies that enclose commitment on customer satisfaction in mission statement, advertising, and also public relation release. Company's main key to win the competition is by giving value and satisfaction to customer through delivering product and service with have quality and competitive price.

Satisfaction or unsatisfaction of customer is part of customer's experience on a product or service offered. Based on the experience, customer has tendency to build certain values. The values will give good effect of product or service experienced [2]. If a company gives good quality product or service, it is expected to fill customer's expectation and finally

having ability in giving maximum value and create satisfaction for customer compared with others competitors.

Customer is as a king that has to be served, but this doesn't mean giving everything to the customer. Effort to satisfy customer's need has to be done profitable or be "winwin situation", in which both sides are happy or there is no one that disadvantaged.

Service and price offered are varieties, it will be character and benefits for each workshop. This requires the owners of workshops or management workshop to create strategy in order to compete and excellent compared with other competitors. It is also for Herry Motor Sampit workshop, which is one of workshop in Sampit, it has strategy and excellent that is different from others. Because of the harder competition , company has to know factors that affect customer satisfaction in order to improve and create innovation that are expected increasing customer satisfaction after doing transaction in Herry Motor Sampit workshop.

#### Statement of Problems

Based on the problem background mentioned above, the statemen problems are:

1. How is the influence of service quality on customer satisfaction?
2. How is the influence of price on customer satisfaction?

3. How is the influence of location on customer satisfaction?

### Research Purposes

Firstly, in doing a research, it needs to determined research purposes in order to out of direction in doing the research. The research purposes are:

1. To analyze the impact of service quality on customer satisfaction.
2. To analyze the impact of price on customer satisfaction.
3. To analyze the impact of location on customer satisfaction.

### The Advantages of Research

Every research is expected to give advantage for reader and those related directly in this research. The advantages of this research is

1. As an input for Herry Motor Sampit workshop. relates on factors that affect customer satisfaction, then can be consideration in developing strategy in the future.
2. As an input for other companie in improving and developing customer satisfaction.
3. As an input or extra knowledge for people in general about customer satisfaction.

### Review of the Literature

Marketing is a social process and managerial where person or people get what they need and want by producing and product and value changing with other parties [1].

Marketing Management happened when there is at least one party in potential changing that consider target and facility to get respond expected from another party.

Marketing management definition which is authorized in 1985 by American Marketing Association in [1], is planning process and price concept execution, promotion and idea distribution, product and service to get exchange that requires personal target and organization.

### Service Quality

Quality is dynamic condition which relates to product, service, and process and environment which fill or exceed the expectation [3]. Service quality definition is an effort filling customer's needs and wants and proper delivering in complementing consumer's expectation. [4] states that service quality defining as customer estimation or feature of a product or sevice as a whole. Service quality can be known by comparing perception of consumers on received service with what the consumer very expect on service atributes of a company. [5].

Service quality can be measured by using five dimensions. The five dimension, according to Parasuraman, Zeithaml and Berry (1995) dalam [6] are:

1. Tangibles, it includes physic facility, equipment, employee, and communication facility.
2. Reliability, an ability to give fast service promised, accurate and satisfying.
3. Responsiveness, an expectation to help consumers and give excellent service.

4. Assurance, is knowledge and propriety of employee and ability in growing trust of consumer on the company.
5. Empathy, it includes simplicity to relate, communicate well, personal attention and understand consumer's need.

Service which has quality according to [4], is company ability in serve or fill what it promises to consumer. Thomson, De Souza, and Gale (2000) states that one of strategy related to successful in business is delivery of hugh service quality. According to [7], high performance service is a service that can satisfy consumer's need, or in other word able to exceed counsumer expectation.

### Price

From marketing view, price is monetary unit or another measurement (included other product and service ) which is exchanged in order to ger ownership or the use of product or serve [6]. Company has to define price properly in order to success in marketing product and service. Price is the only one mix unsure of marketing which gives income or earning fo company, while the three other unsures (product, distribution, and promotion) causes cost. Besides, price is flexible mix unsure of marketing, it means that it can be changed fast.

Generally, there are two main factors that need to consider in determining price, which is company internal factor and external environment factor (Kotler and Armstrong, 1994 in [6]).

Price has two main factors in taking buyers decision, They are:

1. The role of price alocation, is price function in helping buyers to decide way to get advantage or the highest utility expected based on buying power. Thereby, the presence of price can help buyers to decide way to alocate buying power on variety of product and service. Buyers compare price from some alternative provided, then decide fund alocation that they want.
2. The role of information and price, is price function in giving information for consumer about the factors of product such as quality. It has advantage mainly in a situation where buyers have difficulty in measuring factor of product or its benefit objectively. The applied perception is that high price reflect good quality. Kotler states that there are 6 main efforts which can be reached by a company through price, they are survival, maximize shortterm profit, maximize shortterm income, excellent in market and excellent in product quality.

### Location

Service quality location is one of crucial factor that influences sucesful o a service, because location has close relation with potential market of service provider [6]. In a broad outline, there are two consideration possibility in service facility location. The first is, customers come to the service facility location and the second is service provider comes to customers. Besides, service provider may combine both of considerations. Location influences strategic dimensions, such as flexibility, competitive positioning, request management and focus strategic.

Flexibility of a location is a measurement of how far a service able to react on changed economy situation.

Decision of location selection relates to longterm commitment on intensive capital aspects, that is why service provider has to consider, select and choose location which is responsive on economy changing possibility, demography, culture, competition and rules in future. Competitive Positioning is used methods to get and maintain strategic location, then they can be effective obstacles for competitor to get access to market [6].

A location can be said strategic when it is in downtown, population density, easy to reach and involve public transport easiness, traffic smoothness and the direction doesn't make consumer confused. It is accordance with the more business grow or business which offers same type of product or service, a very weak difference on location can have strong impact on market share and getting profit ability of a company. Besides, decision of selection a location also reflects company longterm commitment in finance, because to change not good location sometimes hard to do and ver expensive [8].

**Customer Satisfaction**

According to [1], customer satisfaction is someone's pleased or disappoint feeling that come from comparation impressive on performance or result of a product and all expectations. If the performance is under the expectation, customer is not satisfied. It can bring negative effect for company, which can decrease customer number and cause customer has no interested in using company service then will decrease company profit. According to Schanaar, Basically, purpose of a business is to create satisfied customers. The creation of customer loyalty and form a recommendation from word of mouth which prosper for company.

**Hypothesis And Research Model**

The research model formulation is as follow:

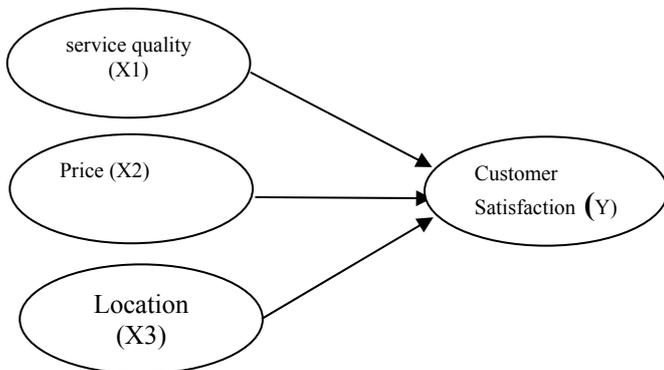


Fig.1 Research Model

**Hypothesis**

Hypothesis is temporary presumption which its corectness still has to be tested. This hypothesis is aimed to give direction for research analysis. The temporary conclusions are:

1. Service quality has possitive impact on customer satisfaction.
2. Price has possitive impact on customer satisfaction.
3. Location has possitive impact on customer satisfaction.

**POPULATION AND SAMPLE**

Population is combination from all ellement in form of events, thing or person which has same kind of characteristic that become attention center of a researcher [9]. Population in this research is all customers of Herry Motor Sampit workshop.

Sample is subset of population, consists of some members of population[9]. Sample taking is conducted by consideration that the population has big number, then impossible to research all population, and formed a representative of population.

The method in taking sample used in this research is Accidental Sampling Method which is taking sample randomly. (DR. Kartini Kartono)

**Type of Data**

In this research, type of data used to conduct the research is qualitative data ( descriptive), which are primary and secondary. Primary data, is information that is collected directly by a researcher in field and first source in this paper is respondent that is asked explanation. Secondary data is added source as research material from company party.

**Data Collecting Technique**

**1. Enquette or Questionnaires**

Enquette or questionnaires is a method or technique used by a researcher to collect data by spreading questionnaires contain questions that should be answered by respondent. Question that is written in questionnaire format spreaded to respondent to answer, then return it to the researcher. From the respondent's answers, the researcher can obtain data such as oppinion and respondent behaviour on problem that is being researched. In enquette, the writer of this paper uses Likert.

Likert scale is a psychometric common scale used in questionnaires, and scale that is often used in a research as survey. The name of scale is taken from name of Rensis Likert, who publishes a report that explains the usage. When respond the question in Likert scale, respondent determines agreement level on a question by choosing one of answers provided.

**2. Interview**

Interview is a conversation among two people or more and happened between resource and interviewer. Purpose of interview is asking questions to be answered by the interviewer. Ankur Garg, a psychologist states that interview can be a tool when conducted by party which employ a candidate to a position, journalist, or common people which are finding about personality or information.

**3. Literature**

Literature is data collecting technique by doing a review study of books, literatures, notes, and reports which relate to solved problems. "Review study is doing research by studying and reading literatures which relate to research object problems.

**4. Observation**

The term of observation comes from Latin language that means "seeing" and "noticing". Observation term leads to activity in noticing accurately, take note the appeared

phenomenon, and consider relation between aspect in the phenomenon. Observation becomes part of the research in any discipline knowledge, both exact and social. Observation can take place in experimental and also natural context.

### The Definition of Research Variable Operational

Research variable is research object or what becomes focus in a research, stated by Arikunto, in this research there are independent variable (X) and dependent variable (Y).

#### 1. Customer Satisfaction (Y)

Customer satisfaction is please and disappoint feeling of someone that come from comaration impressivo on performance or result of a product and all expectations.

Indicators:

1. There is no complain onn Herry Motor workshop.
2. Customers give compliment after transaction in Herry Motor workshop.
3. Customers feel that Herry Motor is a workshop that has good reputation.

#### 2. Service Quality (X<sub>1</sub>)

Service quality can be defined as effort in filling needs and wants of consumer and also proper delivery in balancin consumer's expectation.

Indicators:

1. The building condition is good.
2. The employee can finish the work fast.
3. The employee is responsive on customer complain.
4. The employee is able to know the breakage fast.
5. The employee give individual attention well to consumer.

#### 3. Price (X<sub>2</sub>)

Price is amount of money that paid for product and service, or number value that consumer changed in order to get advantage of having or using product and service.

Indicators:

1. The price offered is reasonable for buying power of customer.
2. The price offerd is lower than competitor.
3. The price fit to the advantages obtained.

#### 4. Location (X<sub>3</sub>)

Location is a place to do a business and crucial factor of t he successful of a business [3].

Indicators:

1. The secutity around location is guaranted.
2. Traffic around the location is smooth.
3. The environment condition is comfortable.

### III. RESULT AND DISCUSSION

#### Hypothesis Test and Data Analysis

Based on multiple regression counting among service quality (X<sub>1</sub>), price (X<sub>2</sub>) and location (X<sub>3</sub>) on customer satisfaction (Y) with SPSS program help in the count, it can be obtained result as follow:

TABLE I  
SUMMARY OF REGRESSION ESTIMATION RESULT

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	8,319	3,201		2,559	0,012
1 Service Quality	0,112	0,111	0,123	1,009	0,317
Price	0,114	0,107	0,126	1,072	0,288
Location	0,280	0,132	0,258	2,116	0,038
R	= 0,331				
R square	= 0,110				
Adjusted R Square	= 0,069				
F count	= 2,712				
Significant	= 0,052				

Based on the table above, the formulation of regression equation in this regression test is:  $Y = 0,112X_1 + 0,114X_2 + 0,280X_3$

According to the equation, it can be known that:

- a. Regression coefficient value of service quality equals 0,112 positive value, means that perception on service quality is getting better, so that customer satisfaction increases.
- b. Regression coefficient value of Price variable equals 0,014 possitive value, means that perception on price is getting better, so that customer satisfaction will increase.
- c. Regression coefficient value of Location variable equals 0,280 possitive value, means that perception on location is getting better, so that customer satisfaction will increase.

TABLE II  
DETERMINATION COEFFICIENT

#### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,331 <sup>a</sup>	,110	,069	2,40818	1,438

a. Predictors: (Constant), X<sub>3</sub>, X<sub>2</sub>, X<sub>1</sub>

b. Dependent Variable: Y

Source: made primary data, 2017

Based on the table above, it can be known that number of determination coefficient value is showed by *Adjusted R Square*, which is 0,069, that means variation from all independent variable are service quality, price and location can explain customer satisfaction variable, price and location can explain customer satisfaction which is 6,9% and remains about 93,1 % explained by other variables that are not proposed in this research.

### IV. CONCLUSIONS

By involving 70 respondents, give information about the influence of variable of service quality, price and location on customer satisfaction. Based on table mentioned above, it can be explained that number of *Adjusted R square* equals 0,069 shows that 6,9 % customer satisfaction variable can be explained by service quality, price and location variables. While it remains 93,1 % can be explained by other variables.

Based on validity test table can be known that service quality variable, price and location and also customer satisfaction has r count bigger than r table (1,996), so that it can be said that all indicators questions used in this resarch are valid. Based on the reability test table, it can be known that each variable among service quality, price, location and customer satisfaction got number *Cronbach Alpha*  $\geq 0,60$ . Thereby, the result of reability test on all variables are reliable.

Based in t-test, it can be known that t count  $>$  t table and significant level  $< 0,05$  then can be concluded that service quality variable, price, and location, affect on customer satisfaction collectively.

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# THE IMPACT OF MOTIVATION AND COMPENSATION ON PERFORMANCE OF EMPLOYEE IN PT. MUSTIKA SEMBULUH KABUPATEN KOTAWARINGIN TIMUR

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**Abstrak.** The research aims to reach expected result and can be conducted well and directly. The purpose that want to be reached are: a. To know the impact of motivation on performance employee in PT. Mustika Sembuluh Kabupaten Kotawaringin Timur. B. To know the impact of compensation on performance employee in PT. Mustika Sembuluh Kabupaten Kotawaringin Timur. Based on validity test, it shows that all statements are valid with r value bigger than minimum requirement that has been determined, which is 0,3. While in realibility test shows that all statements are reliablble with number of alpha bigger than 0,6. Based on linear regression value with equation  $Y_{\text{performance}} = 9.469 + 0.044X_1 + 0.259X_2$ , motivation significant value and compensation 0,045, r value= 0,353 and  $r^2 = 0,125$ , ttable 2.026 and tcount for motivation equals 0,044 and compensation 0,259, from r value shows that there is possitive value between X and Y variables while  $r^2$  few impact of X variable on Y variable. While comparation between number of ttable bigger than thitung for motivation variable, it explains that there is no significant impact and compensation variable has possitive and significant impact on performance of PT. Mustika Sembuluh Kabupaten Kotawaringin Timur employee. It can be concluded that motivation has possitive impact but not significant while compensation has possitive and significant impact of performance employee so that the increasing of motivation and compensation can produce better performance of PT. Mustika Sembuluh employee.

Keywords: Motivation, Compensation, and Performance

## I. INTRODUCTION

Human Resources is organization asset that is very vital, that is why its role and function cannot be changed with another resources, although the using of advanced technology cannot be equal to professional human resources. Human can have a role actively in every economy activities so that needs to be improved and be very important asset. Therefore human resources management becomes one of place to manage all human resources that are in all organizations.

In order to create high quality human resources, it needs guidance effort and also development for all employees. Guidance and development needs to be done in order to employee can increase ability, dedication, discipline and exemplary. By giving guidance and development in an organization, it is expected that they will create high quality staff that can lead on performance employee increasing.

The high increasing of performance of employee is very important in an organization, because by the high of performance of employee, will increase employee's productivity, with the increasing of productivity that increases so the purpose of organization will be reached automatically. Therefore an organization always tries to increase performance of employee in order to reach the goal fast.

Besides motivation, compensation has important meaning in increasing performance performance, compensation reflects company's effort in maintaining and

increasing employee's prosperity. While compensation is all rewards that are accepted by employee for work result done by the employee. Compensation can be physically or non physically that has to be counted and given to employee in accordance with sacrifice that is given for company he works for. A company in giving compensation seeing performance of employee first by making fair performance assesment system. The system generally contains assesment criteria of each employee, such as number of completed work, responsive, communication with another, behavior, and knowledge of work, etc. All employees may count their performance and sacrifice with received compensation. If the employee is not satisfied, he will try to find another job with better compensation.

The Problem Statement of Research

- Do motivation affect performance of employee in PT. Mustika Sembuluh Kabupaten Kotawaringin Timur?
- Do compensation affect performance of employee in PT. Mustika Sembuluh Kabupaten Kotawaringin Timur?

Research Purposes

In order to reach expected result and can be conducted well, the research purposes that want to reach are:

- To know the impact of motivation on performance of employee in PT. Mustika Sembuluh Kabupaten Kotawaringin Timur?
- To know the impact of compensation on performance of employee in PT. Mustika Sembuluh Kabupaten Kotawaringin Timur?

### Research Advantages

The advantages that are expected from this research are:

1. For the writer, as a reference and new input to do research and can add knowledge in studying human resources theories.
2. For the readers, to give more knowledge for next research, and as reference for next research.
3. For related institution, it is expected that the research is useful for the advancement and smoothness at work.

### Motivation

Term of motivation comes from word "motif" that means as power which is in an individual, that causes the individual acting or doing. Motivation is set of process, that raise, lead, and keep human behavior to achieve the goal. Another definition states that motivation is willingness to do high effort to reach organization goal, which is conditioned by ability to fill certain individual need.

Someone's motivation depends on motif strength. Based on that statement a discussion about motivation cannot be separated from motif concept. The point is it can be said that motif is a cause of action occurrence. Motivation theory is classified as two groups, there are satisfaction theory and process theory. The theory is known as Hygiene concept.

### Compensation

Compensation is number of package offered by company to employee as reward in using the staff and as important factor to attract, maintain, and keep the staff for company's importance itself. Compensation is what employees accepted as exchange on contribution to employee. Compensation includes activity of giving reward for employee. The activity here includes determining of compensation system that can push performance of employee and also determine number of compensation accepted by each employee".

Compensation given can be financial or nonfinancial on fixed period. Seen by the way it is given, compensation can be direct compensation such as fee, salary and indirect compensation as allowance or security and medical allowance. A good compensation system will be able to give satisfaction for employee and enable the company to get, hire and keep the employee.

### Type of Compensation

States that there are three kinds of compensation, they are:

1. Direct Compensation

Direct compensation is a reward called salary or fee, that is paid regularly based on fixed period in a form of monthly, weekly or daily or hourly fee.

2. Indirect Compensation

Indirect compensation is a reward for employee exclude salary or fixed fee, it can be money or product. In other word, indirect compensation is reward program with broad variation as a reward in form of medical benefit, vacation, and big day allowance.

3. Incentive

Incentive is a reward that is given to motivate the employee and it is not regularly, such as reward in form of bonus or product.

### Performance

Performance is a word in Bahasa from basic word "kerja" that means work or performance. Actually, performance has wide meaning, it's not only as work but also how the process of work occurs., about doing job, what is worked, how to do the work and result of work that relate to strategic goal of organization, consumer satisfaction and give economy contribution.

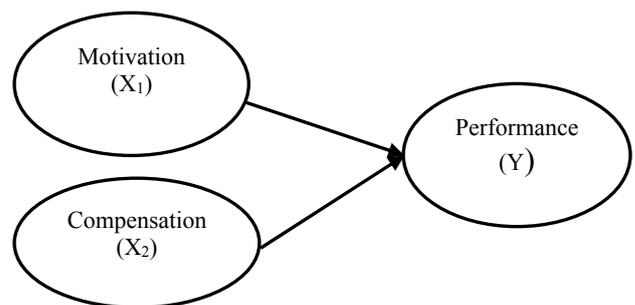
Performance in company is the answer of success or not the set of company's goal. The leaders often don't pay attention except when there is something bad and getting worse. It is often happened that the manager doesn't know how bad is the performance so the company faces serious crisis. The bad impression of a company can have effect and ignore warning that the performance is getting lower.

Performance is a condition that should be known and confirmed by certain party to know result of achievement level of an institution related to holded organization vision or company and to know positive and negative effects of an operational policy. Performance is a real behaviour showed by every people as work performance that is done by employee in accordance with role in a company.

Performance Assessment basically, is a key factor to develop an organization effectively and efficiently, with the policy or better program on human resources in an organization. The assessment of individual performance is very advantageous for company development dynamic as whole, through the assessment, it can be known real condition about the performance of employee. Performance assessment is process that is used by organization to evaluate employee's individual work performance.

## II. METHODS

Research model basically is relation method between observed or measured concepts by research that will be conducted Notoatmodjo, (2002). The research model is as follow:



Picture 2.1. Research Model

Hypothesis is a temporary explanation about certain phenomenon that will happen. Hypothesis is also called as temporary answer arranged by the researcher or writer.

Based on the explanation above, the research hypothesis are:

1. It is suspected there is impact of Motivation on performance of employee of PT. Mustika Sembuluh Kabupaten Kotawaringin Timur.

2. It is suspected there is impact of Compensation on performance of PT. Mustika Sembuluh Kabupaten Kotawaringin Timur.

Sampling is a way in taking sample from population. Sampling used in this research is simple random sampling, which select sample by giving same chance to all members of population to be determined as member sample. By doing this technique, selected individual becomes member of sample based on opportunity factor. According to Sugiyono, 2002 that sample is a part of numbers and characteristic owned by population. If the population is big and the writer cannot study all of them, because of time limitation, fund and energy so that the writer can use sample taken from population. The sample in this research is a half of population number from employee of PT. Mustika Sembuluh Kabupaten Kotawaringin Timur, which are 40 employees.

Population, according to [1], is generalisation that contains of : object/subject that has quantity and certain characteristic that is determined by the researcher to be learnt and then can take the conclusion. According to [1], that sample is a part of numbers and characteristic owned by population. If the population is big and the writer cannot study all of them, because of time limitation, fund and energy so that the writer can use sample taken from population. The sample in this research is a half of population number from employee of PT. Mustika Sembuluh Kabupaten Kotawaringin Timur, which are 40 employees

Type of data used in this research are primary data and secondary data. Primary data is data taken directly from research object by the reseacher. Data collecting method used a s effort in obtaining valid and realible data in this research, they are: (a) Enquette or questionnaires is a method or technique used by a researcher to collect data by spreading questionnaires contain questions that should be answered by respondent. These questionnaires are spreaded to respondent, contain question or statements about motivation and compensation on performance of PT. Mustika Sembuluh Sampit employee; (b) Measurement on each dependent and independent variable indicator is conducted by using SPSS program (Statistical Package for the Social Sciences) for windows versi version 11,5. This research scale is arranged based on likert scale. According [1], likert scale is used to measure behaviour, oppinion and someone's perception or a group of people about phenomenon or social indication happened.

In spreading the questionnaires, the respondents are only asked to choose the answer that supposed to be rightest in accordance with rea condition. Each item or answer from each question or statement will be given point on 1 until scale, they are:

1. SS = Strongly Agree 4 point
2. S = Agree 3 point
3. TS = Disagree 2 point
4. STS= Strongly Disagree 1 point

Interview is a direct conversation with certain goals using qustion and answer. Literature is a technique of research collecting data by learning provided document. Observation is direct watching of an activity which is being done through researcher observation that can get views about what is done actually. Independent Variable, is variable that is not

depended or independtly can be influenced dependent variable, but the independent variable cannot be influenced by dependent variable. The independent variable in this research is motivation (X1) and compensation (X2). Dependent Variable, is variable that can be influenced or relates to independent variable. The dependent variable in this research is performance of employee (Y).

Definition of operational in this research are Compensation (X2), Motivation (X1) and Performance (Y). Winardi (2002) explains, someone's motivation depends on the motif strengt. The point is it can be said that motif is cause of action that raises, directs and leads the behaviour. Compensation involves reward giving to employee. The activity here is determining of compensation system that is able to push peformance employee and also determines the big of compensation that will be accepted by each employee. Based on some oppinions about the compensation, it can be concluded that compensation is kind of financial reward or recompensation that is given by company as giving fee, Big day allowance. Performance is a real behaviour achieved by one employee in the performance of his duties in accordance with the responsibilities given to him.

### III. RESULT AND DISCUSSION

Multiple linear regression analysis is used in this research in purpose of knowing the existance of the influence of independent variable on dependent variable. Statistic counting in multiple linear regression in tis research uses program SPSS ver. 11,5, as seen in the table below:

TABLE 3.1  
THE RESULT RECAPITULATION OF MULTIPLE LINEAR REGRESSION ANALYSIS

Variable	B	Beta	T	Sig t	Explanation
(Constant)	9.469		4.076	0.000	Significant
Motivation	0.044	0.055	0.344	0.732	Not Significant
Compensation	0.259	0.328	2.070	0.045	Significant
Ttabel			= 2.026		
R			= 0.353		
R Square			= 0.125		
Level $\alpha$ = 5% (0.05)					

Source: primary data made in 2017

Based on recapitulation of simple linear regression on the table 4,9 above, it can be explained in the regression:

$$\text{Persamaan } Y_{\text{kinerja}} = 9.469 + 0.044X_1 + 0.259X_2$$

Based on regression equation above, it can be known that there is positive impact between independent variable (motivation and compensation) on dependent variable (performance). The explanations are as follow:

1. Constant number shows that if there is no motivation variable and compensation (X=0), so number of Y (performance) equals 9,469.

2. The regression coefficient shows that each X1 (Motivation) increases one unit, so the performance will increase about 0,044. It is with assumption that other variables are constant or equal zero.
3. The regression coefficient shows that each X2 (Compensation) increases one unit, so the performance will increase about 0,259. . It is with assumption that other variables are constant or equal zero.

As seen on probability level of each independent variable, which is motivation that equals 0,732, higher than 0,05 (5%) and compensation 0,045 and probability is lower than 0,05 (5%), so motivation has no significant influence while compensation has significant influences on performance. It is evidenced by correlation coefficient number (r) and determination coefficient number (r<sup>2</sup>) are small, which is 0,353 of correlation coefficient and 0,125 of determination coefficient.

Research discussion about the impact of compensation and motivation on performance of PT.Mustika Sembuluh employee leads to research goal that wants to be reached. They are:

With the equation  $Y_{\text{performance}} = 9.469 + 0.044X_1 + 0.259X_2$ , it can be explained as below:

1. Constant number shows that if there is no motivation variable and compensation (X=0), so number of Y (performance) equals 9,469.
2. The regression coefficient shows that each X1 (Motivation) increases one unit, so the performance will increase about 0,044. It is with assumption that other variables are constant or equal zero.
3. The regression coefficient shows that each X2 (Compensation) increases one unit, so the performance will increase about 0,259. . It is with assumption that other variables are constant or equal zero.

Motivation significant value equals 0,732 and compensation equals 0,045, number of r is 0.353 and r<sup>2</sup> 0.125, ttable is

2.026 and tcount for motivation is 0.344 and compensation 2.0709.

As seen from number of r that equals positive 0,353, shows that there is positive relation among variable. As seen from r<sup>2</sup>, means that independent variable has impact on dependent variable amount 0,125 while the remains equal 0,875 is influenced by other variables beside motivation and compensation. Based on hypothesis test can be found number of ttable is bigger than tcount for motivation, this explains that there is no significant impact between independent variable and dependent or H<sub>0</sub> accepted and H<sub>A</sub> rejected. While for compensation, number of ttable is smaller than tcount that explains there is no significant impact between independent variable and dependent or H<sub>0</sub> rejected and H<sub>A</sub> accepted.

#### IV. CONCLUSIONS

Based on the discussion above, it can be known that compensation variable is more influence and significant on performance of employee, which is 0,045 than motivation variable which is 0,732 on performance of PT.Mustika Sembuluh Kabupaten Kotawaringin Timur.

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# INDONESIA ECONOMIC POLICY PACKAGE VOLUME 5: COULD IMPACT TO THE ECONOMY?

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**Abstract.** This study was conducted to analyze each of the points contained in Economic Policy Package Indonesia Volume V released by the Indonesia Financial Services Authority (FSA) in October, where the economic policy consists of three points with respect to the policy of Islamic banking, the elimination of double taxation on property, real estate sector, and a decrease in income tax. The purpose of economic policy is to drive economic growth in Indonesia using an exploratory qualitative approach, in which the phenomena to be observed will be analyzed based on the theories related including previous studies related. The results of the analysis is the application of banking products and simplification of the opening of the office network to support the advancement of Islamic banking, to achieve high employment and economic growth then the elimination of double taxation for property and real estate sector to encourage the advancement of the sector at a time the country's economy. Meanwhile a lower income tax rate resulted in increased state revenues from taxes. With a series of policies that made the FSA contribution to economic growth, it is clearly seen that the FSA brought significant progress in Indonesia's economic growth.

Keywords: Financial Services, Economic Policy, Monetary, Banking

## I. INTRODUCTION

Based on data from the Central Bureau of Statistics of the Republic of Indonesia Indonesia's economic growth slowing from 5.12 percent in the second quarter of 2014, to 4.67 per cent in the same period this year, making Indonesia should change its management system to drive the domestic economy. As a result of the impact of the global economic crisis, the government in 2015 to create a new policy in the form of Economic Policy Package Volume V which aims to trigger domestic economic development through strengthening the role of the task oversight The Indonesia Agency Financial Services [1], where each package of policies introduced by the FSA does not negatively impact Indonesian macro economy. It means that the role of the FSA is expected only to make policy based on a sector that should be given support and encouragement that can improve the economy of the country (The Republic of Indonesia, 2011)

FSA of Indonesia Republic is a state institution established under Law No. 21 of 2011 which serves to implement the integrated regulation and supervision of all activities in the financial services sector. Based on the site's official page of the FSA, the FSA stated purpose of establishing inter alia that the overall activity in the financial services sector should be: 1) into a regular basis, fair, transparent, and accountable, 2) able to realize the financial system grows sustainable and stable, and 3) able to protect the interests of consumers and society [2].

While the FSA function is to hold the regulatory and supervisory system that can be integrated to the overall activities in the financial services sector in Indonesia. The FSA in charge of regulation and supervision of financial

services activities in the sector of Banking, Capital Markets sector, and non-bank financial sector [1].

The policy content in Volume V consists of three main points. The first is the reduction in income tax rates. If the tax rate (income tax) in the normal revaluation of assets subject to 10 percent, is now up to the asset revaluation December 31, 2015 income tax rates apply to only 3 percent. While the revaluation of assets until June 30, 2016 subject to income tax rates by 4 percent and the revaluation of assets until December 31, 2016 income tax rates enacted only 6 percent (Kemenkeu, 2015).

Second, the elimination of double taxation on the collective contract of real estate investment funds (DIRE) or Real Estate Investment Trusts (REITs). The government revealed the company property and infrastructure Indonesia publishes many REITs in neighboring Singapore. With the issuance of Ministry of Finance No. 21, double taxation will be eliminated and it is hoped Indonesian companies can publish their REITs in their own country. In addition, government initiatives will encourage property sector, real estate, and infrastructure becomes more advanced. This policy is not only viable in a greater tax revenue in the future, but can stimulate economic growth moving fast.

Then the third regulations relating to Islamic Banking deregulation. In Islamic Banking regulations, there are two things; the first related to the relaxation of Islamic Banking products thus permitting new product expenditures will be simple enough to report it just because it will be made codification system for each of its products [3]. The second rule with respect to Islamic Banking is a simplified opening for Islamic Banking office network can use Conventional Banking office. It can boost efficiency, price and interest rates that are affordable for the community.

As for the issue to be faced by the Indonesian government with regard to implementation of package about reduction in income tax rates, double taxation on real estate and housing / real estate, and a new policy on Islamic banking is able to boost economic growth in Indonesia and the extent to which the ability of the Financial Services Authority could encourage growth of economy?

Based on the background and the issue, therefore the purpose of this study was to analyze the impact in terms of the economy of Indonesia with the policy of reduction in income tax rates, the elimination of double taxation on property and real estate, and a new policy on Islamic Banking, as well as to know the extent to which financial institutions FSA role in the Indonesian economy.

### Literature Review

Monetary policy is essentially created with the primary goal of price stability. But this policy has five objectives are also important, such as: high employment, economic growth, financial market stability, interest rate stability, and the stability of the foreign exchange market. There are three objectives of making Indonesia Economic Policy Package Volume V by the FSA, which is the first objective which is to strengthen liquidity. In this case through monetary and fiscal policy, with measures of monetary operations, exchange rates and inflation may reach stability can be maintained. In addition, the decline in interest rates has been the main issue entrepreneurs, especially Micro, Small and Medium Enterprises (SMEs), can be achieved. The second objective is to be able to real sector through structural reforms three instruments, namely deregulation which includes rationalization of the rules by eliminating the duplication and redundancy or regulations irrelevant. Third, the economic policy package aimed at law enforcement and business certainty. Given this policy, stakeholders involved with participatory methods stakeholders and many parties participating in the implementation and supervision.

Islamic banking is a banking system based on the implementation of Islamic law, or sharia [4]. The formation of this system is based on the prohibition of the Islamic religion to lend or collect any loans with flowers wearing a loan, as well as the prohibition to invest in businesses categorized forbidden. Characteristics of the Islamic banking system that operates on the principle provides an alternative banking system that is mutually beneficial for the community and banks, as well as highlight aspects of fairness in transaction and ethical investment, underlining the values of togetherness and brotherhood in production, and avoid speculative activity in financial transaction [3]. By offering a range of banking products and services are diverse with more varied financial scheme, Islamic banking to be an alternative banking system that is reliable and can be enjoyed by all segments of society without exception. Taken together, the system of Islamic banking and conventional banking synergistically support the mobilization of public funds more widely to improve funding for sectors of the national economy.

### Cases of Tariff Reduction and Impacts

Prepare for the ASEAN Economic Community (AEC) in 2015, a number of countries to reform their tax systems. As the name implies, the economic society, MEA level is higher

than the free market for MEA 2015 is not only free flow of goods and services, but also aims to ease the flow (free flow) of capital, investment, and employee [5]. It has an impact on the integration of ASEAN into a region with high growth economy.

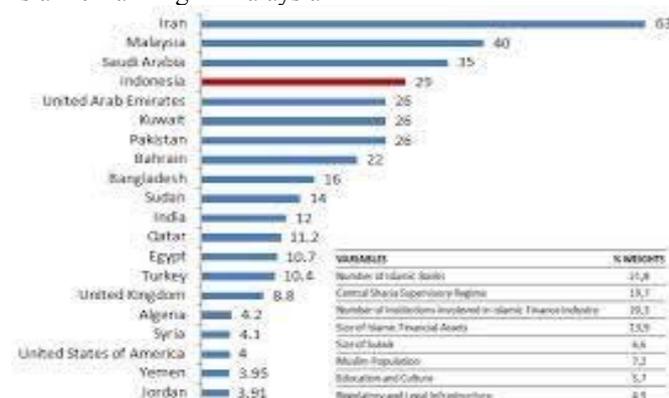
Malaysia end of 2014, began to impose a tax rate of service products. Malaysia set income tax service sector amounted to only 6%, which is the lowest tax rates in the ASEAN (source: worldwidetaxrevie.com). As a result, many services current investment flow to Malaysia compared to Indonesia or other countries. Based on the site tax audits (pemeriksaanpajak.com), Malaysia is noted to be the first investment destination country of the service sector. Given these achievements, it is evident that the tax reduction could trigger investment from other countries. Sourced site tax audit, Singapore at the end of last year also impose a VAT rate of 5% which is the lowest rate of ASEAN. A low tax rate is based safety or the potential impact of lower taxes. Therefore, the transfer of capital and investment focused on Singapore [6]. Application of lower VAT rates indicates the potential for the country to increase foreign exchange through foreign investment.

### Single Tax Enforcement in Singapore

Singapore is still ranked as the country's first targeted investment for global businesses. Given the many tax incentives and the implementation of a single tax rate of 20%, Singapore is considered to be a "haven" for foreign investors (The Investor Daily, 2016). The low level of such taxes will not need to worry to reduce state tax revenue, even with their low tax rates and incentives increase the amount of tax revenue. That is because, the number of companies and individuals who establish a business and the initial public offering (IPO) of the shares and the second deals (secondary offering) tends to increase every year [6].

The Singapore Exchange Annual Report in 2015, Singapore revealed that total retail investors in lion country has reached two million people compared to Indonesia which is only able to attract 300 thousand foreign investors a few years ago. In addition, funds were successfully obtained from the foreign companies on the SGX IPO last year reached 6.5 billion SGD or more than 50% against the Singapore exchange earnings (SGX Ltd. 2016).

### Islamic Banking in Malaysia



Source: Indonesia Central Bank, 2015

Figure 1. The position of Indonesian Islamic Banking and Other Countries

## II. METHOD

Islamic banking is playing a very important role in Malaysia. Most of the population depends on the role of Islamic banking. As a result, each year Islamic banks are always evolving. Government as an organization that the people concerned are also very aware of the importance of the presence of Islamic banks in their countries. Therefore, various policy was created to encourage and support the banking system's growing blossoms for the welfare of the people. With the full support of the government, the Islamic banking in Malaysia can grow up to be the country with the largest Islamic banking [3].

As the figure 1, the development of the statistical data Sharia in Indonesia is still lagging far behind Malaysia, Indonesia needs to issue a policy as a form of encouragement to grow and blossoms Islamic bank in Indonesia (<http://bi.go.id>). With the majority of citizens are Muslims, the increase in demand for Sharia economy increasingly visible role. Therefore, Islamic banks could support and means to reduce poverty and unemployment if its availability and amenities make it easier [4].

### Principles of Islamic Banking

One of the main characteristics of Islamic banking which distinguishes it from conventional banking and positive impact on the real sector and economic growth are Islamic financial institutions put more emphasis on improving productivity. Islamic financial institutions are financial institutions that emphasize the concept of asset based systems and production as the main idea. Mudharabah and Musharaka is a major reflection of the idea of the stretcher [3].

Mudharabah is a partnership contract with the basic principles of the joint venture to be profitable if capital owners provide capital to the managers of capital to be used in commerce [3] and [4]. Then both sides will teamed profit or loss according to the terms that have been agreed. So we can conclude that the owners of capital provide capital to the managers and owners of capital in return get a share in profits. However, in case of a loss, the owners of capital who bear the full loss, whereas business managers do not get anything from the dedication he has given. Therefore, participation in profits and losses is a very important part in the contract between the owners of capital to entrepreneurs due to the overall capital loss is borne by the owners of capital while the capital entrepreneurs do not bear the loss of the business.

While Musharaka is a common form of business for the result in which two or more people donate finance and business management, with the proportion may be the same or not. Profits are shared according to the agreement between the partners, and the losses will be shared in proportion to the capita l [3]. Musharaka transactions based on the desire of the parties to work together to increase the value of the assets they own jointly by combining all resources. Musharaka is taken from the Arabic language which means to mix. In this case the mixing of the capital with other capital that cannot be separated from one another.

Through the financing patterns that have been described, then the real sector and the financial sector will move in a balanced manner. It is then an impact on the growth of Islamic banking and a greater contribution to economic performance and growth. Poverty and unemployment will directly resolved through good economic performance.

This research is a exploratory study using a qualitative approach, where data and information is obtained from various sources related literature. As for monetary theory, financial, and banking in particular Sharia Banking systems are the theory behind the study. In addition, some sources of data from Bank Indonesia as the central bank, Indonesian Financial Services Authority, and InsideTax used in describing and assist researchers in analyzing the case.

In order to develop the taxonomy, we used *Procite©* and *Zotero©*, as software tools that supported us in creating the database containing the bibliographical sources we consulted. Citations were identified using a number of methods. Firstly, through citation search in existing conference, journal and working papers and doctoral theses. Secondly, using the abstracting and on-line services ProQuest, EBSCO, researchgate, and google scholar. All the publications stored in the database are retrievable by means of a set of codes (keywords) we created through intensive analysis of 21 leading and cited papers.

The papers were classified into two criteria:

1. The *content-oriented criterion*, we will classify the basis using the framework we have developed which will be explained in discussion section;

Our literature approach content analysis enables us to address the scope of fields, where the Monetary Banking system, and Fiscal Policy be identified on this paper.

2. The *methodology-oriented criterion*, using The Law Act 21/2011 about OJK as Financial Services Authority Institution in Indonesia framework which classifies researches as primarily descriptive or prescriptive and empirically or conceptually based. Based on the primary framework [4][3], we analyzed of impact of the policy package to Income Tax Rate Reduction, Double Taxation on Property and Real Estate Sector, and finally to the Sharia Policy. This criteria was very helpful not only in developing a literature review with a critical perspective, but also in assessing gaps in current theorizing, methods and empirical finding in the field of study analyzed.

## III. RESULTS AND DISCUSSION

### Impact of Income Tax Rate Reduction

Any policy with regard to the tax created by a state agency would lead to an increase in state revenue from the tax sector. As with the policy of income tax rate (VAT). This policy is intended to be public or taxpayers become more obedient and raise awareness of the rights and fulfill tax obligations. If the goal is reached, then the state revenue from taxes will increase for their tax compliance in conducting the revaluation.

In addition, the income tax rate reduction is also intended to allow the company's net profit after tax higher, or in other words the corporate tax burden will decrease. With it, enterprises can improve productivity and be able to expand so that the country's economy helped participate. Wasylenko and McGuire (1985) find that higher levels of overall taxation discourage employment growth. Effective income tax rates are shown to have a negative impact on employment growth in the wholesale, retail, and finance industries. However, their corporate tax rate variable does not yield statistically

significant results. But Indonesia Central Bank stated that business entities can play a role in the progress of the Indonesian economy by creating jobs for the people of Indonesia that the unemployment rate is reduced, which is reducing 20 percent of income tax the unemployment rate has decreased 0.31 percent from 5.81 percent in early 2015 (Indonesia Central Bank, 2016). Hence, reduced levels of unemployment could indicate increased Gross Domestic Product (GDP) of the country in 4.8 percent (above average economic growth).

Beside that, with the policy package is expected that Private Owned Enterprises also pushed the country's economy by increasing foreign exchange [7]. Each country's foreign exchange earned from international trade. With the private enterprises that export their products to neighboring countries, the national income will increase.

Tariff reduction policies are also made to compete with neighboring countries, to increase the number of investors, both foreign and domestic to invest in Indonesia. The current income tax rate reduction it is becoming a trend of its own in the administration of various countries. Among the member countries of the G20, the lowest corporate income tax rate for 2015 is occupied by Saudi Arabia, Turkey, Russia, and the United Kingdom by the same percentage, is equal to 20 percent. Reported by Inside Tax sites, corporate income tax rates in force in Indonesia is still quite low when compared with other G20 countries and which has 25 percent of tax rate and as the third-lowest country in the world after South Korea, at 24.2 percent. Here are the data concerning the corporate income tax rate countries of ASEAN-6 in 2015 [5].

TABLE 1. CORPORATE TAX RATES IN ASEAN-6, 2015

Countries	Income Tax Tariff (in %)
<b>The Philippines</b>	30
<b>Indonesia</b>	25
<b>Malaysia</b>	25
<b>Vietnam</b>	22
<b>Thailand</b>	20
<b>Singapore</b>	17

Source: *InsideTax, and Author's modification, 2015*

Table 1 show that declining corporate income tax rates in the ASEAN region and plans for economic integration of ASEAN or the ASEAN Economic Community (AEC) in 2015, then it should be assumed that there is a tendency ASEAN countries responded to the ASEAN economic integration by lowering the corporate income tax rate. In future, the competition to lower corporate income tax rates in the ASEAN region seems to have ended, given 2015 was a year of enforcement of AECs [5]. The Philippines plans to cut corporate income tax rates of up to 20 percent in 2019 to come. While Malaysia will reduce income tax rates by 1 percent to 24 percent and Vietnam lowered to 20 percent in 2016. If the plan for the corporate income tax rate reduction in the neighboring countries is realized and Indonesia did not participate lowering tariffs, Indonesia will become the country with the corporate income tax rate the highest in the ASEAN-6. Therefore, Indonesia has taken considerable steps right to

participate in the competitive struggle for investors to increase foreign exchange and advance its economy.

Another positive effect with a reduction in the tax rate are creating compliance, foster a business climate, providing easy, establish justice, and promote economic growth and company or enterprise to go public [8]. This can lead to increased tax revenue by increasing tax compliance. Although, the decreasing can result in potential lost tax revenue, but the decline in revenue is not comparable with the amount of new tax revenue. The fall in income tax rates can also reduce leakage in the payment of taxes, such as collusion between tax officers with the taxpayer, false financial reporting, no detection of the taxpayer, and others. In general, taxpayers feel burdened by the high level of taxes that reduce their income or net income, so try to avoid taxes and not revalued. Some evidences with using data from 1969 to 1986, [9] found that, given overall tax levels, higher marginal tax rates reduced growth. However, with the issuance of the new policy on this tax, it will be established that honest tax payers.

The policy of reduction in income tax rates play a role in supporting the country's economic growth to reduce the unemployment rate which increased GDP, attract foreign investors to invest and increase foreign exchange, as well as increase the state tax revenue. [10] find that personal income taxes reduce employment growth, but corporate taxes do not. Nevertheless, [11] stated that reduction income tax as one of state's fiscal policies have a measurable relationship with per capita income growth, although not always in the expected direction.

#### Impact Elimination of Double Taxation on Property and Real Estate Sector

The elimination of double taxation policy can bring a very positive impact with brisk capital market investment products and encourage the development of national economy. [10] stated that double taxation relating to this financial instrument into an opportunity that can be exploited by employers, especially dabbling in real estate and housing / real estate. This removal could potentially trigger capital markets as alternative sources of funding, so that the increased investment in the property sector and can provide a secondary effect of the national economic development.

In addition, these policies can increase the interest of industry or company property developers and investors to invest in the product of Real Estate Investment Trusts (REITs) as there is potential for higher returns after the removal of double taxation. Indonesian companies also do not need to seek funding to neighboring Singapore to issue REITs. During the process of developing a means of investment properties through REITs always been hampered because of the high tax rate factors. However, with the abolition of tax instruments or DIRE REITs (Real Estate Investment Trusts) can run well. Changing the tax system into a single tax can also improve the level of development of the entrepreneurs so that the number of new registered tax will increase [10]. With a growing number of tax payment, then as well as income tax, state revenue from tax sector will also increase.

This policy was given for the Indonesian capital market product is still relatively limited, so that the capitalization of the Indonesia Stock Exchange is relatively small compared with neighboring countries. For it is necessary to develop

products such as KIK for infrastructure and DIRE line with the deepening of financial markets. Collective Investment Contract (called by KIK in bahasa) is a new tool released REITs. According to the calculations of the Financial Services Authority, the assets in Indonesia, which is sold in the form of KIK-DIRE in Singapore reached 30 trillion IDR (<http://ojk.go.id>). To encourage the development of these products, the government provides tax reduction, namely by eliminating the double tax on the transaction.

Single tax policy is also expected to withdraw funds that had been invested in overseas markets to the domestic financial sector, in addition to encouraging the growth of investment in infrastructure and real estate [8]. The positive impact that can be felt from these tax facilities include increased accumulation of KIK, encouraging the growth of infrastructure and real estate development, and the growth of construction services.

Real Estate Investment Based on the study, noted that the property sector is an industry that absorb a large workforce. Growth is happening in the property sector would open up the potential for employment so as to support government programs in an effort to reduce poverty and unemployment rate.

#### The Impact of Sharia Policy

There are two new regulations with regard to Islamic banking, the first is the relaxation of licensing Islamic banking products, and the second is the simplification of the opening of the office network. In the first point, given the ease for Islamic banking to issue new products which no longer need to be reported which uses the procedure is quite complex and impede the course of Islamic banking in providing the best for the community. In the absence of reporting, the government still can find new products are issued by the Islamic banking, since the entry into force codification system. The system is built with the provision of the code on each of the products released. FSA believes that every product issued by the Islamic banking aims to contribute to the economic progress of the country through programs that help welfare society (the Republic of Indonesia, 2013). With the use of codification system without reporting to the procedures, Islamic banking has the potential to grow bigger in Indonesia [4].

Secondly, simplification opening of this office networks to provide benefits in the subject of public access. Previous number of Islamic banking offices still numbered limited so that its scope becomes not easy. But now with the placement of Islamic banking in conjunction with conventional banking is certainly superior in terms of the number and range of Islamic banking can be found anywhere. So that people have the ease of partnering with Islamic banking [3].

Through these two banking policy has the potential to grow and develop more widely in Indonesia and the public can more easily reach out to the Islamic banking which is now placed in conjunction with conventional banking. The role played by the Islamic banking in encouraging economic progress, both these advantages into the gate that leads to the growth of the national economy. Islamic banking roles are described in the following section.

#### Role of Islamic Banking in National Development

Shariah Banking industry indicates an important role in national development [4]. Notching banking is quite reliable in the process of achieving well-being and prosperity of society. This is because the Islamic banks to apply the principle of equitable outcome without applying interest on the transaction.

Development is one of the indicators that determine the progress of a country, and also one of the important things that cannot be separated from the role of national banks, in particular Islamic bank. Islamic banks play an important role in development, with concrete evidence that the incidence of the monetary crisis in 1998 [4]. At the time the country was hit by the crisis, unlike other conventional banks, Islamic banks are not shaken and counted stable condition.

The development is not solely focused on the development results, but also the subject of development that no other human resources, should be given emphasis. Therefore, the development certainly done with good intention and financing. Islamic banks in the transaction system, which forbids interest, assume that interest with all kinds of species can be detrimental to the community and show the economic gap. The interest rate is also considered creating a chaotic development, where it is seen during the financial crisis; the interest rate that peaked resulted in economic chaos and have an impact on the delay of the development process. While Islamic banks are the main principle of justice, able to survive the crisis without shocks. This clearly proves that the Islamic banks are the right choice in enhancing the development of Indonesia [4].

Islamic banks own role in national development includes three main points. First, the Islamic economic role in the development of the real sector, with Prohibition in interest rates, the bank shariah must distribute the funds under its management to the real sector and the business is lawful [3]. Funds were channeled to the real sector, the nation's economic development will be met and the real sector can be more advanced.

Second, the Sharia economy through the financial industry also contributes in attracting foreign investors to invest in Indonesia [4], especially from the countries of the Middle East. The existence of various Islamic investment opportunities offered in Indonesia, foreign investment is also flowing in. The addition of the value this investment can increase foreign exchange which can takes the Indonesia to a better economy.

Third, the Islamic economic encourage ethical economic behavior in Indonesia society. The Sharia economy is an economy in favor of truth and justice and reject all forms of economic behavior that are not as good as the system of usury, speculation and uncertainty [3]. With the roles played by Islamic banks in national development, the government should give more attention and optimize performance so that financial institutions can thrive.

#### Role of Islamic Banking in the Micro, Small and Medium Enterprises (SMEs)

It is important to broad the knowledge of various parties that the role of Small, Micro, and Medium Enterprises (SMEs) in the economy of Indonesia [12]. National SME sector is known to have positive characteristics such as sectors that absorb a large workforce, to accommodate the poor and the

dominant role in the economic structure [13]. With the scope of business as the dominant activities in the domestic economic environment, do not be surprised if the SME sector has always been a hero of the country's economy when the national economy was dealing with the financial crisis. Therefore, it is reasonable if the government and the parties concerned to encourage the sector to develop better for the sake of economic progress.

Towards the ASEAN Economic Community (AEC), the Small, Micro, and Medium Enterprises (SMEs) in Indonesia showed a positive development [12]. This business sector progress quite rapidly evident from the increasing number of SMEs., but this growth to be very unfortunate if in terms of quantity has not been matched by the quality and competitiveness is good to be on par with competitors from other ASEAN countries. If the SME sector can excel, then the country's economy also rose, which is limited capital to be one of the obstacles [14]. This is where the role of Islamic banks in the development of Small and Medium Enterprises in Indonesia. In contrast to other banks that lend capital to give flowers or the opening credits, Islamic banks offer alternative banking service with a system of rewards in the form of profit and loss sharing or profit margin, the profit that applies the principles of justice both for the bank and the customer (The Republic of Indonesia, 2013)

The philosophy underlying the development of Sharia banks in an effort to develop SMEs in the community is the assistance provided without warranty or surety with the target groups of the middle to lower and less capable but has the potential to develop the business economy [4]. Other provisions are applied is if the member dies, then they are exempt from the payment of credit. In carrying out the program of micro credit services, Islamic banks which organize citizens into small borrowers in small groups consisting of five members. The intention was to strengthen the borrowers so that they have a better capacity to plan and implement decisions at the micro level. While in terms of lending, the priority given to groups of people who really need the funds to support its business success, therefore efforts of Islamic banks in the development of SMEs in the society in terms of assistance, not based on charity or compassion [3]. In this case, the credit aid that has been given should be able to prepare the requested requirements and credit procedures in accordance with the conditions of society. In addition, credit assistance provided does not require any collateral or guarantee members. Policies of Islamic banks themselves associated with the management of credit aid itself must be done openly and professionally with the principle of, by, and for the members [4]. In the implementation of the program, Islamic banks also utilize existing groups in the community as a suggestion channeling credit assistance.

It means that the policy of the Islamic bank in providing assistance to the poor, can trigger economic growth to reduce unemployment and poverty. The Assistances that given by Islamic banks could be beneficial for people who are unemployed and low income to improve the economy and at the same time the country's economy.

#### The role of the Financial Services Authority

So far, up to the first quarter of 2015, the Financial Services Authority (FSA) is still showing positive

achievements. Recorded in the report issued by the FSA, although Indonesia experienced economic growth of 4.7% in the first quarter of 2015 with a decrease of 0.3% compared to the fourth quarter of 2014, but it was also felt by most developing countries due to the global crisis. FSA report also noted there was a surplus balance of trade amounting to USD 2.4 billion, an increase of USD 1.4 billion from the previous year. This indicates that Indonesia is still in good condition [14]. The Composite Stock Price Index (CSPI) on table 2 showed the increasing of 5.6%, resulting in annual stock index grew by 15.7%. This reinforcement is the fifth highest among major exchanges Asia-Pacific region.

Table 2. The Asia Pacific Value Composite Index

Country	The Composite Stock Price Index (CSPI) (point)
China	15.87
Japan	10.06
The Philippines	9.82
Korea	6.55
Indonesia	5.58
Hongkong	5.49
Malaysia	3.95
Singapore	2.43
Thailand	0.55

Source: Indonesia FSA, 2015

## IV. CONCLUSIONS

Indonesia Economic Policy Package Volume V, which was released last October 2015 brought good impact on the country's economy is being weakened by the global crisis and a stronger US dollar. Regulations made by the Financial Services Authority includes three things, where the first, the policy regarding income tax rate (VAT). This policy can help the revival of the country's economy by stimulating the increase in the state income tax sector [6]. This tax revenue could be increased by the construction or expansion of a business entity that is carried out by specific sectors that create employment and reduce unemployment Indonesia (achieving high employment). In addition, the decline in income tax may attract other investors to invest in Indonesia so the impact on the increase in the value of foreign exchange. Awareness of companies or employers in the revaluation also be a reason for increased acceptance in the tax sector which advance the nation's economy.

Second, the policy with regard to the elimination of double taxation in real estate and housing / real estate can encourage investors to invest their shares in this sector. Development will also be a lot going on so that Indonesia can get a list of new taxes that are relatively abundant. The property sector and housing / real estate listed as one of the sectors which are potentially in employment.

Third, the convenience for Islamic banking in releasing new products without reporting and simplification of banking network, helping the development of Islamic banking were instrumental in the construction sector and supporting Small and Medium Enterprises (SMEs). Without passing through the special procedure of reporting new products as well as the implementation of the codification system, the Islamic

banking can be freely released a new product that would bring benefits to the people of Indonesia [15]. With the incorporation of Islamic banking and conventional banking, Islamic banks become easier to reach and be able to serve the people in a broader scope [4]. The role of the banks themselves is very important in national development and progress of the SME sector as a sector of economic backbone of the country.

With a variety of policies and regulations issued by the FSA, therefore they selves managed to prove the effectiveness of its performance [14]. Strengthening the sector, the distribution of SMEs, increase in Indonesia Composite Index [13], and various positive achievements FSA has indicated that the FSA does carry an important role in the progress of the Indonesian economy. With all the initiatives the FSA, Indonesia, which was hit by the phenomenon of economic slowdown, have the potential to grow into a country with a strong economy.

FSA as a new institution that perform oversight functions in the financial industry gave some hope for the country to move forward. In general, performance has been demonstrated towards achieving the objectives and functions of this establishment. However, it should be noted that the FSA should continue to maintain the consistency of its performance for the stability and progress of the country's economy (The Republic of Indonesia, 2011). Therefore, there should be an analysis of the effect of the policies issued by the institution of the nation's economic conditions as well as their performance reports on a regular basis so that the FSA can be evaluated and continuously strive to improve to provide the best for the development of the national economy. In a review of Islamic banking industry by Bank Indonesia, the first quarter of 2015 recorded a decrease in the assets and deposits of 1.5% and 2.2%. Based on this situation, in October 2015 the FSA issued a volume V of economic policy are on simplifying the regulations for Islamic banking (<http://ojk.go.id>). The above description shows that the FSA is quite effective in bringing Indonesia into a country with a better economy. FSA pays attention to every financial aspect and try to improve every sector experienced a decline in performance. So the Indonesia FSA showed a real contribution in the development of the national economy

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# POLICE AND PUBLIC IMAGE SATISFACTION ON QUALITY OF SERVICE IN CORNER DRIVER'S LICENSE UNIT

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**Abstract.** This research discusses, the influence of physical environmental, technical and functional quality toward customer satisfaction and Police institution image (study at SIM Corner in Indonesia). This purposed of this research to evaluate and analyze. The population of this research is the customer's as the applicant extension of SIM A and SIM C and also SIM A and SIM C at the service management of SIM Corner in Indonesia, as respondent being analyzed are 150 customer's at SIM Corner in Surabaya city and Sidoarjo district, and using non-probability sampling, besides it also using accidental sampling. Data tool using the Structural Equation Modeling (SEM) with path analysis, and the result of this research show that: physical environmental quality proven that it improve the customer satisfaction at SIM Corner; technical quality proven that it improve the customer satisfaction at SIM Corner; functional quality proven that it improve the customer satisfaction at SIM Corner; physical environmental quality proven that it improve the Police institution image; technical quality proven that it improve the Police institution image; functional quality proven that it improve the Police institution image; consumer satisfaction proven that it improve the Police institution image in Indonesia.

*Keyword: quality of physical environmental, technical, functional, customer satisfaction, institution image*

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## I. INTRODUCTION

Police Institution is an institution or organization whose function is to provide protection and services to the public, as well as the complaints and solving problems that arise in the community. But as is well known, that lately the image of the National Police declined slightly because of the many legal cases involving multiple elements at the same lack of ability Police to solve the problems such as corruption, drugs, terrorism, and so forth, to the maximum to make the level of trust and satisfaction of the people to the service Institutions Police slightly reduced which results in decreased image or image INP itself. In order to enhance the image or image, this time the Police Institute strives to improve its services back to the community. In

East Java, especially in the city of Surabaya and Sidoarjo regency, various program services again encouraged and enabled such as the application of safety belt, "Click" on the helmet, program two wheels in the left lane, and so forth. One of the programs that currently stand out is the implementation of mobile SIM and SIM Corner is to provide convenience for people who want to extend SIM A and SIM C. However, whether a given service has been able to satisfy customers or service users SIM Corner, which will then have an impact on enhancing the image of the Police is to be investigated further.

## Review of Literature

### Public service

Conceptually management of public services by Norman (Nawawi, 2010) states that, the service is a social process, and management is the ability to direct social processes. In the public

service, management creates a system of moral values or to serve, not to be served (to serve not to be served). Strength in the public policy making process is one way to create a management and service excellence (excellent service management). Improving the ability of public sector management in achieving employment levels are high, such as the activity time (delivery on time), superior quality products (high quality of product), reduction of costs for obtaining services (cost reduction) and treatment are increasingly placing the consumer or the people as a party which has dignity, is essential in order to realize the quality of service. According to Savas (Nawawi, 2010) in the public sector, the terminology of government services (government service) is defined as the delivery of services by government agencies through their employees (the delivery of service by a government agency using its own employees). Zeithaml and Bitner (2000) suggested that quality of service is a total experience that can only be evaluated by the customer. [1] argues that the quality of service is an important factor for the performance of the company and a source of competitive advantage.

This study tried to look at the quality of service (service quality) is based on three variables of service quality, an adaptation of the opinion Asubonteng et al. (1996) and Grönroos (Lovelock, 1992), namely:

a. The quality of the physical environment, related to the physical environment Corner SIM services. Indicators for measuring physical qualities include the environment and supporting facilities, such as: spatial, beauty, cleanliness, and comfort Corner SIM services.

b. Technical quality, technique or procedure relating to the SIM services Corner. Technical indicators for measuring the quality of cover: SIM printing machines (machines), a computerized system (computerized system), direct face to face (know-how), and technical problem solving (technical solution).

c. Functional quality, with regard to SIM services Corner functionally. Indicators to measure the functional qualities include: the ease (assesbility), the appearance of officers (appearance), the behavior of the officer (behavior), internal relations (internal relationship), the attitude of officers (attitudes), contact the customer (consumer contact), and knowledge officer (service- mindedness).

#### Consumer satisfaction

Engel et al. (1995); Oliver ([2]); and [3] reported feeling satisfied consumers arises when consumers compare their perceptions of the performance of the product or service to their expectations. Consumer satisfaction and dissatisfaction is the consumer response to the evaluation of nonconformity (disconfirmation) perceived between prior expectations or other work norm (Sumarwan, 2004), with actual performance product that is felt after use. [4], satisfaction is feeling happy or disappointed someone who emerged after comparing the performance or the result of a product that is considered to performance or outcomes. [2], and [3], explains that the customer perceived service quality will determine the customer's perception of the performance / results of the service, which will ultimately have an impact on customer satisfaction or customer satisfaction.

#### Image of the police

Image or image according to [4] is defined as the set of beliefs, ideas, and impressions regarding a persons hold an object. Peoples attitudes and actions toward an object are highly conditioned by that object image. Citra according Khasali (Kelvin, 2011) is an impression arising from understanding reality. The company's image to show the impression of an object against a company formed by processing information at any time from a variety of sources of reliable information. According to Katz

(Badri, 2006), the image is how others see the company, a person, a committee, or an activity. [4], customer delivered value (the value received by consumers) are the difference between total customer value with a total customer cost. Total customer value is a bundle (bundle) benefits (profit) expected from a product. Source of total customer value is the product itself, services, personnel, as well as image (image). Suwandi (2011); and Aaker (1996), states that the purpose of a good corporate image for the company to stay alive and the people in it continue to develop creativity even more significant benefits for others.

## II. METHODS

### Sampling

Types of sampling techniques in this study included in nonprobability sampling, and sampling by accidental sampling. During the research conducted, the number of respondents is not known for certain. According to Hair et al. (1998), if the sampling is not localized in one area, then the recommended sample size is between 100-200; or the sample size is approximately 5-10 existing parameters in the model to be estimated, then the sample set of 150 samples were deemed meet the required number of samples to be able to use analytical techniques Structural Equation Modeling (SEM).

### Data retrieval

The primary data is done through personalized technical questionnaires making it possible to give an explanation to the respondents in the questionnaires. Measurements for each variable is in the form of scoring according to Likert scale.

### Data analysis

Data analysis was performed using path analysis (path analysis) to test the feasibility of the model developed by a structural equation model, it will use some of the eligibility index that will be used to see the evaluation criteria-models with goodness of fit indices.

It can be seen from Figure 1 which shows that fit the criteria for a model has RMSEA value of 0.077 or less than the cut-off value that is

0.080 and the value of DF / Chi Square of 1.880 or less than the cut-off value which is 2,000. So there are two criteria for goodness of fit index that had been met.

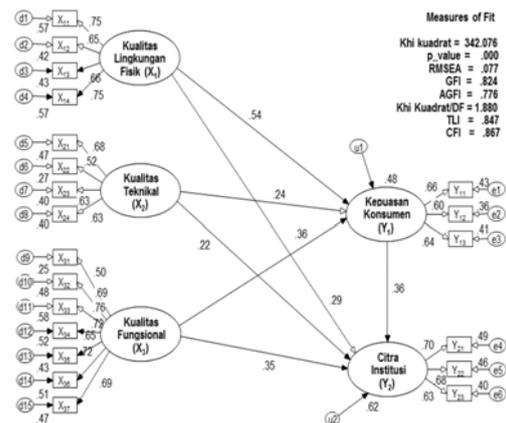


Figure 1  
Test the goodness of fit index

## III. RESULT AND DISCUSSION

Hypothesis testing is done by t-test at each track direct effect partially. While the hypothesis indirect effect demonstrated through proof of each lane direct effect, which can be seen as follows.

Table 1  
Regression Line Coefficient

Variabel Independen	Variabel Dependen	Regression Weight	P-Value (P<0,05)
physical env →	Satisfaction	0,538	0,001
technical →	Satisfaction	0,242	0,025
functional →	Satisfaction	0,360	0,001
physical env →	image of police	0,288	0,031
technical →	image of police	0,216	0,043
functional →	image of police	0,347	0,004
Satisfaction →	image of police	0,362	0,032

Table 1 shows the quality of the physical environment has a coefficient regression lines amounting to 0.538; p = 0.001 (p < 0.05), which means the physical environment positively affects customer satisfaction. This means that the higher the quality of the physical environment,

the higher the level of customer satisfaction SIM Corner.

Table 1 shows the technical quality of the positive and significant impact on customer satisfaction with the value of regression coefficient of 0.242; and  $p = 0.025$  ( $p < 0.05$ ), which means the higher technical quality, the higher the level of customer satisfaction SIM Corner.

Table 1 shows the functional quality positively affects customer satisfaction shown the value of a regression coefficient of 0.360; and  $p = 0.001$  ( $p < 0.05$ ), the higher the functional quality, the higher the level of customer satisfaction.

Table 1 shows the quality of the physical environment has positive influence on the image of Institutions with regression coefficient of 0.288; and  $p = 0.031$  ( $p < 0.05$ ), this means that the higher the quality of the physical environment, the higher the image of the police force.

Table 1 shows the positive effect on the technical quality of the image of the institution with a regression coefficient of 0.216; and  $p = 0.043$  ( $p < 0.05$ ), which means that the higher the technical quality, the higher the image of the police institution.

Table 1 shows the functional quality positively affects the image of an institution that demonstrated the value of a regression coefficient of 0.347; and  $p = 0.004$  ( $p < 0.05$ ), this means that the higher the quality, the higher functional image of the police institution.

Table 1 shows the customer satisfaction has positive influence on the image of the institution with a regression coefficient of 0.362; and  $p = 0.032$  ( $p < 0.05$ ), ie the higher the customer satisfaction, the higher the image of the Police Institution.

Power of influence between a construct, both direct effect and indirect effect can be analyzed through the coefficients of all the lines with arrows one end. The direct effect is the latent variable factor loading of each indicator that form latent variables are analyzed. The indirect effect (standardized indirect effect) can strengthen or weaken the direct influence derived from indicators in the study (Ferdinand, 2000). The influence of direct and indirect effect is shown in the following table.

Table 2  
Direct influence and intervening

Exogenous variables	X-Y	Z	$\Sigma$
physical	0,288	0,195	0,483
env.technical	0,216	0,088	0,303
functional	0,347	0,130	0,477
Satisfaction	0,362	-	0,362

Indirectly there is a positive and significant effect of the variable quality of the physical environment of the image of the institution through 0195 customer satisfaction. Indirectly there is a positive and significant effect on the image quality variable Technical Institute through customer satisfaction by 0087. Indirectly there is a positive and significant effect on the image quality variable functional institution through customer satisfaction by 0.130. Directly there is positive and significant variable image to the satisfaction of consumers Institution of 0.362. This means that if the consumer satisfaction variables changed (Increased) to a more positive one level then the image of the Institution will Also Increase by 0362.

#### Discussion

Overall results of this study indicate that the quality of the physical environment, technical and functional proven to increase customer satisfaction SIM Corner. These results indicate that the quality of the physical environment, technical and functional proven to improve the image of the Police Institution. The results of this study as a whole to support or strengthen theoretical study and empirical studies that have been there. Theoretically line with Fornell et al. (1996), [2], and [3]. Empirically, supports research [5], [6], [7], [8], Eternal (2007), [9], [10], and [11].

The results of this study show that customer satisfaction SIM Corner Institusi. Result proven to improve the image of this study support and strengthen the results of research conducted by previous researchers that [5], [6], [7], [8], Eternal (2007), [9], [10], and [11] which concluded that the quality of service significantly influence customer satisfaction.

#### IV. CONCLUSION

Based on the results of research and discussion that was raised, it can be concluded that the environmental quality of technical quality and functional quality are proven to increase customer satisfaction SIM Corner in Indonesia. Similarly, the quality of the physical environment of technical quality and functional quality are proven to improve the image of the Police Institution in Indonesia; and customer satisfaction SIM Corner proven to improve the image of the Police Institution in Indonesia.

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# GET CREATED TO WORK QUALITY OF LIFE, COMMITMENT AND PERFORMANCE OF ARREARS COLLECTION OF TAXPAYERS IN SAMSAT MOJOKERTO

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**Abstract.** Research to determine the effect of improving the quality of working life and employee commitment to employee performance as sampling took 38 employees in call centers Mojokerto through the total study population. Data dkumpulkan through a Likert scale, and analysis through multiple regression techniques. The results of hypothesis verification showed  $F = 1202.366$ ;  $p = 0.000$  ( $p < 0.01$ ), indicating both the independent variable is the quality of work life and employee commitment together provide a very significant influence on employee performance variables. The coefficient of determination explain together the two variables is able to contribute effectively to improving the performance of employees amounted to 98.6%. Partial assay results demonstrate the quality of working life gained value  $t = 17.271$ ;  $r = 0.350$ ;  $p = 0.000$  ( $p < 0.05$ ), which means the quality of work life directly influence on employee performance improvement, as well as variable gain employee commitment  $t = 2.240$ ;  $r = 0.045$ ;  $p = 0.000$  ( $p < 0.05$ ), indicating that employee commitment is a direct influence on employee performance improvement.

Keywords: quality work of life, commitment, job performance

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## I. INTRODUCTION

Self-assessment system requires taxpayers to meet their tax obligations are backed by HR or an employee tax services to improve the quality of performance. Therefore, in accordance with the Regulation of East Java Governor Number 19 Year 2012 on the Organization and Technical Implementation Unit of the Department of Revenue of East Java province, each employee is given a target to be able to collect on delinquent taxpayers, with a reward or incentive as one form of increased quality of working life, in addition to briefing given in the form of technical training. Efforts are made with consideration of external factors as an obstacle for the joint Office of Samsat in doing for collection of motor vehicle tax [1].

Efforts to improve the quality of working life is done to minimize the obstacles that arise in the implementation of the motor vehicle tax collection. Compulsory Motor

Vehicle Tax can find out early about their obligation to pay motor vehicle tax of at least prior to the due payment of taxes, through the Income Tax Motor Vehicle (SPKPKB) sent directly to the taxpayer in accordance with the address stated in the vehicle license (Law No. 22 Year 2009). It can be said that the employee's performance will be achieved in line with expectations when the institution enhances the quality of working life of employees. This means that the quality of working life is an effort made to overcome the obstacles that arise can be done by improving the quality of human resources and improvement of computer programs SAMSAT expected object vehicle tax free (motor vehicle red code / services) and changes in tax rates can be covered and made changes or adjustments automatically in the computer program. Besides the implementation of the target achievement as one employee performance evaluation will be constrained internally and externally when employees lack commitment. Commitment is

the result of the socialization process and deals with the power of organizational culture where trust and confidence of employees at the institution can be proved. If employees do not believe that they can depend on the institution, the employee is less able to bind themselves to the institution.

It can be interpreted that the responsibilities of employees towards their duties, followed by a consistent attitude in their behavior towards their job, and their proactive attitude is characteristic of their komitmen employees of the company or his work. Such conditions directly affect the assessment of the work both in quality and quantity, time is more effective, the impact on the financing aspects, as well as the positive impact of such employees who received the factors that shape the satisfaction internally and interpersonally. Based on this framework, as the provisional estimates presented in this study is, there is the quality of work life and employee commitment to the performance of tax officials in the office area along SAMSAT Mojokerto.

## Review of Literature

### 1. Employee Performance

[2] defines the performance is a systematic review of an individual employee's performance on the job which is used to Evaluate the effectiveness of his or her work, which is a review of the systematic review of the work of individual employees in jobs that are used to evaluate the effectiveness of the work. Bernardin and Russel (dalam [3]), defines performance as the recording of the results obtained from job functions or activities for a certain period. [4] stated that the performance is the result of one's productivity on the job responsibilities in an organization where the person works.

Kaplan & Norton (dalam [3]) suggests some aspects of employee performance measurement as follows.

- a. Quality, is the result of hard work of the employees in accordance with the goals set by the company earlier.
- b. Quantity, is the result of the hard work of employees can achieve maximum scale that has ditentpkan by the company, with the result that has been set by the company, the performance of the employees is good.

- c. Timeliness is the ability of employees to work on the working time standards set by the company, by working in accordance with the standards specified time then the performance of the employee is good.
- d. Cost effectiveness, the use of employee resources efficiently and afektif that can affect the cost savings incurred by the company and generate maximum profit.
- e. Need for Supervision, an employee's ability to work well without supervision from the company.
- f. Interpersonal impact, namely employees who have high self-esteem to their work so that employees strive to achieve the best results in doing the job.

### 2. Quality Work of Life

Ames ([5]);[6] suggests that the quality of working life of employees is a cognitive evaluation of the whole process of the work that has goal orientation, or implies a belief that leads to a different way of approaching, engaging in, and responding to the achievement situation. [7] describes the QWL is a set of trends or the intensity of behavior that determine how a person approaches and carry out a work activity, followed by the chance of the system in force in the company as well as the opportunity to develop his or her potential. This is explained Fortune (2016) and [8] that the quality of work life is basically a management practice which aims to create a work culture that is able to motivate every employee to be able to develop themselves and contribute pencapaian optimal for the target company (goal orientation). [9] factors that affect the quality of life krja (QWL) among others, is a relationship with co-workers (employment relationship), work environment (work environment), processes and organizational structures (organizational structures and processes), job design (job design), praktik-management practices and supervision (overall business strategy), the attitudes and behaviors of workers (worker attitudes and behavior) and the organization's culture.

Wayne [10]; Anderson ([11]); [12] suggests several aspects to determine the

quality of working life of employees as part of the performance management company, which covers.

- a. Participative management (participatory of management),
- b. Good working environment, healthy and safe (safety, health and work environment).
- c. Design work. According Greendberg and Baron ([13]) work is designed to help employees do the job pleased and concerned with what is done
- d. Opportunities to obtain development potential (human resources development), namely training opportunities (training), understanding the value (value) work, design work as a consideration for the completion of tasks (reason for effort), and the attribution of self (internal locus of control), taking wisdom for the failure.
- e. Choice of work (working reward), the employee gets a chance to develop or improve performance

### 3. Commitment

Etzioni ([5]), states that the commitment is rooted in employee involvement within the organization itself. This approach views the commitment and involvement of employees in organizations with the order of a total commitment to not commit at all. Steers and Porters [14] argues that employee commitment to the organization is to identify flavor, which revealed the involvement of workers' loyalty towards the organization or organizational unit. Employee commitment is a very pleasant attitude employee organizations for their willingness to undertake high effort for the organization to facilitate the achievement of organizational goals. [15], states that the employee commitment to the organization is an employee siding levels of an organization and aim to maintain membership in the organization. [16], states that the organization's commitment reflects how an individual identifies himself with the organization and related objectives.

[17]; [14], the characteristics of employees who can be an indicator or measurement in dimension affective commitment, continuant and normative, are implied as follows:

- a. Responsible (responsibility), an identification or acceptance of responsibility, working hard to solve the problem, and are working hard to complete the work.
- b. Consistent (consistency). A small commitment or unappreciated often worse than no commitment at all.
- c. Proactive (pro-active). Commitment requires a perspective that includes the efforts of current and future than the willingness to react and explanations.

## II. METHOD

### Subject Research

The study population was an employee at the office with SAMSAT Mojokerto, all of which as many as 38 employees. Subjects taken through a total population sampling, the whole population is used as a sampling anggota research.

### Data Collection

Data collection techniques in this study using a questionnaire. The questionnaire used in this study consists of two parts, namely the open questionnaire and questionnaires Closed. The statement in the enclosed questionnaire is compiled using a Likert scale in the form of a statement on the research instrument with five alternative answers. Test reliabilitas (reliability) second questionnaire this study using Cronbach's alpha reliability technique. According to [18], the measuring instrument is declared reliable (reliably) if it has an alpha value close to the value of 1.00 or according to [19] has an alpha value greater than 0.70 for the social sciences. Results of testing the reliability of unknown quality of working life has a value of  $\alpha = 0.949$ ; Employee commitment has a value of  $\alpha = 0.923$ ; and employee performance has a value of  $\alpha = 0.947$ , so the whole scale used relatively reliable.

### Date Analysis

Hypothesis test results can be known regression equation as follows.

$$Y = \alpha + \beta_1x_1 + \beta_2x_2 + e +$$

$$\text{Performance} = -0.213 + 0.870 + 0.206 + e$$

The value of the regression equation indicates that the Y has a constant value of -0.213 negative that can be said that the performance of employees with the quality of

work life and employee commitment has a degree inversely, ie, if the quality of work life and employee commitment to be increased then not always followed by an increase in employee performance.

Value  $\beta_1$  ( $x_1$ ) shows that any increase in the quality of working life of 0.870 will be followed by an increase in the performance of employees by 87%. Similarly, the value of  $\beta_2$  ( $x_2$ ) of 0.206 which indicates that if the employees' commitment to increase the performance of employees will also increase at the same rate that is equal to 20.6%.

### III. RESULTS

Based on the analysis of data proving the hypothesis can be seen as follows.

Table 1  
Simultaneous Hypothesis Test Results Summary

	R	R <sup>2</sup>	F	p
1	0,993	0,986	1202,366	0,000

F value of 1202.366 with  $p = 0.000$  ( $p < 0.01$ ) showed that the two independent variables, namely the quality of work life and employee commitment together provide a very significant influence on employee performance variables. It can be said that the hypothesis that there is an influence simultaneously the quality of work life and employee commitment to employee performance is acceptable. The R value of 0.993 indicates a correlation coefficient of the two independent variables (quality of working life and employee commitment) has classified the level of the relationship is very strong against job satisfaction variables up to 99.1%. R<sup>2</sup> value of 0.986 indicates the coefficient of determination two independent variables (quality of working life and employee commitment) who is able to contribute effectively to the employee's performance of 98.3%.

Table 2  
Partial Summary Hypothesis Test Results

	r part	t	p
QWL	0,350	17,2 71	0 ,000
Commitment	0,045	2,24 0	0 ,000

T value on work culture variable amounted to 17.271 with a probability of

0.000 ( $p < 0.01$ ) showed that the quality of working life has a very significant influence on employee performance. Partial correlation coefficient value of 0.350 indicates that the relationship between the two variables by 35%. It can be said that the hypothesis that there is influence quality of working life of the employee's performance is acceptable.

T value of 2.240 with a probability of 0.000 ( $p < 0.01$ ) show that employee commitment has a very significant influence on employee performance. Partial correlation value of 0.045 indicates the closeness of the relationship between employee commitment variable with the performance of employees by 4.5%. Based on the analysis proving the hypothesis known that the hypothesis that there is an influence employee commitment to employee performance is acceptable.

Based on the results of the analysis of the partial test is also known that the partial correlation between the quality of working life on employee performance values obtained  $r = 0.350$ , while the value of partial correlation between employee commitment to employee performance obtained a value of 0,045 so it can be said that the quality of work life is able to provide the largest contribution to the increase performance of employees in the office with SAMSAT Mojokerto.

### Discussion

Results of analyzes simultaneously proving hypotheses about the influence of the quality of work life and employee commitment to employee performance obtained probability value of less than 5%, so the hypothesis has been convicted. Results were in accordance with the opinion of [20]; and [21]; [7] argued that the overall quality of working life is the quality of human experience in the workplace, which can give a positive effect on performance. The concept is in accordance with the results of inferential analysis that shows the correlation between the quality of working life with employee performance.

[13], explains that the quality of work life is basically a management practice which aims to create a work culture that is able to motivate every employee to be able to develop themselves and contribute pencapaian optimal for the target company (goal orientation). Similarly, employee commitment, which according to research results [22], [14], [23]; [14] which states that

employee commitment to the organization is to identify flavor, which revealed the involvement of workers' loyalty towards the organization or organizational unit. Employee commitment is a very pleasant attitude employee organizations for their willingness to undertake high effort for the organization to facilitate the achievement of organizational goals [8]. This is consistent with data analysis shows that the high and low commitment of employees have high and low correlation with the performance of its employees. Result research [24], in connection with the definition of that commitment, as well as its association with the employee's performance can also be shown how employees work plan, as has been stated that most of the employees who are planning to maintain morale, and minimize leakage and improve work performance.

#### IV. CONCLUSION

It is known that the quality of working life and employee commitment together give a significant effect on the variable performance of employees in the office with SAMSAT Mojokerto. Likewise, the results of the partial test evidence shows the quality of work life directly impact the performance improvements, while the employees' commitment directly impact the improvement of performance of employees in the office with SAMSAT Mojokerto. Based on the analysis of test partial effect known that the quality of work life able to contribute much higher the performance of employees in the office with SAMSAT Mojokerto.

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# CONSUMER PROTECTION ARRANGEMENTS PURCHASE PRODUCTS THROUGH E-COMMERCE

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**Abstract.** Consumer Protection is regulated in Act No. 8 of 1999 on Consumer Protection. Consumers as user of goods and services in doing transactions of products purchasing are able to use the technological advances in online transactions (e-commerce). It also contributes to the high rate of consumers complaining in Indonesia related to fraud of online transactions. Consumer protection arrangement is possible to do of turn proving in case of disputes between consumers and entrepreneurs. Consumers who feel that their rights are violated to be able to complain and proceed the case legally in consumer dispute resolution bodies (BPSK). Entrepreneurs who use online sales can be imprisoned if it is found a violation of the rules of law related to the Abuse of Information Technology and Consumer Protection..

Keywords: Consumer Protection, E-Commerce

## I. INTRODUCTION

Science and technology are growing more rapidly. It affects the business activity in the world, including in Indonesia. Consumer products offered not only in the real world, but also through the virtual world that is the Internet. A transaction conducted between seller and buyer does not need face to face, however they are able to utilize the internet technology in advance, which is more popular purchases online transactions (e-commerce).

Online transaction is a new way to buying and selling activities to take advantage of technological advances. Online transactions are getting more the attention of enthusiasts and selling online as the development of technologies that facilitate the buying and selling process. In addition, due to the public demand for services quickly and easily as well as practical because the public has a wider space in selecting products. It also contributes to the high rate of complaints by consumers in Indonesia related to fraud in online trading.

A change in public spending behavior of conventional shopping into online shopping in Indonesia has some problems. Based on data from YLKI, e-commerce rankstthird of the total complaints as many as 781 direct and 1,038 complaints over the phone [1]. Complaints e-commerce jumped to the top three in 2016 were previously in 2014 is not in the top 10 consumer complaints. Consumer complaints against e-commerce is divided into several major issues, such as the goods are not shipped, unilateral cancellation, the refund process, misleading information, until the settlement of disputes [2]

There are still many consumers have not been able to solve their own problems. It indicates that the consumer weakness in the level of consumer awareness of their rights is still low. Challenges to the development of technology, especially in digital era that makes government should give more attention

to the increasingly complex problems on consumer protection. Therefore, the Consumer Protection Act intended to be a strong legal foundation for government and non-governmental consumer protection agencies to empower consumers through guidance and consumer education

## II. METHOD

The method used in this paper is normative. Normative juridical research is research literature in order to obtain legal material to be analyzed. Legal material to be analyzed consists of three types, namely primary legal materials, secondary and tertiary. Primary legal materials, ie materials that have the binding force of law, among others: the Book of the Law of Civil Law/Burgelijk Wetboek (Statute 1847/23) (BW), Act No. 11 of 2008 on Information and Electronic Transactions, Act No. 8 of 1999 on Consumer Protection and Government Regulation No. 82 Year 2012 on the Implementation System and Electronic Transactions. Secondary law are materials that explain the law of primary legal materials such as books, magazines and newspaper articles, and papers related to the topic of this paper. While tertiary legal materials that material support laws that give clues to the primary legal materials and secondary law such as legal dictionary, and the dictionary language.

## III. RESULTS AND DISCUSSION

Consumer Protection Settings

Law No. 8 of 1999 on Consumer Protection states that consumers as the user of goods and services available in the community, for the benefit of themselves, their families, other people, and other living beings and not for sale.

Act 1945 as the main legal basis which makes the consumer is able to propose the protection. It was contained in Article 27 paragraph (1), that: All citizens have an equal right for the law and government. They also have to abide the law and government without any exception. "Indonesia as a country of law, then every element of society must obey the laws regulations in the Republic of Indonesia.

According to the Consumer Protection Act, Article 1, Item 1 states that "Consumer protection is all the effort that guarantees the legal assurance to provide protection to consumers". Legal assurance is made to protect the rights of consumer, which is reinforced by a special law, by giving hope that entrepreneurs do not anything which is able to impair the consumer right. By having the Consumer Protection Act and other legal instruments, the consumer has the right and impartial position to be sued or sue if it turns out their rights have been impaired or violated by the entrepreneurs.

The consumer protection issue is possible to make a turn proving [3], in case of disputes between consumers and entrepreneurs. Consumers who feel that their rights are violated to be able to complain and proceed their case legally in consumer dispute resolution bodies (BPSK). The legal basis could be a valid legal basis in terms of consumer protection arrangements. BPSK carry out the handling and settlement of consumer disputes by way of mediation or arbitration or conciliation, as well as providing consulting consumer protection.

The Article 28 of Law Consumer Protection states that a proving element toward unexistence of fault is a burden and responsibility of entrepreneurs. It means that the responsibility of civil law still requires an element of error, even though it is set in a a turn proving in the Article of 28. The turn proving was limited to the proof of the error element. In fact, the responsibility of civil law includes the elements of causality (causal link). Therefore, it needs to prove a number of consumer detriment caused by the goods or services produced by the entrepreneurs, in addition to the element of fault [4]

The consumer protection which is guaranteed by the law is the existence of legal assurance to all acquisition needs of consumers. Legal assurance that covers all efforts based on the law to empower consumers to obtain or determine its choice of goods and services of their needs and maintain or defend their rights when the consumer is harmed by the entrepreneurs as the providers of consumer needs.

#### 1.Principles of Consumer Protection

According to the Consumer Protection Act chapter 2, there are five principles of consumer protection that is to be base on the benefits, justice, equity, security and safety of consumers, as well as legal assurance.

##### a. The principle of benefit

It is intended to all efforts in the implementation of consumer protection should provide maximum benefit for the necessity of consumer and the entrepreneurs overall.

##### b. The principle of justice

It is intended to the citizen participations is to be able fully actualized and provide the opportunity to the consumers and nterpreneurs to obtain their right and implement the obligations in fairly.

##### c. The principle of balance

This principle is intended to provide a balance between the interests of consumers, the entrepreneurs, and governments in the sense of material and spiritual.

##### d. The principle of security and safety of consumers

This principle is intended to provide a guarantee for the security and safety to consumers in the use, handling, and use of goods / services consumed or used.

##### e. The principle of legal assurance

This principle is intended to both the entrepreneurs and consumers obey the laws and obtain the justice in the implementation of consumer protection, as well as the State guarantee legal assurance.

In the Consumer Protection Act Section 3 states that the purpose of consumer protection are as follows:

- a. Raising the awareness, ability and independence of the consumers to protect themselves.
- b. Raising the dignity of consumers by keeping away them toward negative excess consumption of goods and services.
- c. Improving the empowerment of consumers in choosing and demanding their rights as consumers.
- d. Creating a consumer protection system contains elements of legal assurance and transparency of information and access to information.
- e. Growing awareness of the entrepreneurs about the importance of consumer protection. It grows attitude of honest and responsible
- f. Improving the quality of goods/services that ensure the continuity of the production of goods and services, health, comfort, security, and safety of consumers.

#### 2.Consumer Rights

As a user of goods / services, consumers have a number of rights and obligations. Knowledge of consumer rights is very important for people to act as independent and critical consumers. It is intended to if there is an unjust action against to the consumer. Hoping the cosumer immediately realized the mistake. Consumers could then go further to fight for their rights.

There are 4 (four) basic rights of consumers, namely [5]:

- a. The right to safety;
- b. The right to be informed;
- c. The right to choose;
- d. The to be heard.

The consumer rights in the Consumer Protection Act in Article 4, the rights of consumers as follows:

- a. The right to comfort, security, and safety in the consumption of goods/services.
- b. The right to choose and get the goods/services in accordance with the exchange rate and conditions and guarantees promised.
- c. The right to correct information, clear and honest about the condition and guarantee of the goods / services.
- d. The right to be heard complaint opinion on goods / services is used.
- e. The right to advocacy, protection and mediation in consumer protection is worth.
- f. The right to receive guidance and consumer education.

- g. The right to be treated or serviced properly and honestly and not discriminatively.
- h. The right to obtain compensation, indemnity, or replacement if the goods/services received are not in accordance with the agreement or not as it should be.
- i. The rights set forth in the provisions of other legislation.

### 3. Consumer Obligations

The Consumer obligations In accordance with Article 5 of Law Consumer Protection, Consumer obligations are:

- a. Reading and following the instructions and procedures for the use of the information or the use of goods and services, for security and safety;
- b. Doing in good faith to purchases of goods and services;
- c. Paying in accordance with the agreed exchange rate;
- d. Following legal dispute resolution efforts.

On the other hand, the obligation for the entrepreneurs (in this case is an online seller), in accordance with Article 7 of Law Consumer Protection, the obligation of entrepreneurs are:

- a. Doing in good faith in conducting its business activities;
- b. Providing correct information, clear and honest about the condition and guarantee of the goods and services and explain the use, repair and maintenance;
- c. Treating and serving customers properly and honestly and not discriminatory;
- d. To ensure the quality of goods and services produced and traded under the provisions of the quality standards of goods and services are applicable;
- e. Giving the consumers a chance to test, try the goods and services as well as the guarantee and warranty on goods manufactured and traded;
- f. Giving a compensation and reimbursement of losses due to the use, consumption and utilization of goods and services traded;
- g. Giving compensation and replacement if the goods and services received or used not in accordance with the agreement.

Article 8 of the Consumer Protection Act prohibits the entrepreneurs to trade in goods/services that are not in accordance with agreements stated in the label, label, information, advertising or sales promotion of goods and services. Based on that article, mismatches specification of goods before and after have been accepted is a form of trespassing to the entrepreneurs in the trading of goods.

If the entrepreneurs do not implement their obligations, they are able to be imprisoned based on Article 62 of Law Consumer Protection, namely: the entrepreneurs who violates Article 8 that may be imprisoned for a period of 5 (five) years or a maximum pay of Rp 2,000. 000,000.00 (two billion rupiah)

At the Consumer Protection Arrangement Transactions Online (E-Commerce). Electronic Transactions is a legal act performed by using a computer, computer network, and other electronic media. Online is a situation of the network connected to the Internet. In the online situation, we are able to utilize the internet with conducting actively so as to establish good communication one-way communication such as reading news and articles on the website as well as two-way communication such as chatting and exchanging emails.

The definition of e-commerce by Warwick Ford and Michael S. Baum is as follows: Electronic commerce is an umbrella term that describes automated business-related

transactions, spanning the purchase of pencils via an electronic mail message to an office supplies store, a shopping trip to an electronic mall on the World Wide Web, the electronic filling of tax returns or other government-oriented information, and high-dollar industrial inventory control transactions [6]

Status of e-commerce in Indonesian law lies in the field of civil law as a subsystem of the law of contract, then the e-commerce has principles similar as the agreements in general such as: The principle of freedom of contract, Principle consensual, Principle faith Goods, principle of balance, principle of appropriateness, principle habit, principle of compensation, principle of force majeure as well as the principle of legal assurance.

Based on the legal stipulations has been conducting in Indonesia, the legal relations in the electronic contract as a manifestation of freedom of contract, which is known in the KUH civil law. This principle is also referred to the freedom of contract or *laissez faire* [7]

The principles of contract law in e-commerce under the terms of the engagement, so that the effect of Article 1320 of the KUH civil law is about the requirement validity of the terms of an agreement. An agreement was declared fulfilled four conditions namely:

- a. The agreement of the parties to the agreement (agreement)
- b. Skills of the parties to the agreement (capacity)
- c. Subjective requirement in the first and second terms.
- c. A specific case (certainty of terms)
- d. Because of legitimate (considerations)

Objective conditions on the third and fourth terms.

Law on Information and Electronic Transactions No. 11 of 2008 is the main legal basis for e-commerce in Indonesia. ITE Law was adopted on 21 April 2008 and entered into force on the date of promulgation (Article 54 paragraph 1), so that:

- a. Recognition of the transaction, information, documents and electronic signatures within the legal framework of the engagement and the laws of evidence, so that the legal assurance of electronic transactions can be guaranteed.
- b. Classifying into actions including qualifying law violations related to the abuse of IT (Information Technology), accompanied by criminal sanctions.

Sale and purchase transactions are done online though, based on the ITE Law and Government Regulation No. 82 Year 2012 on the Implementation System and Electronic Transactions (PP PSTE) continues to be recognized as an electronic transaction to be accounted for. Approval to purchase goods online by clicking the approval of the transaction is a form of action receipt indicating approval on a deal in electronic transactions. The act of acceptance is usually preceded by a statement acceptance of terms and conditions of sale and purchase online we can say also as a form of Electronic Contract. Electronic contract pursuant to Article 47 paragraph (2) PP PSTE considered valid if:

- a. There is an agreement between the parties;
- b. Conducted by the legal subject capable or authorized to represent in accordance with the provisions of the legislation;
- c. There are certain things; and
- d. The transaction object must not conflict with legislation, morality and public order.

Electronic contract itself according to Article 48 paragraph (3) PP PSTE, should at least contain the following [8]:

- a. The data identity of the parties;
- b. Objects and specifications;
- c. Electronic Transactions requirements;
- d. Prices and costs;
- e. The procedure in the event of cancellation by the parties;
- f. The provision that entitles the injured party to be able to return the goods and request a replacement product if there is a hidden defect; and
- g. Electronic Transactions settlement of legal options.

In the electronic transactions which is able to utilize UU ITE instruments and PP PSTE as a legal basis in resolving legal problems. Relating to the protection of consumers, Article 49 paragraph (1) PP PSTE confirms the entrepreneurs that offer products through Electronic System have to provide complete and correct information with regard to the terms of the contract, the manufacturer, and the products offered so that business actors are required to provide clear information about deals contract.

If the entrepreneur perform acts that meet the elements in Article 28 paragraph (1) UU ITE namely: "Every person intentionally and without right of spreading false news and misleading results in loss of consumer in Electronic Transactions", it can be subject to penal provisions under Article 45 paragraph (2) with imprisonment of 6 (six) years and/or a fine of 1,000,000,000.00 (one billion).

#### IV. CONCLUSIONS

Consumer protection is any measure that guarantees the legal assurance to provide protection to the consumer that the settings contained in Law No. 8 of 1999 on Consumer Protection. The rules regulate their rights and obligations as a consumer. Transactions are conducted online, based on the ITE Law and Government Regulation No. 82 Year 2012 on the Implementation System and Electronic Transactions are recognized as an electronic transaction to be accounted for. Therefore, when the consumers who feel that their rights are violated are able to complain and proceed their case legally. The entrepreneurs who take advantage of online sales could face criminal penalties if found to have violated the rules of law relating to consumer protection and the Abuse of Information Technology.

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# REFLECTION INCOME SMOOTHING TOWARD MARKET RESPONSE

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**Abstract.** *The purpose of this study was to obtain empirical evidence, examine and explain the influence of companies doing income smoothing the market response to the voluntary disclosure as moderating variables in manufacturing companies that go public in BEI 2011-2015 many as 143 companies. This research variable income smoothing as an independent variable, the market response is proxied by Earnings response coefficient (ERC) as the dependent variable and voluntary disclosure is moderating variable. Methods of data analysis using regression with single moderating variable. Income smoothing individually and partial influence on the market response. Earnings were delivered on the date of the announcement responded positively by investors. However, the presentation of the full report in the form of voluntary disclosure actually reduces the market response to earnings at the date of announcement.*

**Keywords:** *Earnings response coefficient, income smoothing, voluntary disclosure market response*

## I. INTRODUCTION

The financial statements other than as an end result of the accounting process is also a source of financial information provided by the company to the public, especially to investors and creditors. The information will be submitted by the company one of which is profit information (earnings), which is a measure of performance or the success of a company, which is then used by investors and creditors for consideration decision to invest. The importance of information such profits, expected earnings may show the actual information about the performance management

Ball and Brown (1968)[1] explains that the ups and downs of income will affect the ups and downs of stock returns in the same direction. While the magnitude of the relationship earnings and stock returns measured by Earning Response Coefficient (ERC). The information contained in a number of accounting reports would be useful if the actual profit differs from profit expectations of investors, this indicates that the market reaction reflected in stock price movements around the announcement date.

Studies conducted by Beaver, et al (1969) [2] showed that the profit has information content which is reflected in the stock price. While Lev and Zarowin (1999)[3] using Earning Response Coefficient (ERC) as an alternative for measuring the value relevance earnings information. Low Earning Response Coefficient (ERC) showed that profit is less informative for investors to make economic decisions. Scott (2010: 154)[4] states Earnings Response Coefficient (ERC) to measure the magnitude of abnormal stock returns in response to the expected components of a company's reported earnings.

Management as the parties prepare financial statements and inform the company's performance has a tendency to take action that can make financial reports to be better than the reality, and one of the common actions performed by the management is the income smoothing (income smoothing).

Mudjiono (2010)[5], Restuningdyah (2010)[6], Kustono, Alwan (2011) [7] shows that the market reaction to the announcement of earnings different for companies that income smoothing with a company that does not do income smoothing. Mudjiono (2010) [5] concluded that the smoothing of income are positively related to earnings response coefficients or in other words the market is responding to the profit generated from the practice of smoothing earnings. While research Latrini (2003) [8] and Salno and Baridwan (2000) [9] found that there was no difference in the market reaction to the income smoothing. Although income smoothing is a common phenomenon and many of the company, such action could lead to earnings information presented be misleading and may result in errors in management decision making.

voluntary disclosure is the disclosure of information beyond the minimum requirements of the prevailing capital market regulations. The Company has the discretion to make voluntary disclosures in the annual report, causing the diversity of expression of a voluntary or a wide variation between companies. The purpose of delivering voluntary disclosure is to address the conflict of interest between managers and principals that occur within the company including reducing earnings manipulation behavior by management.

This study will examine and analyze whether there is influence companies doing income smoothing the market response to the voluntary disclosure as moderating variables? The specific objective of this study was to obtain empirical evidence, examine and explain the influence of

companies doing income smoothing the market response to the voluntary disclosure as moderating variables in manufacturing companies that go public in BEI.

## II. THEORY DAN HIPOTESIS

### A. Earnings Response Coefficient

The strong market reaction to earnings information reflected by the earnings response coefficients (ERC), shows the quality of reported earnings. Scott (2000)[4], Earning Response Coefficient (ERC) is one measure or proxy is used to measure the quality of earnings (Collins et al. 1984) [10][11]. Cho and Jung (1991) classifying the theoretical approach Earning Response Coefficient (ERC) into two groups: (1) assessment model based on economic information (information economics based valuation model) as developed by Lev (1999)[12] which showed that the strength of the response of investors to the profit information signal is a function of the uncertainty in the future. The greater the noise in the system of reporting companies (the lower the quality of earnings), the smaller Earning Response Coefficient (ERC) and (2) assessment model based on time series earnings (time series based valuation model) as developed by Beaver, Lambert and Morse (1980) [13]

Calculation of Earnings Response Coefficient (ERC) can be done in two ways: 1). Cross Sectional or known by the pool regression, in this case the ERC will be the same for all companies, usually in one industry. (Imhoff and Lobo, 1992) [4] 2). Time Series or firm specific coefficient, that each company has a number forecast ERC obtained from previous years (Teets and Wasley, 1996) [15]. Accuracy Time Series is higher than the pool regression, because the R-square value generated Time Series method is higher than the pool regression. (Chandrarin, 2002)[16].

Beaver (1968) [2] defines, Earning Response Coefficient (ERC) is the slope coefficient on earnings. Earnings response coefficients measure the strength of the stock price in response to the accounting profit. Coefficient accounting profit may indicate the quality of corporate profits

### B. Income smoothing

Income Smoothing is normalized earnings were done intentionally to achieve a particular trend or income level. Income smoothing is a deliberate attempt to smoothing the level of earnings so that at the present time is deemed normal for a company. Income smoothing can be defined as the management efforts to reduce fluctuations in income reporting by using certain accounting. Another definition, income smoothing is a means by which management to reduce the variability of the sequence of reporting earnings relative to some sequence of target seen for their manipulation of variables (accounting) false or (transactions) real, thus, smoothing earnings show a company's management efforts to reduce abnormal variations in earnings within the limits permitted in the practice of accounting and management principles were reasonable.

### C. Voluntary Disclosure

Hendricksen and Breda [19] defines disclosure as providing some of the information needed for optimal operation of an efficient capital market. In the interpretation of a broader, disclosures related to either contained in the financial statements as well as additional communications (supplementary communication) consisting of a footnote, information about events after the reporting date, the analysis of management on the company's operations the days to come, financial forecasts and operations, as well as other

information. The information disclosed in the annual report of listed companies can be grouped into two categories, namely the expression compulsory (mandatory disclosure) and voluntary expression (voluntary disclosure).

1. Disclosure Required (mandatory disclosure)

Minimum disclosures required by regulations. Decision of the Chairman of the Capital Market Supervisory Agency and Financial Institution Number: Kep-431 / BL / 2012, regulation No. X.K.6 of the provisions concerning the submission of the Annual Report of Public Company The regulation applies to all companies that have made a public offering and public companies.

2. Disclosure of voluntary (voluntary disclosures)

One way to improve the credibility of the company is through voluntary disclosure more broadly to assist investors in understanding the business strategy of management. Voluntary disclosure is a disclosure made by public companies to provide accounting information and other information considered relevant as additional disclosures set minimum and without required by regulations.

Completeness of measurement can be expressed in terms of the completeness of disclosure index, where the index calculation is done as follows completeness of disclosure, Botosan (1997)[19]:

1. Give a score for each disclosure, ie a score of 1 for disclosure of information at a glance, a score of 2 for the provision of more detailed information and maksimum 3 for companies that provide information to penjelasan quantitative data that support, to obtain maximum disclosure score.
2. scores obtained by each company summed to obtain a total score of disclosure.
3. Calculate the disclosure index (IDX) by dividing the total score by score of disclosure of maximum disclosure.

Study of relevant previous research contains analysis of the research that has been done before by other researchers. The relevance of this in terms of the variables involved, while the results of the study provide reinforcement to the study of the previous theory.

Research conducted in the capital market shows that many companies are doing income smoothing for a particular purpose. Assih research results and Gudono (2000)[20] and Leous [21] shows that the market reaction to the announcement of earnings different for companies that income smoothing with a company that does not do income smoothing. Harahap (2003) [22] concluded that the smoothing of income are positively related to earnings response coefficients or in other words the market is responding to the profit generated from the practice of smoothing earnings. While research Latrini (2003) [8], Salno and Baridwan (2000) [9] found that there was no difference in the market reaction to the income smoothing. One objective of smoothing earnings is too extreme reduce profits by raising or lowering profit by using discretionary accrual components. Investors are more inclined to like earnings less volatile.

Also investors are moreover always follow the development of the company through voluntary disclosure presented throughout the year. So the prediction of corporate profits can be done even before earnings were Announced. Paramita (2012) states that investors respond to earnings on the date of the announcement, but the market less responsive annual report that there is a negative influence voluntary disclosure with the market response.

The hypothesis in this study consisted of testing the hypothesis that direct influence and the influence of moderating variables

H<sub>1</sub> = There are companies that do influence income smoothing the market response

H<sub>2</sub> = Voluntary disclosure strengthen the influence of companies doing income smoothing the response of the market.

The conceptual framework of this study, as presented in Figure 1.

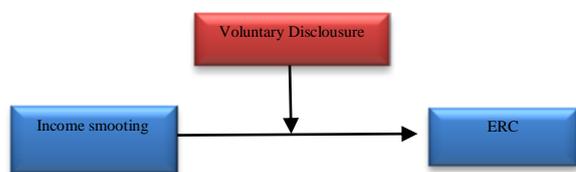


Figure 1: The conceptual framework

III. RESEARCH METHOD

A. Desain Riset

Design research in the form of the hypothetical equation is as follows:

$$Y = \alpha_0 + \beta_1 IS + \epsilon$$

$$Y = \alpha_0 + \beta_1 IS + \beta_2 VD + \epsilon$$

$$Y = \alpha_0 + \beta_1 IS + \beta_2 VD + \beta_3 IS*VD + \epsilon$$

Where:

Y = earnings response coefficient

IS = Income smoothing

VD = voluntary disclosure

α = constanta

β = coefisiant

ε = error

The study population includes all companies listed on the Indonesia Stock Exchange by using purposive sampling method by setting the following criteria:

1. Companies whose shares remain actively operating from 2011 until December 2015, and to publish audited financial statements on a regular basis.
2. Companies that have never experienced delisting from the Stock Exchange during the estimation period and did not stop its activities in the stock market.
3. The company did not stop its activities on the stock market, did not stop its operation and does not perform as well as the merger does not change the status of the industry sector.
4. Do not lose during the estimation period.
5. Has the complete data is used as a variable in this study and consistently reported in Bapepam

B. Variable Operational Definition and Measurement Scale

Operational variables will outline the operationally variable refers to the conceptual definition and measurement scale. In this study may be explained operational definitions in Table 1 as follows:

TABEL 1  
VARIABLE OPERATIONAL

Variabel	Indikator	Rumus	Skala
ERC	Cumulative Abnormal Return (CAR) Unexpected Earnings (UE)	ERC obtained from regression between the CAR and the EU	Ratio
Income Smoothing	index Eckel (1981) [18], namely Coefficient Variation (CV) variable earnings and net sales	Indeks Income Smoothing = $\frac{CV\Delta I}{CV\Delta S}$	Ratio
Voluntary disclosure	disclosure index (IDX) by dividing the total score by score of disclosure of maximum disclosure.	IDX = $\frac{\text{total score}}{\text{maximum score}}$	Ratio

IV. EMPIRICAL RESULT AND CONCLUSION

A. Empirical Result

Test of research data to prove the hypothesis by using regression analysis with a single moderating variable. Next will be the observation of the test results of the model, and analysis.

First, an observation against the model to determine the effect of income smoothing the response of the market with and without voluntary disclosure. Regression test results are presented in Table 2 below:

Table 2. Effect of voluntary disclosure to the model

Model 1	R square change	Sign change
Income smoothing	0.127	0.000
Income smoothing + voluntary	0.000	0.789
Income smoothing + voluntary + (Income smoothing + voluntary)	0.011	0.050

Income smoothing (IS) partially accounted for 12.7% of the market response, with a significance level of 0.000 means that income smoothing can significantly affect the market response. Penempatan voluntary disclosure (VD) on the model of lowering contributions to 0%, with a significance level of 0.789 means that VD is not a variable that affects the market response. Observation on the results of further testing is with the placement of VD as moderating prove that IS provides a contribution of 1% of the market's response to the significance level means that a placement VD 0:05 in significance as a moderating influence will weaken against VD IS.

There is a table showing the level of significance of the model:

Tabel 3. The significance level models

Model 1	T	Sign
Income smoothing	6,581	0.000
Model 2		
Income smoothing	6.482	0.000
voluntary	0.268	0.789
Model 3		
Income smoothing	2,840	0,005
Voluntary	1,923	0,055
Income smoothing+ Voluntary	-1,904	0,058

The study concluded significant influence smoothing income against market response indicated by the significant value of 0.000 in model 1. In model 2 by placing a voluntary disclosure variable income smoothing test results show a significant effect, while voluntary disclosure in this study is not independent variables with significant value 0.789. In model 3 by placing the variable voluntary disclosure as moderating variable income smoothing test results showed a significant effect, voluntary disclosure in this study is the dependent variable and the moderating variable.

The resulting regression equations of the model coefficient as produced in the test are as follows:

$$Y = 35,075 + 0,299IS + 2,089$$

$$Y = 34,543 + 0,297IS + 0,012VD + 2,884$$

$$Y = 7,120 + 0,882IS + 0,574VD - 0,012IS*VD + 14,683$$

### B. Conclusion

The reported profit is a signal on profits in the future, therefore, the use of the financial statements can make predictions on company profits for the foreseeable future based on the signals provided by the management through the reported earnings. In addition, income smoothing provides a signal for more accurate predictions. The reaction of market participants to information published in the capital market can be proxied by the ERC showed that companies that do smoothing income financial reports will be responded by the market. This means that with their income smoothing can cause the market reaction (earning response) at the time of the announcement of the company's profit. Previous studies Norwani, et al (2011), finds that the market responds to the financial statements mainly profit on the date of the announcement. Januar (2007) concluded that income smoothing has expanded its market share and the company has increased the value of the stock. In company with the status grading earnings, corporate profits will be able to more precisely predicted by investors.

Completeness of the financial statements presented by the company did not provide a meaningful contribution to the market response. The more complete the company presents the company data in addition to the financial statements on the date of this earnings announcement will not be much response by the market for corporate information has been available throughout the year. In corporate income smoothing the presentation of an annual report that addition will reduce the market response. This is also consistent with the inferred Paramita (2012) which states completeness of the financial statements negatively affect the market response.

Investors consider the voluntary disclosure information disclosed in the annual report of the company, resulting in investor decision-making is not solely based on profit information only. Disclosure of information in the

annual report the company can provide additional information to investors other than those included in the accounting profit.

Income smoothing individually and partial influence on the market response. Earnings were delivered on the date of the announcement responded positively by investors. However, the presentation of the full report in the form of voluntary disclosure actually reduces the market response to earnings at the date of announcement.

The results of this study explains that income smoothing is one factor that caused the market to provide a response to the earnings reported by the company, but the presentation of the completeness of the report does not show the effect of the strengthening. It's good voluntary disclosure served the company is not a monotonous report that only shows changes in the numbers, but the form of the presentation related matters during the current year has not been read by investors. So that the completeness of the voluntary disclosure really become the market awaited news.

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# Financial Distress and Corporate Strategy for Manufacturing Sector in Indonesian Stock Exchange: An Empirical Analysis

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**Abstract.** This research studied the effect of variable tax management, income management variables based real activities and accrual-based earnings management variables of the financial distress of manufacturing sector companies on the Indonesia Stock Exchange. The study uses secondary data from the period 2006-2015 by selecting a sample of 14 companies from seven sub-sectors of manufacturing. This study uses multiple regression model and data processing through-Amos SPSS software version 23. The study found that variables accruals-based earnings management significantly influence financial distress manufacturing company in Indonesia Stock Exchange. While the variable tax management and accrual-based earnings management variables not significant effect on financial distress manufacturing company in Indonesia Stock Exchange. In this study also used variable leverage moderating variable, the variable capital expenditure and variable size, with the result that the variable size variable capital expenditure and significant influence or strengthen the position of financial distress of manufacturing companies in the Indonesia Stock Exchange.

Keywords: Financial distress, Earning management, Tax Management

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## I. INTRODUCTION

The study was motivated to study the phenomenon of the development of the manufacturing sector as a strategic sector in the national economy, absorbing labor force large enough and involves many fields of resource utilization. National manufacturing sector is growing, it is characterized by the number of companies that have used funding from the stock exchange. Shares of the manufacturing sector is in great demand by investors as this sector has a viable prospect, capable of increasing the value added, increased efficiency through the use of technology, marketing a viable prospect, and the level of profitability that are interesting or able to restore its investment more quickly. The manufacturing sector varied from small, medium to large-scale, so the sector is attractive for development because it is more flexible in management or business process.

Through various government policies are expected to have growing sector coming future, the government even greater opportunities to foreign investors to develop its business in Indonesia. Among foreign investors, of course, manufacturers should increasingly growing sector both the development of the manufacturing sector itself as well as the development of other sectors that require the support of the manufacturing sector.

Economically, Indonesia is a country of interest by foreign investors in manufacturing, because the available natural resources complete and abundant human resources are relatively cheap compared to other countries, a vast land and the potential market is large enough for the number of people began to develop its economy, so the need for goods from the manufacturing will increase future coming.

Based on the above outlook, the research will examine the condition of financial distress faced by the manufacturing company to study the results of previous studies and try to

identify variables that influence financial distress companies in the manufacturing sector.

Variables affecting financial distress is related to tax management, income management variables both based estate activities and the berbasis accruals. And as a variable that can strengthen or weaken the financial distress is a variable degree of leverage or capital structure, capital expenditure, and the variable size or the size of the company.

Variables to be studied as independent variables and as moderating variable will be studied to solve the problems faced by the companies in the manufacturing sector. Based on this view, then that becomes the subject matter of this study are:

- How is the effect of variable tax on financial distress management companies of the manufacturing sector in the Indonesia Stock Exchange?
- How to influence earnings management activities based on the real financial distress manufacturing company in Indonesia Stock Exchange?
- How do the accruals-based earnings management to financial distress manufacturing company in Indonesia Stock Exchange?

Based on the above issues, so the purpose of this study are: (a) assess the effect of tax management to the financial distress of manufacturing companies in the Indonesia Stock Exchange, (b) study the effect of earnings management that is based on real activities of the financial distress of manufacturing companies in the Indonesia Stock Exchange, and (c) analyze the effect of accrual-based earnings management of the financial distress of manufacturing companies in the Indonesia Stock Exchange.

This research is expected to contribute to: (a) the development of knowledge about the factors that influence financial distress, (b) provide input into management decision making companies manufacturing, (c) providing information to capital market practitioners, and (d) a reference for

researchers who study the financial distress of manufacturing or other relevant field.

## II. LITERATURE REVIEW AND DEVELOPMENT HYPOTHESIS

### Literature Review

This research deals with the burden of the company's losses are charged as subsidies on the budget revenue and expenditure or the state budget. At the expense of the resulting budget of other sectors would decrease, although it is recognized that such subsidies help alleviate the burden on society, but the distribution of subsidies is still enjoyed by consumer groups should be burdened with tariffs that do not hurt the company even alleviate the financial burden of the state through a system of cross subsidy.

Agency theory indicates asymmetric information and in certain circumstances there is a conflict of interest between the owner of the company or the principal and the management company or agent. The owner of the company or the government's interest to suppress the subsidy burden, and management as the agent concerned should meet the interests of the principal. Therefore, agency theory as a strong foundation in this study to indicate the interests of each party represented in the relationship between government as the owner of the company and the board of directors as the company's management to optimize resources and capitalize on opportunities optimally.

*stakeholder theory* reflecting the interests of each party against the company, but more importantly in the business process is the balance of interests between the harmful and the beneficial enterprise. The consumer requires optimal service but rates as low as possible, shareholders, management and employees require achievement of a decent level of profitability and avoid dependency on government subsidies. Where the role of stakeholder theory a very strong role in this study so that the company can avoid financial distress are increasingly alarming.

*signaling theory* as the basis for describing the various parties about the condition of the company, so that the signal reflected by the periodic financial reports can provide information that is important to know the company's financial condition is relevant or realistic. Because these signals to the attention of many parties, so many studies have found their management efforts do earnings management or management action to influence the company's financial report the company to the purpose to be achieved. Earning management is done through accruals and through real activities that signal the financial statements reflect a better condition compared with the actual conditions. This is where the importance of signaling theory to illustrate that a good signal will be responded to positively by the parties, and vice versa. Therefore necessary financial statements are relevant and reliable.

*Agency theory, stakeholder theory* and signaling theory briefly presented below, as the theoretical foundation to strengthen the argument in the development of this research hypothesis. This study also uses the reference results of previous studies to illustrate the basic formulation of hypotheses and measurement variables which are relevant to this study. It is intended to indicate that the measurement of

the variables used in the research have been used in other studies using similar variables.

### *Agency Theory*

Agency theory told by Jensen and Meckling (1976) in his Theory of the firm: managerial behavior, agency costs and ownership structure as in Ismayani [1]; Rakhlinasari [2], Retno and Priantinah [3], mengemukakan that an agency relationship as a contract where one or more person (principal) uses another person (the agent) to do some work on behalf of the principal involving the delegation of authority to an agency for decision making.

Agency theory describes the company as a meeting point between the owners of the company (principal) and management (agent). Jensen and Meckling states that an agency relationship is a contract which takes place between the manager (agent) and the employer (principal). The powers and responsibilities of the agent and the principal stipulated in the employment contract by mutual consent.

Conflicts of interest in the agency relationship. Conflicts of interest between owners and agents because of possible agents acted in accordance with the interests of the principal, thus triggering the agency fee (agency cost). Agency theory capable of explaining the potential conflict of interest among the various stakeholders in the company. Conflicts of interest occur due to differences in the objectives of each party based on the positions and interests of the company. As an agent, manager moral responsibility to optimize the benefit of the owner (principal), however, the manager also wants to always obtain compensation in accordance with the contract. Thus there are two different interests in the company in which each party seeks to attain or maintain a desired level of prosperity.

### *Stakeholder theory*

In theory Stakeholders stated that the company's survival depends on the support of stakeholders who affect or be affected by the activities of the company as Ghazali and Chariri (2007); Rustiarini (2011) in the Ismayani [1]; Rakhlinasari [2], and Retno and Priantinah [3].

Stakeholder theory emerged in the mid-1980s. The background of this theory mainly because of the desire to build a framework that is responsive to the problems faced by managers at the time that changes in the environment. The purpose of stakeholder management is to devise a method that is used to manage a variety of groups and relationships resulting in a strategic way. Stakeholder is any group or individual who can affect or be affected by the achievement of organizational goals. Stakeholders can be divided into two based on their characteristics, namely the primary stakeholders and secondary stakeholders. Primary Stakeholders are persons or groups without which the company can not survive for a going concern, including: shareholders and investors, employees, customers and suppliers, along with defined as a public stakeholder groups, namely: the government and the community. Secondary stakeholder group are defined as those that affect, or are affected company, but they do not relate to transactions with companies and nonessential continuance.

### *Signaling Theory*

In Signaling theory suggests how should a company give a signal to users of financial statements and non-financial as

Maulidra (2015) in Ismayani [1]; Rakhlinasari [2], and Retno and Priantinah [3]. Signal theory to discuss the urge companies to provide information to external parties. The impetus is caused due to the asymmetry of information between management and external parties. To reduce the asymmetry of information, the company must disclose the information held, both financial and non-financial information.

Signal theory rooted in the pragmatic accounting theory focuses on the influence of information on changes in user behavior information. One of the information that can be used as the signal is a disclosure made by an issuer. Disclosure of this information can later affect the price fluctuations of securities of the issuer company. Disclosure of accounting information can provide a signal that the company has good prospects (good news), or reverse signal is bad (bad news) in the future.

The impetus for the proposed accounting information is because there is asymmetry of information between management (agent) and stakeholders (principal). Information asymmetry or inequality of information is a situation where managers have different information (better) about the condition or prospects of the company rather than owned by the investor. The asymmetry of information can allow managers to practice earnings management (earnings management), the circumstances in which managers perform actions that benefit themselves by using estimates and accounting methods to hide the true economic value of the company's stakeholders. Companies can increase the value of the company by reducing the information asymmetry. One way to reduce the asymmetry of information is to give a signal to the stakeholders of reliable financial information that will reduce uncertainty about the company's prospects to be dating.

### ***Legitimacy Theory***

*legitimacy theory* states that organizations must continually try to ensure that they are carried out in accordance with the limits and norms of society, because every company has a contract with the community based on the values of justice and how the company responded to the various groups to legitimize the actions of the company as Rustiarini (2010) in the Ismayani [1]; Rakhlinasari [2], and Retno and Priantinah [3]. Legitimacy is an enterprise management system that is oriented toward empowering communities (society), individual governments and community groups. For that, as a system that emphasizes alignments to society, the company's operations should be congruent with the expectations of society.

The theory of legitimacy is closely linked to stakeholder theory. The theory states that the legitimacy of the organization on an ongoing basis to find ways to ensure that their operations are within the limits and norms in society. In the perspective of the theory of legitimacy, a company will voluntarily report their activities if management considers that it is expected of the community. The theory of legitimacy relies on the premise that there is a social contract between the company and the communities in which it operates. The social contract is a way to explain the large number of people's expectations about how the organization should carry out its operations. The social expectation is not fixed, but changes

over time. This requires companies to be responsive to the environment in which they operate.

In the theory of legitimacy, the organization must continue to demonstrate has been operating in behavior consistent with social values. It can often be achieved through disclosure (disclosure) in a company report. Organizations can use the disclosure to demonstrate management's attention will be the social value, or to redirect the attention of the community of the existence of negative influences an organization's activities. A number of previous studies assessing the environmental disclosure voluntary annual reports and looked at the environmental and social reporting of information as the methods used by organizations to respond to public pressure

### **Hypothesis Development**

#### ***Tax Management and Tax Planning***

Tax Management Nugraheni [4], an oversight in the implementation of routine tax field, as concerned with transactions that occur repeatedly. Aiming to minimize the risk of tax liabilities that may be incurred in a transaction that the routine. Example Tax Management: A company selling with export orientation. While raw materials are purchased in the country. Thus, the input VAT which is greater than the output VAT, the result should be made restitution, perhaps every year or every month to be done. Division of taxation must be to manage the process of tax management tax refunds that are running. For example: take care of the tax reconciliation, adjusted input tax invoices and payment vouchers are required. You can imagine if this is not taken care of properly, will bring restitution fines and tax liabilities of course material.

Tax Planning [4], is a tax planning so as to achieve a tax saving (tax savings) by exploiting legal loopholes taxation. Aims to make tax savings or tax evasion are also permitted by law (tax avoidance). Example Tax Planning: A company that suffered the loss of fiscal years. As is known tax loss can be utilized tax losses are still in a period of five years, the rest of the losses will be expired. How to utilize the tax losses that limit the existing expiration date can be avoided. This is where the tax planning is done. By utilizing the existing fiscal losses then there are the tax savings.

In connection with the management policy of tax burden reduction efforts tax, so in this study proposed the following hypothesis H1.

**H1.** Tax management significantly influence financial distress manufacturing company listed on the Indonesia Stock Exchange.

#### ***Earning management***

Earnings management according to sugiri (1998) and Earth (2010) in Sanjaya (2013), namely: the actions taken by management to affect reported earnings in accordance with the interests of management without violating the principles and accounting methods generally acceptable, which can mislead the users perception the financial statements will be the company's economic performance without affecting the long-term economic profitability of the company.

The pattern of earnings management according to Scott (2000) in Sanjaya (2013), namely: (a) Taking a bath, when companies want to report higher profit, the company will carry out the removal of some assets and the recognition of

the cost of future periods to the current period as a loss in the period in the hope that future earnings can be increased. This pattern chosen by the company when the company made the process of reorganization or upon the appointment of the Chief Executive Officer (CEO) of the new method of reporting losses in large numbers. When normal profit reported in the next year, there is hope of rise in the amount of profits from the company will make investors believe that the company's performance will be better from year to year. (B) Income minimization is a management action to reduce reported earnings. Similar to the pattern of taking a bath, but the pattern is done for political reasons. This pattern is done by removing the capital goods and intangible assets, the imposition of ad spending, research and development costs accelerated.

The aim of the profit decline was intended to avoid public attention. (C) Income Maximization, the action aims to reported earnings and a larger number in the hope that the management will get a bigger bonus. The company's desire to raise the bonus makes the management to raise earnings so as to increase the bonuses received by management. This action is usually done at the time of the company's profit decline. Besides purposive bonus, there is also the possibility of this action carried out for companies that breach a debt covenant. (D) Income smoothing, that is as committed to leveling the profit to be earnings reported by the company as if a stable and low fluctuate. This is supported by the fact that investors tend to like the company's profit was relatively stable.

#### **Accrual Earnings Management or Accrual earnings management**

Accrual earnings management consists of: (a) *Short-term accruals* linked by way of earnings management related assets and current liabilities, usually time taken is in the first quarter or a fiscal year. (B) *Long - term accruals* related to fixed assets and long-term debt (Kusuma, 2006) in Trisnawati, Wiyadi, and Saso [5], Managers can take advantage of differences in these characteristics. Managers will be easier to manipulate accounting data through *long - term discretionary accruals*, Because the manager's actions can not be detected for some of the next accounting period (Whelan and McNamara 2004) in Trisnawati, Wiyadi, and Saso [5].

According to Dechow (1995) in Trisnawati, Wiyadi, and Saso [5]. If the total accrual is intended to reduce problems *timing* and *matching* in cash flow. Use *short term accruals* is intended to further reduce the problem *timing* and *matching*, Meanwhile, there are no clear reasons for the use *long term accruals* to accommodate that goal. This is because the use of *long term accruals* influenced by the political process (Watts and Zimmerman, 1989) in Trisnawati, Wiyadi, and Saso [5].

Meanwhile, the market might consider the use of *long term discretionary accruals* is an attempt to fool manager market participants, because of the nature of the accruals that provides an opportunity for managers to manipulate (Whelan and McNamara, 2004) in Trisnawati, Wiyadi, and Saso [5]. Thus the impact of use *long term discretionary accruals* will be greater than the *short term discretionary accruals*,

#### **Real Earnings Management or Real Profit Management**

Roychowdhury (2006) in Trisnawati, Wiyadi, and Saso [5] defines income as follows "*management actions that deviate from normal business practice, undertaken with the primary objective of meetings Certain earnings thresholds.*". In other words, that the intervention of managers in the financial reporting process not only through methods or estimates of accounting but also can be made through the decisions relating to operational activities. Furthermore, managers also have an incentive to manipulate real activities during the year to meet profit targets. Manipulation of the activities of the so-called real real earnings management.

The real profit management is management measures that deviate from normal business practices conducted with the main objective to achieve the profit target (Roychowdhury, 2006; Cohen and Zarowin, 2010) in Trisnawati, Wiyadi, and Saso [5]. Real earnings management can be done with three (3) ways: (A) Sales manipulation, which is an effort to increase sales on a temporary basis in a given period by offering discount prices on excessive product or provide more lenient credit requirements. This strategy can increase sales volume and profit of the current period, assuming a positive margin. But giving price discounts and credit terms are more lenient will reduce the cash flow of the current period. (B) decrease in discretionary expenses (*discretionary expenditures*), Which allows companies to reduce *discretionary expenditures* such as research and development expenses, advertising, and selling, administrative and general especially in the period in which such expenses are not directly lead to revenue and profit. This strategy can increase profit and cash flow this time period, but with the risk of lowering the cash flows coming period. (C) Excessive production (*over production*), Which is to increase profits, then the manager of the company can produce more than is necessary on the assumption that the higher production rate will cause the fixed costs per unit of product is lower. This strategy can reduce the boarding of goods sold (*cost of goods sold*) And increase operating profit.

In relation to the Vendor management policies to affect the financial statements or earnings management, then in carrying this study proposed the hypothesis H2a and H2b hipoteis below.

**H2a.** Based real earnings management activities significantly influence financial distress manufacturing company listed on the Indonesia Stock Exchange.

**H2b.** Accruals-based earnings management that significantly influence financial distress manufacturing company listed on the Indonesia Stock Exchan

#### **Sample Selection**

The study used secondary data for the period 2006 to 2015, or 10 years to select a sample of manufacturing sector companies listed on the Stock Exchange. Companies selected as the sample is from 7 sub-sectors of manufacturing, and each sub-sector selected a sample of two companies that are considered representative of the population. The number of companies which were observed as many as 14 companies and observation in a timeframe of 10 years. Secondary data used this year's data (t), mutation data this year or (t) - (t-1) and the mutation of last year or the (t-1) - (t-2), so that the number of observations of each sample is only 8 periods, The research data were used or the number of observations in the

study are: its 14 x 8 period = 112 company-years. Sub-sector manufacturers do observed consisting of (a) cement (code: INTP, SMCB), (b) ceramic, porcelain and glass (code: IKAI, TOTO), (c) metal and the like (code: CTBN, henna), (d) chemical (code: BRPT, TPIA), (e) plastic and packaging (code: AKKU, APLI), (f) fodder (code: CPIN, MAIN), and (g) of pulp and paper (code: INKP, TKIM).

## Variable and Measurement

### 1. Dependent variables

a) Variable Financial distress models 1983 (YFD\_ALT83it)  
Financial distress is measured based on the value of the Altman Z-score Model 1983 using the basic calculation of a Z-score below.

$$Z_i = 1.2 + 3.3X_1 + 1.4X_2 + X_3 + 0.6X_4 + 1.0X_5$$

Where :

- X1 = (Current assets - current liabilities) / Total Assets
- X2 = Retained earnings / total assets
- X3 = Earnings before interest and taxes / Total Assets
- X4 = The market value of common and preferred stock / total book value of debt
- X5 = Sales / Total Assets
- Zi = Value Z-Score

b) Variable 1984 models of financial distress (YFDt)  
Altman model 1983 developed in 1984, known as the 1984 models Altman Using as a basis the value of Z-score below.

$$Z_i = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5$$

Zi assessment results illustrate: A cut-off value is  $Z < 1.81$ , the company went bankrupt category;  $1.81 < Z\text{-Score} < 2.99$  the company enters a gray area (gray area or zone of ignorance) or prone areas; and  $Z > 2.99$  the company is not bankrupt.

### 2. Independent variables

a) Variable Tax Management (X1TAMit)

*tax Management* is a business planning, organizing, directing, coordinating and monitoring of the tax whose purpose is to improve the efficiency of the means to increase profits or income. While the term Tax planning is a part of the tax management. Measurement is based pda tax management burden of taxes paid to total income before taxes.

b) Variable real earnings management activities (X2REAMit)

This variable was measured by using abnormal operating cash flow, abnormal production costs and abnormal discretionary expenses. The independent variable real earnings management activities are actions taken by management to influence the financial statements through policies related to corporate activity such as production, sales, accounts receivable, inventory and more. Real variable measurement activities as in Roychowdhury, S (2006), then in the study used the equation equation (1) to the equation (3) below.

(1) Equation Operating cash flow (CFO).

$$CFO_t/A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta_1(S_t/A_{t-1}) + \beta_2(\Delta S_t/A_{t-1}) + \varepsilon_t$$

(2) The equation of the cost of production (PROD),

$$PROD_t/A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta_1(S_t/A_{t-1}) + \beta_2(\Delta S_t/A_{t-1}) + \beta_3(\Delta S_{t-1}/A_{t-1}) + \varepsilon_t$$

(3) The equation discretionary expense (DISEXP),

$$DISEXP_t/A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta(S_{t-1}/A_{t-1}) + \varepsilon_t$$

Where: At: total assets, end of year t; and St: sales period t

Variable measurement procedure in this study begins by using equation (1), Equation (2) and equation (3), and then calculated the residual or abnormal from the third equation (ACFO, APROD, ADEXP) as in the study by Cohen et al. [6] in Roychowdhury, S (2006) below.

$$AREAL_t = ACFO_t + APROD_t + ADEXP_t$$

Where: AREA: abnormal estate activities; ACFO: abnormal operating cash flow; APROD: abnormal production costs; and ADEXP: abnormal discretionary expense.

Furthermore, the value of AREALt used as input data or independent variables X2RACEMt on the regression equation as the model used in this study.

c) Variable accruals earnings management (X3ACEMit)

X3ACEMt variable measurement obtained from residual or abnormal accruals based on the total accruals or ACCR equations used in the analysis of earnings management. This study used a total accrual equation (ACCR) as proposed Kasznik (1999) which is the development of John Model (1991) and Dechow Model (1995) below.

$$ACCR_{it} = \alpha_0 + \alpha_1(\Delta REV_t - \Delta REC_{it}) + \alpha_2 + \alpha_3 PPE_{it} CFO_{it} + \varepsilon_{it}$$

For the sake of generalization in the measurement data for companies varying scale of its business, so in this study were modified by dividing the numerical value of each of these variables with the value of total assets of the periods before (TAT-1) as the following equation.

$$ACCR_{it} / TAT-1 = \alpha_0 + \alpha_1(\Delta REV_t - \Delta REC_{it}) / TAT-1 + \alpha_2 PPE_{it} / TAT-1 + \alpha_3 CFO_{it} / TAT-1 + \varepsilon_{it}$$

Where :

- Total accruals or accruals (ACCR)
- Total assets (TA)
- Revenue to total assets (REV)
- Total receivable (REC)
- Refers property, plant, and equipment (PPE)

### 3. Moderating variables

a) Variable leverage or debt to equity (X4LEVit)

Acheampong, P., Agalega, E., Ahibu, AK [7], based on a measurement variable leverage of debt to equity = total debt / equity total. This study examined the effect of leverage on stock return variabel. Haddad, FS [8], her research at measuring the effect of variable leverage or debt to equity on working capital management. Nawaiseh, RIS [9] uses a variable leverage or debt to equity as a variable that is influenced by various factors such as firm size. Veachvei, A and Notta, O [10] uses a variable leverage or debt to equity to examine its impact on sales. Based on the above reference, the measurement variables formulated leverage = total debt / total equity.

b) Variable capital expenditure (X5CAPXit)

Subrahmanyam, V., Indudeepchachhi and Brown, C. [11], measuring a variable capital expenditure based on the amount of capital expenditure or capital expenditure (capital budgeting). This study examined the variables that affect capital expenditure. Haddad, FS [8], the measurement of capital expenditure shares based on a comparison between the capital expenditure to total assets. Research at measuring the effect of variable capital expenditure to working capital management. Chung, KH., Wright, P., Charoenwong, C. [12]. This study examined the effect of variable capital expenditure towards

abnormal return of stock or SR (standardize abnormal return of stock). Referring to the reference mentioned above, the variable capital expenditure was measured by changes in fixed assets or non-current assets that describes the amount of capital expenditures or capital spending.

c) Variable capacity or size of the value of corporate assets (X6SIZE<sub>it</sub>)

Zadeh, FO and Eskandri, A [13] use firm size as Total Assets (TA) to test the effect of size on the level of disclosure. Pauragerajan, A and Malekian, E [14] using the size of the firm or total assets (TA) in a study to assess the effect of firm size on firm performance (ROA and ROE). Velnampy, T and Niresh, JA [15] use firm size or total assets (TA) in his study of the effect of this variable on net profit and return on assets (ROA). Nawaiseh, RIS [9] use firm size or total assets (TA) in a study of the influence of these variables on the level of leverage of the company. Veachvei, A and Notta, O [10] use firm size or total assets (TA) in research on the influence of these variables on sales. By reference to previous research, the study used the variable firm size is measured by the percentage of the value of total assets (TA) recorded each end of the observation period.

### Selection Model

To test the hypothesis that needs to be done is by using the model selection den econometric model as a reference as used in previous studies. The model used is used a model that includes independent variables and at the same time moderating variable. Used as a comparison model that exclusively use or not use the independent variables moderating variables.

As an alternative to test the consistency of these results, it will be used changes in the method of measuring the dependent variable or financial distress Altman models. In this study used the method of Altman in 1984, and as a comparison, or sensitivity analysis used Altman 1983.

Variable-based real earnings management activities simply using a model or equation cash flow (CFO), the cost equation production (PROD) and discretionary expense equation (DISEXP). Variable accrual-based earnings management using a model or equation of total accruals or ACC as presented by Kasznik (1999) which is the development of John Model (1991) and Dechow Model (1995) noted above.

Finally, regression models were selected according to the results of this selection is made from model 1 and model 2, then to use a sensitivity analysis model 3 and model 4 described in research models.

### III. RESEARCH MODEL

To test the hypothesis and to solve problems facing manufacturing companies in the Indonesia Stock Exchange, so in this study used a model 1 and model 2. Model 1 using the independent variables and moderating variables, whereas model 2 uses only independent variable. In this analysis, sensitivity analysis model was used as the model 3 and model 4 to test the consistency of the results of calculations by changing the method of measuring the dependent variable. Model 1 and Model 2 using a measurement model based on the financial distress of the Altman Z-score model year 1984, while the model 3 and model 4 uses the measurement of

financial distress based on the Altman Z-score of the 1983 model year.

Model-1 : The basic model of financial distress with the independent variables and moderating variables

$$YFD_{it} = \beta_0 + \beta_1 X_1TAM_{it} + \beta_2 X_2REAM_{it} + \beta_3 X_3ACEM_{it} + \beta_4 X_4LEV_{it} + \beta_5 X_5CAPX_{it} + \beta_6 X_6SIZE_{it} + e_{it}$$

Model - 2 : The basic model of financial distress and independent variables

$$YFD_{it} = \beta_0 + \beta_1 X_1TAM_{it} + \beta_2 X_2REAM_{it} + \beta_3 X_3ACEM_{it} + e_{it}$$

Model - 3: Model sensitivity with independent variables and moderating variables

$$YFD\_ALT83_{it} = \beta_0 + \beta_1 X_1TAM_{it} + \beta_2 X_2REAM_{it} + \beta_3 X_3ACEM_{it} + \beta_4 X_4LEV_{it} + \beta_5 X_5CAPX_{it} + \beta_6 X_6SIZE_{it} + e_{it}$$

Model - 4: Model sensitivity and independent variables

$$YFD\_ALT83_{it} = \beta_0 + \beta_1 X_1TAM_{it} + \beta_2 X_2REAM_{it} + \beta_3 X_3ACEM_{it} + e_{it}$$

Note: YFD<sub>it</sub>: financial distress, X<sub>1</sub>TAXM<sub>it</sub>: tax management, X<sub>2</sub>RACEM<sub>it</sub>: earnings management based real activities, X<sub>3</sub>ACCEM<sub>it</sub>: earnings management based accruals, X<sub>4</sub>LEV<sub>it</sub>: the level of leverage, X<sub>5</sub>CAPEX<sub>it</sub>: capital expenditure, X<sub>6</sub>SIZE<sub>it</sub>: the size or the size of the company, β<sub>0</sub>: constant, β<sub>1</sub> ... β<sub>6</sub>: coefficient direction of the independent variable, e<sub>it</sub>: error

## IV. RESULT AND DISCUSSION

### X2REAM<sub>it</sub> variable calculation, X3ACEM<sub>it</sub>, and YFD<sub>it</sub>

As a basis for the calculation of the regression model used in this study, it first has to do calculations on X2REAM<sub>it</sub> independent variable, and the dependent variable YFD<sub>it</sub> X3ACEM<sub>it</sub> below.

a) *The independent variable Estate Activities (X2REAM<sub>it</sub>)*

Through the CFO function, PROD and DISEXP like the following can be calculated the amount of residual or abnormal estate activities (AREA) is used as the scale of value X2REAM<sub>it</sub> to be used in the regression equation models-1 sampai with Model-4.

$$AREA = ACFO + APROD + ADISEXP$$

While ACFO, APROD and ADISEXP is a residual calculated based on the difference between the observed data and the estimated CFO, PROD DISEXP funds. The regression equation coefficients as the table can be written in the form of the following equation.

- CFO equation:

$$CFO_{it} = 0.033 + 0.066 Sit / Ait-1 \text{ to } 0.087 \Delta Sit / Ait-1$$

- PROD equation:

$$PROD_{it} = 0.122 + 0.885 Sit / Ait-1 \text{ to } 0.698 \Delta Sit / Ait-1 + 0.079 \Delta Sit-1 / Ait-1$$

- DISEXP equation:

$$DISEXP_{it} = 0,044 + 0,047 Sit-1 / Ait-1$$

CFO - Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.033	.045		.748	.456
St_At_1	.066	.020	.380	3.289	.001
ΔSt_At_1	-.087	.065	-.153	-1.327	.187

a. Dependent Variable: CFO<sub>it</sub>, At\_1

PROD - Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.122	.175		.694	.489
St_At_1	.885	.092	.880	9.593	.000
ΔSt_At_1	-.698	.254	-.214	-2.748	.007
ΔSt_1_At_1	.079	.250	.023	.316	.752

a. Dependent Variable: PROD1\_At\_1

DISEXP - Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.044	.010		4.496	.000
St_1_At_1	.047	.004	.738	11.482	.000

a. Dependent Variable: DISEXP1\_At\_1

**b) Accruals independent variables (X3ACEMit)**

This study used a total accrual equation (ACCR) as proposed Kasznik (1999) which is the development of John Model (1991) and Dechow Model (1995) below.

$$ACCRit = \alpha_0 + \alpha_1 (\Delta REVt - \Delta RECit) + \alpha_2 + \alpha_3 PPEit CFOit + eit$$

In the present study used a model similar equations with the results as follows coefficients table or the regression equations, namely:

$$ACEMit = 0.138 + 0.045 (\Delta REVit - \Delta RECit) / Atit - 0.229 PPEit / Ait - 0.171 CFOit / Ait$$

The results of the regression equation ACEMit mentioned above, are then used to calculate the residual-gap between observational data to estimate ACEMit, then used as the amount or value X3ACEMit variables used in the regression equation or model 1 to model 4.

ACEM <sub>it</sub> - Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.138	.031		4.437	.000
ΔREVit_ΔRECit_Ait	.045	.039	.100	1.159	.249
PPEit_Ait	-.229	.050	-.391	-4.554	.000
CFOit_Ait	-.171	.080	-.183	-2.135	.035

a. Dependent Variable: ACEMit\_At

**c) The dependent variable of Financial Distress (YFDit and YFD\_ALT83it)**

Variable financial distress as the dependent variable, referring to Altman model 1983 and 1984, as mentioned above, namely:

Adresses 1984 models, which calculate the Z-score is used to determine the amount of the dependent variable in the regression equation YFDit as the model 1 and model 2. The Z-score formula was modified in 1984, namely:

$$Z_i = 0,717X_1 + 0,847X_2 + 3,107X_3 + 0,420X_4 + 0,998X_5$$

Where: X<sub>1</sub> = (assets -utang lancar lancar) / total assets, X<sub>2</sub> = retained earnings divided by total assets, X<sub>3</sub> = earnings before interest and taxes / total assets, X<sub>4</sub> = nilaia common and preferred stock market / book value of debt, X<sub>5</sub> = sales / total assets, and Z<sub>i</sub> = Z-score.

Meanwhile, to test the consistency of the results of the calculation model 1 and model-2 then used the model sensitivity using measurement differences on the dependent variables, using the model in 1983 by Altman Z-score calculation below.

Altman Model 1983:

$$Z_i = 1.2 + 3,3X_3 + 1,4X_2 + X_1 + + + 0,6X_4 + 1,0X_5$$

**Descriptive Statistics and Correlation Matrix**

Descriptive research data shows that:

(A) variable YFDit have a minimum amount of -1.495 and a maximum of 4.621 while the mean or average of 1.507 with a variation of plus and minus according to the standard

deviation of 1.136. Figures average or mean = 1.136 indicates that the level of financial distress at the level of the category of a gray area as to the statement in defining the magnitude Altman Z-score or YFDit that argued that the cut-off: Z < 1.81, the company went bankrupt category; 1.81 < Z-Score < 2.99 the company enters a gray area (gray area or zone of ignorance) or prone areas; and Z > 2.99 the company is not bankrupt.

(B) the independent variable X1TAMit -2.96 minimum and maximum average of 11.92 with a standard deviation of 0.385 and 1.385. This means also that this variable indicates that the amount of the tax burden according to the results of observation the company turns the burden of tax paid relatively small and some of them negative, moreover a tax rate that applies to the tax body about 25% income tax. The possibility of such differences, because the difference between the calculation of depreciation of its financial statements with the financial statements of fiscal commercially. The other thing that differentiates is due to the income tax taxes were recorded on the financial statements of commercial consists of current tax and deferred tax.

(C) the independent variables both based earnings management and real activities based accruals showed an average of 0,000. This means that the residuals of abnormal estate activities and abnormal accruals are relatively small or relatively small treatment of earnings management. Against both earnings management patterns of treatment, it appeared variations real action activities tend to be higher than the action accruals. This happens because the accounting standards and oversight of treatment is easily detected accruals mainly with IT or information technology system that is more accurate and supervision and regulation is getting tighter, so the management company's tendency to choose earnings management through real activities.

(D) X5LEVit moderating variable varies greatly due to the company's scale observed extreme among small-scale, medium and large scale as the minimum number 0.156 and 22.465 and a maximum standard deviation of 3.178 or greater than the average. Variable X5CAPXit relatively small variations for using the ratio between the growth of companies that are not affected by the scale of the company. Variable X6SIZEit vary anatar -0.585 minimum to a maximum of 8.724 with an average of 0.239 but a standard deviation higher than the average so that it can be stated that there is a variation between different companies with a higher rate. It is related to the rate of growth and policies that vary relative to each other.

**Tabel 1. Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
YFDit	112	-1.4954	4.6204	1.507	1.136
X1TAMit_At	112	-2.9587	11.9164	0.385	1.383
X2REAMit	112	-1.9546	8.9474	0.000	1.091
X3ACEMit	112	-0.3580	0.3015	0.000	0.095
X4LEVit	112	0.1557	22.4659	2.054	3.178
X5CAPXit	112	-0.7558	0.4883	0.040	0.130
X6SIZEit	112	-0.5854	8.7244	0.239	0.971
Valid N (listwise)	112				

Correlation matrix as in Table 2 indicate that the independent variables have a correlation of 0.547 X3ACEMit larger than the other independent variables. X5CAPXit moderating variables have a correlation greater than 0.566 other moderating variables. This indicates that overall will generate an determinant coefficient of correlation (R<sup>2</sup>) are relatively small or less than 0.5.

Tabel 2. Correlations (Pearson)

	YFDit	X1TAMit_At	X2REAMit	X3ACEMit	X4LEVit	X5CAPXit	X6SIZEit
YFDit	1						
X1TAMit_At	-.049	1					
X2REAMit	-.069	.228*	1				
X3ACEMit	.547**	-.017	-.318**	1			
X4LEVit	-.173	.063	-.022	.043	1		
X5CAPXit	.566**	.170	.139	.562**	-.165	1	
X6SIZEit	-.068	.159	.317**	.086	.185	.445**	1

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

\* Correlation is significant at the 0.05 level (2-tailed).

Correlations between independent variables with a moderating variable X5CAPCit X3ACEMit of 0.562 emunjukkan the relationship is statistically although still smaller than 0.6. While the correlation between other independent variables are relatively small so that indicates there are no multicollinearity.

### The Results of Hypotheses

The hypothesis put forward in H1, H2a and H2b X3ACEMit showed that the only variable that significantly influence financial distress. It happens to be consistently on the model 1 and model 2 is a significant confidence level of 0.005 da 0,000. Other independent variables and X2REAMit X1TAMit not significant effect on financial distress. Variable X3ACEMit positive influence coefficient of 3.365, which means that more aggressive management pass accruals-based earnings management, the higher the level of the company's bankruptcy or getting away from bankruptcy as Z-score expressed by Altman.

These results indicate that there is compliance with H2b hypothesis, while the hypothesis H1 and H2a is not proven or is not consistent with the hypothesis. Research shows that management policies in tax management (X1TAMit) did not significantly influence financial distress, which means that companies are more obedient to the rules of taxation that does not attempt to perform actions that suppress the tax burden. Penalties for companies that conduct more stringent tax manipulation so companies tend to follow tax rules.

X3REAMit variables showed no significant effect or not consistent with the hypothesis H2a which means that the company's management policy is less effective to increase the level of financial distress when using real activities, because in the long term and medium and lower level will be detrimental to the company's bankruptcy.

X5CAPXit moderating variables and variable X6SIZEit significant effect, which means the two variables strengthen financial distress variables with positive coefficients for the variables X5CAPXit and weaken with negative coefficients for the variables X6SIZEit, while moderating variable X4LEVit not significant effect on financial distress.

Partially through the t-statistic test showed as described above shows that not all independent variables significantly influence financial distress. But by means of testing the F-statistic shows Prob F-statistic of 0.000, which means that the independent variable in whole or simultaneously significant effect on the dependent variable of financial distress (YFDit). The result of the F-statistic model 1 and model 2 is consistent with the F-statistic Prob the same, namely 0,000.

Adjusted R2 shows that a relatively small scale, the model 1 and model 2 = 0.47 = 0.30 which means the Capacity of this regression model to explain the phenomenon of research only in the range of 47% and 30%. This means that the

phenomenon is explained by other factors outside the study. This is consistent with the correlation matrix in Table 2 illustrates that the only variable that correlated X3ACEMit and X5CAPit greater than 0.50 while the other variables are correlated is smaller than 0.50 so that the overall coefficient determinant or adjusted R2 generated a relatively small value or less of 0.50.

Tabel 3. The impact of Variabel Tax Management and Earning Management on Financial Distress

Model - 1 :  $YFD_{it} = \beta_0 + \beta_1 X1TAM_{it} + \beta_2 X2REAM_{it} + \beta_3 X3ACEM_{it} + \beta_4 X4LEV_{it} + \beta_5 X5CAP_{it} + \beta_6 SIZE_{it} + e_{it}$

Model - 2 :  $YFD_{it} = \beta_0 + \beta_1 X1TAM_{it} + \beta_2 X2REAM_{it} + \beta_3 X3ACEM_{it} + e_{it}$

	Model - 1			Model - 2			
	Prediction	Coefficients	Sig.	VIF	Coefficients	Sig.	VIF
(Constant)		1.453	.000 ***		1.529	.000 ***	
X1TAMit_At	-	-0.082	.166	1.091	-0.057	.399	1.058
X2REAMit	+	0.078	.367	1.426	0.139	.124	1.177
X3ACEMit	+	3.365	.005 ***	2.041	7.015	.000 ***	1.116
X4LEVit	-	-0.007	.800	1.210			
X5CAPXit	+	4.953	.000 ***	2.421			
X6SIZEit	+	-0.407	.000 ***	1.543			
Adj-R2		.472			.297		
F-Statistic		17.570			16.652		
Prob F-Statistic		0.000			0.000		
Durbin-Watson		.782			.731		
Total Observation		112			112		

\*\*\* Significat at alevel of 1 percent, \*\*Significat at alevel of 5 percent, \*Significat at alevel of 10 percent

Note : YFDit : financial distress, X1TAMit : tax management, X2REAMit : earning management berbasis real activities, X3ACEMit : earning management berbasis accruals, X4LEVit : tingkat leverage, X5CAPit : expenditure, X6SIZE : ukuran perusahaan.

Classical assumptions indicate that there is no indication of multicollinearity as a result of Variance-inflating factor or VIF each independent variable value is less than 10. The autocorrelation test model 1 shows the Durbin-Watson statistic = 0.782 whereas the Durbin-Watson tables at the level of 5%; n = 112; k = 6 obtained dL = 1,651 and dU = 1.812 so statistically expressed in theory there is autocorrelation but otherwise does not occur because the autocorrelation using panel data or pooling data time series and cross section data eliminate the possibility of autocorrelation. Heteroskedastisitas test using Glejser shows that none of the independent variables that significantly influence the residual, so that there is no indication otherwise heterokedastisitas. It is anticipated using data so that the ratio of the difference when the company extremes can cause heteroskedastisitas meditation or not.

### sensitivity Analysis

To test the consistency of the model 1 and model 2, then through a sensitivity analysis to know whether the results are relatively similar or close if there is a change in the dependent variable measurement methods YFDit or financial distress with Altman model 1984. In this sensitivity analysis, used measurement by using the Z-score Altman model year 1983 as table 4 using model 3 and model 4 below.

Table 4 shows the results of analysis are consistent with the results obtained in Table 3 despite using different measurement dependent variable. Model 3 shows results consistent with the model 1 is the independent variable X3ACEMit significantly influence financial distress, while independent variabel X1TAMit and X2REAMit berpengaruh not exhibited significantly towards inancial ditress. Similarly, the moderating variables showed consistency result yaitu X5CAPXit and X6SIZEit variables significantly influence financial distress, with the effect of strengthening and weakening as in Table 3.

**Table 4. The impact of Variabel Tax Management and Earning Management on Financial Distress (Altma,1983)**

Model - 3 :  $YFD\_ALT83_{it} = \beta_0 + \beta_1 X1TAM_{it} + \beta_2 X2REAM_{it} + \beta_3 X3ACEM_{it} + \beta_4 X4LEV_{it} + \beta_5 X5CAP_{it} + \beta_6 SIZE_{it} + e_{it}$

Model - 4 :  $YFD\_ALT83_{it} = \beta_0 + \beta_1 X1TAM_{it} + \beta_2 X2REAM_{it} + \beta_3 X3ACEM_{it} + e_{it}$

	Prediction	Model - 3			Model - 4		
		Coefficients	Sig.	VIF	Coefficients	Sig.	VIF
(Constant)		1.693	.000 ***		1.765	.000 ***	
X1TAMit_At	-	-0.096	.174	1.091	-0.067	.404	1.058
X2REAMit	+	0.106	.297	1.426	0.184	.087 *	1.177
X3ACEMit	+	3.931	.006 ***	2.041	8.207	.000 ***	1.116
X4LEVit	-	-0.018	.582	1.210			
X5CAPit	+	5.777	.000 ***	2.421			
X6SIZEit	+	-0.460	.000 ***	1.543			
Adj-R2		.468			.291		
F-Statistic		17.281			16.161		
Prob F-Statistic		0.000			0.000		
Durbin-Watson		.807			.732		
Total Observation		112			112		

\*\*\*Significat at alevel of 1 percent, \*\*Significat at alevel of 5 percent, \*Significat at alevel of 10 percent  
 Note : YFD\_ALT83it : financial distress, X1TAMit : tax management, X2REAMit : earning management berbasis real activities, X3ACEMit : earning management berbasis accruals, X4LEVit : tingkat leverage, X5CAPit : expenditure, X6SIZE : ukuran perusahaan.

Model 4 shows consistent results against X3ACEMit variables that significantly influence the financial distress as in model 2 Table 3. While the variable X2REAMit occur inconsistencies between model 2 and model 4, which is the model 2 effect is not significant, contrary to the model 4 indicates that the variable X2REAMit significant effect on the financial distress with a confidence level or level of 0.087 sig. The independent variable X1TAMit results are consistent between model 2 and model 4, that is, both the model shows that the variable X1TAMit not significant influence on financial distress.

The F-statistic to 0.000 probability level consistent with the model 1 and model 2 as Table 3. Adjusted R2 model 3 and model 4 respectively 0.468 and 0.291 consistent with Table 3 model 1 and model 2 is relatively small or less than 0, 50.

Classical test that multicollinearity, autocorrelation and heteroscedasticity results are consistent with Table 3 in model 1 and model 2, so that it can be stated that, despite the change in the method of measuring the dependent variable YFDit be YFD\_ALT83it but the result was almost the same or consistent.

**Discussion**

Based on the calculation in table 3 (model 1 and model 2) and Table 4 (model 3 and model 4) it can be stated that the hypothesis H1, H2a and H2b indicates the following:

Hypothesis H1 variable X1TAMit tax management or significant influence on financial distress or YFDit, was rejected or not in accordance with the results of this study. This happens because the consciousness of taxpayers increased and oversight or taxation rules more stringent, so the company will bear the risk when making efforts to suppress the tax burden that violate the rules.

Hypothesis H2a-based earnings management variables or X2REAMit estate activities significantly influence financial distress. In the research results that do not fit this variable is not significant effect on financial distress. This happens because of the policies of earnings management through real activities will be read by users of financial statements, and there could be future levels of financial distress that comes mainly in the period of the medium-term and long-term.

Hypothesis H2b variable accruals-based earnings management or X3ACEMit significantly influence financial distress. The results of this study demonstrate conformity with the hypothesis, that X3ACEMit variables significantly influence financial distress. This happens because there are opportunities accruals policy in terms of accounting rules or

standards, so it is still done by the management company to influence the company's financial distress.

**V. CONCLUSIONS**

Based on the issues raised in this study and in accordance with the calculation result of the above, it can be concluded as follows:

- a) The independent variable tax management or X1TAMit not significant effect on financial distress, due to the better management awareness and increased surveillance and sanctions that are given to companies that violated the effort to suppress the tax burden.
- b) Management actions perform earnings management based real activities or X2REAMit not significant effect on financial distress, because the companies that perform actions earnings management through real activities AKN more readable by users of financial statements, making it less effective to increase the level of financial distress, even in the medium term and long term will reduce the level of financial distress.
- c) Policy management in accruals-based earnings management or X3ACEMit significant effect on the financial distress or YFDit. This is consistent comparison between model 1 and model 2 or without the moderating variables. The same thing happened in the sensitivity analysis model 3 and model 4, the results are consistent, namely X3ACEMit variables significantly influence financial distress.

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# The Impact of The Work Discipline and Remuneration (Compensation) on The Performance of Employees At h. Asan airport Operating Unit Office

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**Abstract.** The research examined how much the impact of working discipline and remuneration (compensation) on employee performance at H. Asan Airport Operating Unit Office. Sample is an assemblage or part of population. Sampling technique is a method in taking sample. This study used Random sampling technique (A sampling method in which all members of a group (population or universe) have an equal and independent chance of being selected. This research used Independent variable; Work Discipline ( $X_1$ ) and Remuneration /compensation ( $X_2$ ), and Dependent variable Employee Performance (Y). The result of this research is the coefficient of determination ( $R^2$ ) is equal to 0,311 (31,1%), it means that Work Discipline ( $X_1$ ) and Remuneration/compensation ( $X_2$ ) are able to influence variable Employee Performance (Y) of 31,1%. It indicates that there are 68,9% of others variables such as motivation, education, work satisfaction and work stress.

Keywords: Work Discipline, Remuneration, and Performance

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## I. INTRODUCTION

### Background to research

According to [1], work discipline is awareness and the willingness of a person to obey all company rules and social norms in force. Human resources in this research is Public Servant, as the main unsure in reaching the goal of government organization development. The public servants which is able to take the role play, is the one who has competence that is indicated by high work discipline, good performance and attitudes which are full of loyalty and obedience to the country, having good moral and mental, professional and aware of responsibility as public servant.

To increase the discipline of public servant, Government has issued a regulation. The regulation is Government Law No.53 2010 about discipline rules of public servant as government officials and public services in order to serve well and take responsibility. In fact, there is still undiscipline of public servant, it leads performance to ineffectiveness.

To increase quality of Public Servant, reward and punishment are given with the purpose of gaining prosperity, professional and carrier level in accordance with the performance. Public servant is supposed to apply work discipline and set well-organized government. With those efforts, the human resources can be increased regularly especially the quality, the efficient service to people and professional resources in conducting jobdesc. High quality services for people need good track record of human resources and commitment to apply work discipline.

Government Remuneration (compensation) is a part that is very important thing, which cannot be separated from bureaucracy reform policy. It is based on government willingness and commitment to make clean and good government. By giving the remuneration for the employee, it will create the worth and fair payroll system. Remuneration

(compensation) is a tool to lead the public servant in applying a good and high quality performance and work effectively.

Each public servant always want and wait for the remuneration (compensation), they will get the remuneration regularly exclude the take home pay based on the job quantity and quality. According to Minister of Transportation Regulation number PM.79 in 2014 and PM.102 of 2015 states that every public servant of Ministry of Transportation has level and mapping in carier. Each carier level has main jobdesc that will be done by the person as his position. It can be said that the public servant who can do the job well will get more compensation.

Increasing of remuneration for the public servant aims to increase performance. The public servant is expected to have commitment in doing job and duty based on the jobdesc because of the proper remuneration that has gotten. By giving remuneration, there will be no excuses in doing job well, no others job after workhours because of earning the lack salary or allowance reason.

Knowing the importance of discipline work and remuneration (compensation) on employee performance in an organization, the writer of this paper entitle the research as: "The impact of the work discipline and remuneration (compensation) on employee performance at Kantor Unit Penyelenggara Bandar Udara H. Asan Sampit ( H. Asan Airport Operating Unit Office )

### Statement of Problems

According to the background written above, the things which will be examined in this research are: a) Is there any influence of work discipline on employee performance at H. Asan Airport Operating Unit Office? b) Is there any influence of remuneration on employee performance at H. Asan Airport Operating Unit Office? c) Is there any influence of work

discipline and remuneration on employee performance at H. Asan Airport Operating Unit Office.

### Research Purposes

The purposes of the research are: a) To know the influence of work discipline on employee performance at H. Asan Airport Operating Unit Office? b) To know the influence of remuneration on employee performance at H. Asan Airport Operating Unit Office? c) To know the influence of work discipline and remuneration on employee performance at H. Asan Airport Operating Unit Office.

### Review of Reference Work Discipline

Work Discipline is something that has many advantages. Both of the organization and the employee can get the advantages. The discipline has a strong impact on the organization to achieve success in the pursuit of goals that are planned. It also has impact on the employee in creating good condition in a workplace and leading the employee work in an orderly condition.

Public servant discipline regulation is a regulation that rules obligation, prohibition, and sanctions of the public servant. The regulation is stated in Government regulation No. 53 in 2010 about the employee discipline.

[1] states that discipline is awareness and the willingness of a person to obey all company rules and social norms in force. The willingness of someone's efforts, encouragement and directing his behavior to carry out duties and responsibilities properly measured through indicators: earn rewards, the establishment of cooperation, respect, self-actualization and fulfillment in work environment

According to [2] discipline is a behaviour, attitude, and action that accordance with both written and unwritten regulation.

[3] defines work discipline as an attitude of respecting, appreciating, obedience toward prevailing rules, both written and unwritten as well as capable cooperate and not evade to accept sanctions if he disobey the duty and authority which are given him.

Based on the definition above, it can be concluded that discipline is a willingness of a person to obey all the written or unwritten regulation and able to accept sanction when disobey the rules.

### Work discipline principles

[4] states that an employee has done discipline work principles if he has already done these things:

1. Come to the workplace on time or before the worktime begins.
2. Work based on the procedures or regulation stated on organization.
3. Obey the leader's order.
4. Always keep the workplace clean and tidy.
5. Use the work tool effectively and effeciently.
6. Take the rest time in a proper way and leaving after worhours finished.
7. Never be lazy in working.
8. Never leaving workplace for no make sense excuse.

### Sanctions of Discipline Violation

According to [5], there are some common sanctions of discipline violation in an organization.

1. Sanction of easy violation, by giving direct warning (unwritten), written warning, and unsatisfied statement.
2. Sanction of medium violation, by postponing salary increase, decreasing salary, and postponing carrier level.
3. Sanction of hard violation, through demotion, acquisition, and dismissal.

### Remuneration ( Compensation)

According to Bahasa Indonesia dictionary, remuneration (compensation) is reward or salary. For pubic servants, Remuneration in Policy Reform is the realignment of the provision for employee benefits in the form of allowances related to performance achievement.

According to [6], Remuneration is something that is accepted by the employee as a reward from the contribution given to an organization.

Based on the meaning of remuneration mentioned above, It can be concluded that remuneration is a compensation granted by the employee as reward of service, and it is usually granted in cash.

Legal framework of remuneration policy is conducted in accordance with government regulation and law [7]. These are:

1. The Law No. 28 of 1999, about organize independent and clean country from Corruption, Collution and Nepotism.
2. The Law No. 8 of 1974 on the Fundamentals of Civil Service, as amended by Act No. 43 of 1999. In the Article 7 is stated that each public servant deserve receiving fair and worth salary in accordance with duty and responsibility.
3. ILO Convention No. 100 as ratified in 1999, states, Equal remuneration for jobs of equal value.
4. The Presidential Regulation No. 7 of 2005 about Medium-term National Development Planning.
5. The Law no 17 of 2007 about Longterm National Development in 2005-2025.

[8] states Governance Remuneration (compensation) is a part of the reform of the bureaucracy. It is based on government awarness and commitment to create clean and good government. However, Change and renewal related to clean and good governance cannot be realized without the prosperity of the public servant as the human resources. Change and renewal are so important in changing government bad image, the bad impression are;

- a. Bad service quality (slow response, no rules, complicated, arrogant).
- b. Involved in Corruption, Collusion, and Nepotism.
- c. Bad discipline quality and lack of work ethic.
- d. Unproductive, uneffective, and uneffecient government management quality.
- e. Unaccountable and not transparant public service quality.

Remuneration (compensation) has strategic meaning on the success of the reform of the burreaucracy, as known as the most significant impact on work performance which is

determined by the bureaucracy culture changing in completing the obligation.

The public servant is expected to do the duty and obligation accordance with the function and the main duty. Presence is one of important appraisal beside of main task evaluation. There will be a consequence in giving this remuneration. It will be decreased if the public servant disobey the regulation and have no performance. The remuneration will be cut if; for example, a public servant comes late to the office, leaves before workhours or absence for no reason. Assesment from the organization leader is needed to measure how good the employee performance. If the result is not good, applying remuneration based on performane is not effective.

It is expected that there will be no more complains on bad public services through the remuneration based on performance. Remuneration granted to the employee is to heal the worrieness of employee on lack of salary. It is also epected, there will be no low performance problems by applying the reward on organization.

### **Remuneration policy fundamental**

Remuneration policy fundamental is fair and propoisional. Through remuneration regulation, salary and reward are determined by the position and responsibility.

The Law No. 43 of 1999 as the eiger of remuneration regulation, payroll system of public servant based on Articiel 7 First Verse states that public servant deserve the worth and fair salary as responsibility and duties. [9]

The reform of Beurachracy has been begun by Ministry of Finance, one of the beurachracy changes remmuneration system from personal considertation to grading the performance.

The reform of beurachracy needs to be done gradually for all public servants in all position, firstly done by the Minister of Finance, by changing remuneration (compensation) system in which the employee income beside salary based on class and also giving the extra compensation as reward on job performance. The rewards can be considered by the education and knowledge, experience and the complicated job.

According to [10], the remuneration indicators are:

1. Salary.
2. Honorarium.
3. Basic compensation.
4. Insentive.
5. Bonus and performance.
6. Severance of retirement.

### **Work Performance**

According to [5] work performance is a real behaviour achieved by one employee in the performance of his duties in accordance with the responsibilities given to him.

[1] states that the work achievement is a result of work accomplished person in carrying out the duties charged to him based assignments of know-how, experience and seriousness as well as time.

According to [11], performance is something that has been achieved or not achieved by the employee.

Based on the opinions above, it can be concluded that performance is an achievement that is achieved by someone in doing the duty and responsibility as criteria and standart

stated. The achievement will reach a job satisfaction and it will influence the reward given.

### **Employee Performance Characteristics**

According to [12] the characteristics of people who have high performance are as follow:

1. Having high personal responsibility.
2. Dare to responsible and take risk.
3. Having a realistic goal.
4. Having whole work planning and struggle in making the goal.
5. Take advantage of concrete feedback in all work activities.
6. Search for chance to realize planned programs.

### **The Indicators of employee performance**

Clear indicators are needed to know the employee performance. According to [13], the indicators are:

1. Work quality  
The indicators are accuracy, skill and orderliness.
2. Work quantity  
The indicator is work quickness.
3. Work discipline  
The indicators are follow the leader's instruction, obey company regulation, and attendance obedient.
4. Innisiative  
The indicators is always active in completing the job without any encouragement from the leader.
5. Teamwork  
The indicator is the abbility in go along with others employee in a proper position.

### **Hypothesis**

The hypothesis of this research are a) It is suspected there is the influence of work discipline on employee performance at H. Asan Airport Operating Unit Office? b) It is suspected there is the influence of remuneration on employee performance at H. Asan Airport Operating Unit Office? c ) It is suspected there is the influence of work discipline and remuneration on employee performance at H. Asan Airport Operating Unit Office.

## **II. METHODS**

### **Object of Research**

The object of this research is H. Asan Airport Operating Unit Office located at jalan Muchran Ali Baamang Hulu Sampit, Central Kalimantan. All employee of H. Asan Airport Operating Unit Office become the object which are researched, the leaders and all employee. There are about 60 employees are involved in this research. The research is done by filling the questioners, direct observation and also interview the employee so that knowing the impact of discipline and remuneration on empolyee performance.

### **Sampling Technique**

According to [14] population is all of the subjects who are connected to the research. The population is the whole subject of research. Generally, Population is not only the total in the object or subject where study, but also all of the character that belongs by subject or object. The population in this research is the 60 employee of H. Asan Airport Operating Unit Office as respondent.

Sample is an assemblage or part of population. This research uses Random Sampling as sampling technique. [15] states the random sampling is a technique in taking sample in

which all population in a group or personal have the chance to be chosen randomly. The total of sample in this research is 50 employees of H. Asan Airport Operating Unit Office.

### Data Collection Method

This research used collecting data technique as below:

#### Reference

This method is done by finding literatures, arranging and learning the research object, and article related to the research as reference.

#### Observation

Observation is one of method to collect data by observing the research in the location directly.

#### Interview

This method used some questions and ask them directly to all the employee of H. Asan Airport Operating Unit Office.

#### Questionnaire

Questionnaire or list of questions is collection data technique by arranging questions and providing answers. In spreading the questionnaires, the respondents only give the checklist on chosen answers. There will be given number or grade in every answers. The scale is between 1 to 5 based on Likert scale.

SS = Strongly Agree	5 point
S = Agree	4 point
KS = Undecided	3 point
TS = Disagree	2 point
STS= Strongly Disagree	1 point

This questionnaire test uses *statistical product and service solution (SPSS) versi 16.0 for windows* program.

### Definition of Variable operational

This research consist of Independent variables. There are Work discipline ( $X_1$ ) and Remuneration /compensation ( $X_2$ ), and Dependent variable Employee Performance ( $Y$ ).

The definition are

#### Work discipline ( $X_1$ )

It is the ability of the employee in accomplish with the works and responsibility and also avoid the violation because there will be a punishment for who disobeys the regulation.

#### Remuneration/compensation ( $X_2$ )

It is the extra benefit (cash) granted to the employee as a reward based on the presence and good performance.

#### Employee Performance ( $Y$ )

Good work result of employee in achieve the optimal goal, consist of quality, quantity, on time, effective and independent.

### Hypothesis Testing

Hypothesis is a temporary opinion or conclusion. To proof the hypothesis that Independent variable, Work discipline ( $X_1$ ) and Remuneration /compensation ( $X_2$ ), affects the dependent variable, Employee Performance ( $Y$ ), this research uses tool in this test. They are:

#### t-Test (partial)

Partial test is to test variable separately in knowing the influence of independent variable, Work discipline ( $X_1$ ) and Remuneration /compensation ( $X_2$ ), affects the dependent variable, Employee Performance ( $Y$ ) at of H. Asan Airport Operating Unit Office.

### f-Test (simultaneous)

F test used in this study to determine the effect of several variables (independent variables) on the dependent variable.

The data analysis method and hypothesis test in this research use SPSS (*Statistical Package for the Social Sciences*) for windows versi 16.0.) program.

## III. RESULT AND DISCUSSION

The discussion of the research is conducted referring on the aims of the research and based on the statistic results (SPSS program),

$$Y = a + b_1X_1 + b_2X_2 \quad (1)$$

$$Y = 9,057 + 0,256 (X_1) + 0,299 (X_2)$$

As explanations:

$Y$  = Employee Performance

$(X_1)$  = Work discipline

$(X_2)$  = Remuneration (compensation)

a.  $a = 9,057$

The constant number explains that there are no work discipline and remuneration variable, so the work employment equals 9,057.

b.  $b_1 = 0,256$

The regression coefficient equals 0,256, means that the increasing one point of work discipline will influence 0,256 increasing of performance,  $X_2$  constant number required.

c.  $b_2 = 0,299$

The regression coefficient equals 0,299, means that the increasing one point of remuneration will influence 0,299 increasing of performance,  $X_1$  constant number required.

The equations show the correlation between independent variable. Work discipline ( $X_1$ ) and remuneration (compensation) ( $X_2$ ) on dependent variable which is performance ( $Y$ ).

To know how much the influence in each independent variable on dependent variable, the regression can be explained as below;

1. The result of test-t shows independent variable has impact on dependent variable. Evidenced by statistic count result which shows  $t_{count} > t_{table}$  and followed by probability number  $< 0,05$  so that  $H_0$  rejected, and  $H_a$  accepted. While the work discipline ( $X_1$ ) result is  $t_{count} (2,031) > t_{table} (2,0117)$  with significant number amount to  $(0,048 < 0,05)$  and remuneration ( $X_2$ ) result  $t_{count} (2,611) > t_{table} (2,0117)$  with the significant  $(0,012 < 0,05)$ . It can be concluded that the result of t-test proves that remuneration variable ( $X_2$ ) has more significant impact on performance ( $Y$ ) than work discipline ( $X_1$ ).
2. Based on the result f- test, it can be concluded that independent variable (work discipline ( $X_1$ ) and remuneration ( $X_2$ ) has significant impact on dependent variable (performance). It is evidenced by the result that  $f_{count} (10,592) > f_{table} (3,1950)$  with significance  $0,000 < 0,05$ .
3. On model summary, R number equals 0,557, means work discipline ( $X_1$ ) and remuneration ( $X_2$ ) has strong relation on performance ( $Y$ ) at H. Asan Airport Operating Unit Office.

4. The count of Coefficient of determination ( $r^2$ ) also shows the result that independent variables has impact on increasing performance (Y), the amount is 31,1%. The 68,9% is explained by other variables beside the variable mentioned above, such as motivation, education, work satisfaction and work stress.

#### IV. CONCLUSIONS

1. Obtained significance value of work discipline on performance of H. Asan Airport Operating Unit Office employee.
2. Obtained significance value of remuneration (compensation) on performance of H. Asan Airport Operating Unit Office employee.
3. Obtained significance value of work discipline and remuneration (compensation) on performance of H. Asan Airport Operating Unit Office employee. Work discipline and remuneration (compensation) are able to influence amount to 31,1% of performance variable (Y) change. It indicates there are still around 68,9% of other variables that effect the performance of employee, such as motivation, education, work satisfaction, and stress work.

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# The Correlation Health Education About HIV-Aids to Pregnant Toward HIV Check Interest

## (analytic studies in maternity out-patient clinic in pare government hospital kediri regency in 2016 year)

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**Abstract.** The presence of pregnant with HIV can threaten mother safety and her infant. To early detection does HIV disease to pregnant then pregnant need check HIV. The interest pregnant to check HIV is very low. This research purpose knowed the correlation health education about HIV-AIDS to pregnant toward HIV check interest in maternity out-patient clinic in pare government hospital Kediri Regency in 2016 year. This Design Research was an experiment with One Group Pretest Posttest approach. The population in this study were all pregnant who came to maternity out-patient clinic and didn't check HIV and 46 samples of respondents were taken with Purposive Sampling technique. Taking data on the interest of pregnant women to check HIV using a questionnaire after it was done counseling about HIV / AIDS then repeated the interest to check HIV. Data analysis used Wilcoxon test. The result of research of pregnant woman's interest to check HIV in maternity out-patient clinic in pare government hospital kediri before giving health education from 46 respondents mostly have low interest was 22 respondents (47,8%) and after giving health education, most have high interest was 23 respondents (50%). Based on the analysis of the influence data of the peyty on the interest of pregnant women to check HIV with wilcoxon test with error rate  $\alpha = 0,05$  and value  $p = 0,000$  so that  $p < \alpha$  then  $H_0$  is rejected and  $H_1$  accepted so that there was influence of HIV / AIDS counseling to pregnant woman to interest Check for HIV. This study conclusion was hoped pregnant can improve their knowledge about HIV / AIDS and HIV testing, to increase pregnant was interest to check their health for often personal Health gives health education routinely who to does complete pregnancy examination.

Keywords: Health Education , HIV Check Interest

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### I. INTRODUCTION

Health Education is one of the activities maternity care (antenatal care). Counseling in this case aims to recognize the condition of the client and determine the needs of clients so it is considered Health Education is very important in the care of pregnant women (antenatal care). (Pantikawati, 2010). Human Immunodeficiency Virus (HIV) is a virus that causes AIDS that belongs to the retrovirus group. A person infected with HIV, will experience a lifelong infection. Most people with HIV / AIDS (PLWHA) remain asymptomatic (without signs and symptoms of a disease) for a long time. However, they have been able to infect others. (Handbook of PPIA, 2012). Prevention of Transmission of Human Immunodeficiency Virus (HIV) from Mother to Child / PMTCT (prevention of Mother to Child HIV Transmission) is an effort done to prevent HIV infection in women, while preventing HIV

transmission from pregnant mother to infant (PMTCT training module, 2008)

In Indonesia data in 2008 from the number of pregnant women who took HIV test were 5,167 people where 1,306 (25%) were HIV positive. The increasing number of positive pregnant women will also increase the need for PMTCT services based on HIV epidemic projection and modeling, the number of positive pregnant women requiring PMTCT (prevention of Mother to Child HIV Transmission) services will increase From 5,730 people in 2010 to 8170 in 2014.

Prevention of mother-to-child HIV transmission has been implemented in Indonesia since 2004, especially in areas with high HIV epidemic levels. However, by the end of 2011 it has only reached about 7% of the estimated number of mothers requiring PMTCT (prevention of Mother to Child HIV Transmission) services. (PCIA Guidebook, 2012)

Although the HIV prevalence in women in Indonesia is only 16%, but because the majority

(92.54%) of people with active reproductive age (15-49 years), then it is estimated that the number of pregnancies with HIV will be positive. (Ivone Junita, 2011)

In East Java, the number of AIDS patients continues to increase. Starting in 2001 cumulatively the number of new AIDS sufferers ranges from 219 people, but up to June 2010 has reached 21,770 this is a huge increase and should be prevented from spreading to remote areas. From data owned by Infection Treatment Intermediate Infectious Disease Unit (UPIPI) RSU dr Soetomo Surabaya, until June 2013, in East Java has about 1,168 HIV-infected mothers and 163 of them are pregnant women. (BKKBN, 2012). From existing data of Pregnant Women in East Java who do HIV Checks Only about 20%. (PMTCT training module, MOH 2008)

In Kediri Regency, it was found that HIV / AIDS cumulative cases in Kediri Regency until 2016 reached 471 with 139 deaths. From the available data, the findings of an infected mother have increased. The percentage reached 14 percent, the second highest after the CSW group. In number, the number of positive sex workers infected was 107 people, while housewives up to 32 people. From the 2010 data of pregnant women in Kediri district who are HIV positive there are 4 people, then for pregnant women who do HIV check only 20%. (Aidsindonesia, 2016)

From preliminary study conducted by researchers in **Maternity Out-patient clinic** Pare Kediri Regency Hospital on August 6, 2015, based on interviews conducted on 10 pregnant women who visited the poly, found that 6 pregnant women (60%) are not interested to check HIV. And 4 Pregnant women (40%) of 10 pregnant women interviewed said they would be interested in HIV testing because they wanted to know the status of HIV and for early detection.

Based on the results of interviews on 6 pregnant women who are not interested in HIV testing, 5 out of 6 unanticipated pregnant women said they had never been given information or information about HIV-AIDS and 1 person had been given information about HIV but did not want to check for reasons not infected and The test is not important. Then after 5 of 6 pregnant women were given counseling about HIV, 4 of them expressed interest to check HIV and 2 of them are not

interested in the reason of not feel infected from anyone.

Lack of service delivery from PMTCT can be caused by many factors, one of which is the lack of knowledge or information on pregnant women with HIV / AIDS so that if they do not feel HIV / AIDS does not need to check HIV. This service has not spread evenly and has not been socialized, so many people are less concerned about the service because of lack of information. (PPIA Guidebook, 2012)

To prevent transmission of HIV from pregnant women to babies in pregnancy, PMTCT is required. In Improving PMTCT Interests, all pregnant women should know about HIV-AIDS and how to prevent it. Efforts that can be made to improve the knowledge of pregnant women about HIV / AIDS is to conduct counseling, counseling and giving brochures about HIV-AIDS.

Based on the description of the researchers interested in conducting research entitled " the correlation health education about HIV-AIDS to pregnant toward HIV check interest in maternity out-patient clinic in pare government hospital Kediri Regency in 2016 year."

## II. METHODS

this research the design used is analytic design using experimental research with model One Group Pretest Post test. The study was conducted in March - July 2016. This research took place in maternity out-patient clinic in Pare Kediri District Hospital. This research populations were All Pregnant Mothers Visiting for 1 Month In maternity out-patient clinic Pare District Hospital Kediri Year 2016 number of 84 people. This research sample was some pregnant who visited in maternity out-patient clinic Pare Kediri District in 2016. The sampling technique used in this research is Purposive Sampling, that is the technique of determining the sample based on the criteria determined by the researcher.

### A. Inclusion Criteria

The inclusion criteria in this study are:

- 1) Pregnant who are willing to be respondents.
- 2) Pregnant who have never had HIV testing
- 3) Pregnant who are not in inpartu state.

### B. Exclusion Criteria

The inclusion criteria in this study are:

- 1) Pregnant who experience mental disorders and are not cooperative

## Large Sample

$$n = \frac{N}{1 + N(d)^2}$$

$$n = \frac{84}{1 + 84(0,1)^2}$$

$$n = \frac{84}{1 + 84(0,01)}$$

$$n = \frac{84}{1,84}$$

$$n = 45,6$$

N: Number of samples

N: Total population is 84 people

D: Awareness level obtained  $d = 0.1^2$

So the sample size of this research was 46 respondents.

TABLE I  
OPERATIONAL DEFINITION

Variable	Operational definition	Indicator	Measuring instrument	Scale	Score
Independent variable: Counseling on HIV AIDS	Health Education that is done related to HIV AIDS	HIV AIDS Health Education about: 1. Understanding HIV AIDS 2. Causes of HIV 3. Pathophysiology / way of HIV AIDS 4. Mode of HIV AIDS transmission 5. Factors that affect the transmission of HIV from mother to baby 6. Signs and Symptoms 7. Management	SAP	-	-
Dependent variable: Interests of pregnant women for HIV check	Awareness, preference, willingness of pregnant to HIV check (PMTCT)	1. Interested to check for HIV 2. Trying to be curious about checking for HIV 3. Trying to follow the HIV check 4. Willing to sacrifice both time, effort and cost	Questionnaire	Ordinal	Positive statement: ST (Strongly agree): 4 S (Agree): 3 TS (Disagree): 2 STs (Strongly Disagree): 1 Negative statement: ST (Strongly agree): 1 S (Agree): 2 TS (Disagree): 3 STs (Strongly Disagree): 4  Criteria: Interests Height: score 67-100 Interests Medium: score 34-66 Low Interest: score 0-33

## C. Data Collection and Data Analysis

### 1. Data collection

#### a. Data collection process

The researcher distributed the questionnaire, measured the interest of the mother to check the HIV prior to the counseling and gave an explanation / clue how to fill out the questionnaire, gave the respondent time to fill out the questionnaire for 10 minutes and then gave the HIV / AIDS counseling for ± 30 minutes. After counseling

researchers measured the interest of HIV testing by distributing questionnaires and explaining how to fill

## D. Data Collection Instruments

The questionnaire consists of Positive and Negative Questions. Number of questions There are 12 questions with choice Answer Strongly Agree, Agree, Disagree and Strongly Disagree who have different scores between positive and negative questions.

### 2. Data Analysis

#### a. Editing

Is a data editing activity conducted with the aim to evaluate the completeness and suitability between the criteria and required to test the hypothesis or answer questions from the study.

#### b. Coding

Coding is to classify answers from respondents in kind by member code of each answer.

#### c. Scoring

Is a scoring activity on the data consisting of several categories. In each statement, If positive statement with choice answer Strongly agree: 4, Agree: 3, Disagree: 2, Strongly disagree: 1. Whereas if the negative statement with the choice of answers Strongly agree: 1, Agree: 2, Disagree: 3, Strongly disagree to score: 4.

The formulas used are as follows:

$$S = \frac{SP}{Sm} \times 100\%$$

Information :

S: Score gained

SP: Scores Obtained

Sm: Maximum Score

The scores division for interest is as follows:

- High interest (score 67-100)
- Interests (score 34-66)
- Low interest (score 0-33) (Suparyanto, 2011)

## E. Tabulating

### 1) Statistical test used in reading test results

The statistical test in this study using the Wilcoxon Signed test is hypothesis testing

to see the Influence of HIV-AIDS Counseling on Pregnant Mother to Interest to Check HIV. Test significance using the level of significance 95% or at  $\alpha = 0.05$ .

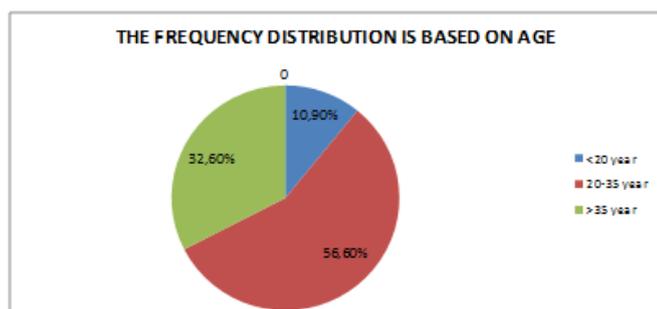
2) Readings of statistical test results  
The conclusion of hypothesis test conducted based on the probability number of computer software analysis results are as follows:

- If  $(\rho) > \alpha$  then  $H_0$  is accepted and  $H_1$  is rejected which means no Difference Interests before and after counseling.
- If  $(\rho) < \alpha$  then  $H_0$  is rejected and  $H_1$  is accepted which means there is a Difference of Interest before and after counseling. (Sugiyono, 2007)

### III. RESULT AND DISCUSSION

#### 1. The General Data

##### A. The Respondents Characteristic are based on Age

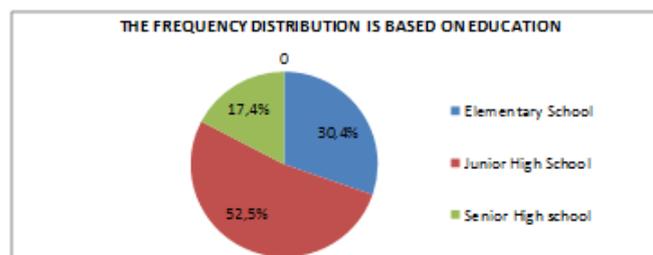


Source: Primary Data, 2016

Fig. 1 The Frequency Distribution is based on Age In in maternity out-patient clinic Pare Hospital Kediri Regency 2016 Year

Based on Fig. 1, of 46 Respondents of maternal age was mostly aged 20-35 years as many as 26 respondents (56.60%).

##### B. The Respondents Characteristic are Based on education

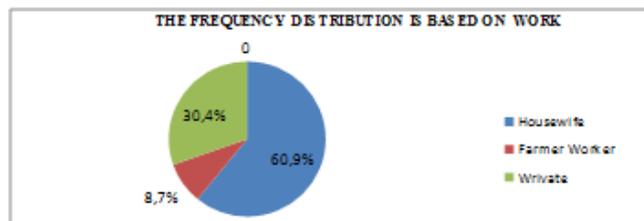


Source: Primary Data, 2016

Fig. 2 The Frequency Distribution is Based on Education In in maternity out-patient clinic Pare Hospital Kediri Regency 2016 Year

Based on Fig. 2, of 46 Respondents of maternal education is mostly Junior high school was much 24 respondents (52.5%).

##### C. The Respondents Characteristic are based on Work

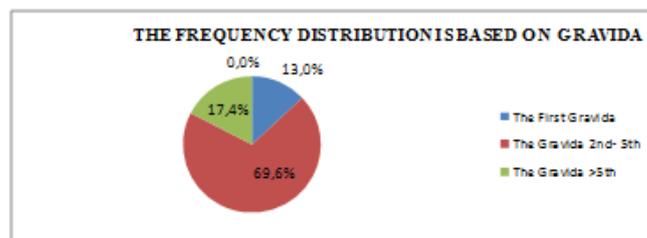


Source: Primary Data, 2016

Fig. 3 The Frequency Distribution is Based on Work In in maternity out-patient clinic Pare Hospital Kediri Regency 2016 Year

Based on Fig. 3, out of 46 Respondents, most of the housewives are housewives (28%) (60,9%)

##### D. Respondents Characteristic are Based on Gravida



Source: Primary Data, 2016

Fig. 4 The Frequency Distribution is Based on Gravida Status In in maternity out-patient clinic Pare Hospital Kediri Regency 2016 Year

Based on Diagram 4.3, out of 46 Respondents Parity of mother mostly was Pregnant to 2-5 many 32 respondents (69,6%).

#### 2. Special Data

##### A. Interests Pregnant to HIV Check Before Giving Health Education about HIV / AIDS

TABLE II

INTERESTS OF PREGNANT WOMEN TO CHECK FOR HIV BEFORE COUNSELING ON HIV / AIDS IN IN MATERNITY OUT-PATIENT CLINIC PARE HOSPITAL KEDIRI REGENCY 2016 YEAR

No	Interests of Pregnant Women to Check for HIV Before Giving a Health Education HIV-AIDS	Total	Percentage (%)
1	High	5	10,9
2	Medium	19	41,3
3	Low	22	47,8
Sum		46	100

Source: Primary Data, 2016

Based on Table II, of 46 respondents most of the interest of pregnant women to HIV before health Education about HIV / AIDS was low many 22 respondents (47.8%) and a small percentage of mothers had high interest in HIV testing by 5 respondents (10.9%).

**B. Interests of Pregnant Women to Check HIV After Giving Counseling on HIV / AIDS**

TABLE III  
INTERESTS OF PREGNANT WOMEN TO CHECK FOR HIV AFTER BEING GIVEN COUNSELING ABOUT HIV / AIDS IN MATERNITY OUT-PATIENT CLINIC PARE HOSPITAL KEDIRI REGENCY 2016 YEAR

No	Interests in Pregnant Women to Check HIV After Giving Health Education about HIV / AIDS	Total	Percentage (%)
1	High	23	50,0
2	Medium	22	47,8
3	Low	1	2,2
<b>Sum</b>		46	100

Source: Primary Data, 2016

Based on Table III, of 46 respondents most of the interest of pregnant women for HIV testing after being given health education about HIV / AIDS was High as many as 23 respondents (50.0%) and a small number of mothers had low interest in HIV check that was 1 respondent (2,2 %).

**C. Interests Matter of Pregnant Women to Check for HIV Before and After Advocacy on HIV / AIDS**

TABLE IV  
CROSS MATERNAL MATERNAL INTERESTS TABULATION FOR HIV CHECK BEFORE AND AFTER ADVOCACY ON HIV / AIDS IN MATERNITY OUT-PATIENT CLINIC PARE HOSPITAL KEDIRI REGENCY 2016 YEAR

NO	Interests of Pregnant Women to Check for HIV Before Giving Health Education HIV-AIDS	Interests in Pregnant Women to Check HIV After Giving Health Education HIV / AIDS						TOTAL	
		High		Medium		Low		N	%
1	High	5	10,9	0	0	0	0	5	10,9
2	Medium	16	34,8	3	6,52	0	0	19	41,3
3	Low	2	4,3	19	41,3	1	2,2	22	47,8
<b>Sum</b>		23	50,0	22	47,8	1	2,2	46	100

Source: Primary Data, 2016

The Table above shows the interest of Pregnant Women to Check for HIV Before Giving Health Education about HIV / AIDS Mostly Low was 22 respondents (48%), after giving the Health Education most of pregnant women have high interest that was much 23 respondents (50%). A small percentage of pregnant women for HIV testing prior to Health Education was

High many 5 respondents (10.86%) and after being given Health Education a small proportion of pregnant had a low interest of 1 respondent (2.2%).

**3. Data Analysis**

TABLE V  
LARGE THE CORRELATION HEALTH EDUCATION ABOUT HIV-AIDS TO PREGNANT TOWARD HIV CHECK INTEREST IN MATERNITY OUT-PATIENT CLINIC IN PARE GOVERNMENT HOSPITAL KEDIRI REGENCY IN 2016 YEA

Test Indicators	P value	α
the correlation health education about HIV-AIDS to pregnant toward HIV check interest.	0,000	0,05

From result of calculation by using computer software aid using wilcoxon test formula obtained  $P = 0,000$  and  $\alpha = 0,05$  thus  $P < \alpha$  then work hypothesis (H1) accepted and initial hypothesis (H0) is rejected means there is influence of counseling about HIV AIDS In Pregnant Women against HIV checking interests. To find out how much influence can be explained in cross-tabulation of the interest of pregnant women to check HIV before and after health education

**1. Interest of Pregnant Women to Check HIV Before being given Health Education**

Based on table 4.1 it can be concluded that the interest of pregnant women to check HIV before giving counseling about HIV AIDS from 46 respondents have less interest 22 respondents as much as 47,8%. Factors of this interest are influenced by internal and external factors. What will be discussed in the discussion of the results of this study are external factors such as Education and Employment.

According to Hurlock Year 1999, Interests are a source of motivation that encourages people to do what they want if they are free to choose. When someone judges that something will be useful, it will become interested, then it will bring satisfaction. Increased interest can be influenced by several factors, including educational factors and work factors. (Suparyanto, 2011). The first is the education factor. Based on Diagram 4.2 shows that most respondents have junior high school education as much as 24 respondents (52.2%), while 8 respondents 17.4%) who have high school education. Most of the mothers who are junior

high school have a moderate interest that is as many as 14 people (30.4%)

Education is a scientific process that occurs in humans. According to Dictionary of Education, education can be defined as a process whereby a person develops the ability of attitudes and other forms of behavior in society and culture. Education can be obtained through formal education and non-formal education. Formal education has a very valuable contribution to change in society, can promote society and development. While non-formal education can be obtained family members and community throughout life both in the family environment and surrounding communities. (Suparyanto, 2011). Education greatly affects the knowledge of pregnant women about what services should be obtained during pregnancy, it will also affect the interests of pregnant women to use health care facilities, especially for HIV testing because HIV is considered taboo and does not need to check if not infected. Mothers with low education tend to think no need to know the status of HIV because it is not contracted, this kind of thinking that needs to be changed. One way to improve mother's knowledge is to provide health education especially related to pregnancy.

The second is the work factor. Based on Diagram 4.3 shows that most respondents work as IRT that is 28 respondents (60,9%), whereas a small part of respondents are 4 respondents (8,7%) work as farmer / farmer. Most mothers who had jobs as IRT had a low interest of 19 respondents (41.3%)

According to Markum cited by Nursalam and Pariani (2008) that work is generally a time-consuming activity, and by working can add information and knowledge. Conversely, with conditions that do not work allow the lack of social circles or socialization of respondents who are less than those who work. The environment is all the conditions that exist around the human and its effects that can affect the development and behavior of people or groups. Environment is the input into a person so that the adaptive system that involves both internal factors and external factors. Someone who lives in the environment will tend to follow the environment (suparyanto, 2011)

Mothers whose job as housewife tend to have low interest because daily activities are mostly done in the home environment and there is little

information exchange or socialization. Preferably for mothers whose job as housewife more seek information because the daily work done at home should not limit the mother in searching for useful information especially related to pregnancy. Mothers can seek information from mass media, books, the internet and health professionals.

## **2. Interest of Pregnant Women to Check HIV After being given Health Education**

Based on the analysis of table 4.2 it can be concluded that the interest of pregnant women to check HIV after giving counseling about HIV AIDS from 46 respondents High interest as much as 50% and a small part of low interest mothers that is as much as 1 respondent (2,2%).

A person's awareness of an object, person, problem, or situation that has something to do with itself. That is, interest must be seen as conscious. Therefore interest is the psychological aspect of a person to pay high attention to a particular activity and encourage the person concerned to carry out the activity. (Sutjipto, 2011)

Based on the characteristics by age group, most of them are 20-35 years old as many as 26 respondents (56.5%) and the average mostly have high interest as much as 13 respondents (26.3%).

According to Nursalam and Siti Pariani (2008), the more age, will be more mature in thinking, working so that knowledge will increase In terms of public trust, a more mature person will be more trusted than people who are not mature enough. With increasing age, the level of knowledge will develop in accordance with the knowledge that has been obtained, also based on personal experience. Age also greatly influences the thinking patterns that will result in behavior.

Based on the characteristics of the work, it was found that from 46 respondents, most of them were IRT, 28 respondents (60,9%) and most of Mother who worked as IRT had high interest of 20 respondents (43,5%).

According to Arikunto (2007), people who work knowledge will be wider than someone who is not working, because by working someone will have more information and experience. Habits that must be done especially to support life. Working is a time-consuming activity, working for moms will have an influence on the family. The environment contains two elements, which means that the interaction between human and cultural elements

is the same form of behavior found in the family. Man learns his behavior from others in his social environment. This culture is accepted in the family including the language and values of habitual adaptation behavior and so on which will affect one's education. (Suparyanto, 2011). Although most of the respondents are housewives (IRT), it does not rule out they have a high interest to check HIV. It can be proven that the respondent can answer the good question from the questionnaire So the counseling obtained respondents is one way to Increase Interest and the role of health workers is very important. In this case the environment can be interpreted as health workers who can provide motivation through counseling or health education. It aims to increase interest in HIV testing with the application of HIV testing to every pregnant woman it will become a habit as a regular part of the pregnancy screening activity

Therefore, it is hoped that the role of health officer will be further enhanced in giving counseling about HIV AIDS to the Pregnant Mother So that new information is easy to accept, the thinking pattern is also more mature and in particular can increase the interest to perform HIV check for early detection and prevention of HIV virus transmission from mother to baby.

### **3. The correlation health education about HIV-AIDS to pregnant toward HIV check interest**

From result of research by using Wilcoxon got value with significant level  $\alpha = 0,05$  got significant  $\rho < \alpha$  that is 0,000 which mean H1 accepted which means there is influence counseling to Interests of pregnant mother to check in maternity out-patient clinic in pare government hospital Kediri Regency.

Based on the results of the research conducted in out-patient clinic in pare government hospital Kediri Regency. from 46 respondents, before being given Health Education most respondents that was as much as 22 respondents (47.6%) have low interest after being given Health Education there was only 1 respondent (2.2%) Have low interest.

Based on the results of research according to the characteristics of education, most mothers with junior high education as much as 24 respondents (52.2%). Prior to the counseling of 24 mothers with junior high school education, most had moderate interest as many as 14 respondents (30.4%) and after being given counseling most

mothers had high interest as many as 14 respondents (30.4%).

The level of education is too low will be difficult to receive messages or information submitted. The higher the level of education a person more easily receive information so much of the knowledge owned and vice versa. Education affects the learning process, the higher a person's education the easier the person is to receive information. (Nursalam, 2008).

The relevance of the educational process to development, especially human development, is that education is less able to inhibit the cognitive and behavioral development of new values received and introduced. Lack of public knowledge about health services will affect the utilization of existing service facilities that affect their health condition. (Notoatmodjo, 2007). With higher education then someone will tend to get information, either from other people or from mass media. The more information that comes in the more the knowledge gained about health. Knowledge is closely related to education where expected pregnant women with higher education, then pregnant women will be more knowledgeable too. It may also have an effect on interest, but it should be emphasized that a lowly educated person is by no means an absolute knowledge and low interest. Increased knowledge is not absolutely obtained in formal education, but also can be obtained in non-formal education.

Other factors that influence interest are the impetus from within, education, situation, socioeconomic, environment and social motivation (Notoadmodjo, 2007). Health education is a combination of activities and opportunities based on the principles of learning to achieve a situation where the individual, family, group, or society as a whole wants to live healthy, know how and do what is commonly done by individuals or groups and ask for help when need. The purpose of counseling or health education one of them is for people to have a better understanding of the existence of the system and how to use it efficiently and effectively. (Notoatmodjo, 2007).

To improve the knowledge of pregnant women, can be through the method of counseling or direct direction of health personnel. With the increasing level of one's knowledge. It will be easier to change his behavior especially to increase interest. Knowledge gained from counseling will be

applicable and expected interest in HIV checking is on the rise. For health education workers about HIV AIDS needs to be done to increase interest at least to improve mother's knowledge about HIV. In addition, early prevention or early detection of HIV is very needed pregnant women so that counseling can be done as early as possible in early pregnancy or early face to face pregnant women with health workers

#### IV. CONCLUSIONS

1. The Pregnant Interest to Check HIV Before Giving Health Education , Most have low interest much 22 respondents (47.8%).
2. The Pregnant Interest to Check HIV After Giving Health Education Most have high interest many 23 respondents (50%).
3. There were correlation health education about HIV-AIDS to pregnant toward HIV check interest it can be explained from before counseling most interest of pregnant women to check was low much 22 respondents (47,8%) and after given health education most interest of pregnant to check HIV was high many 23 respondents (50%).

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# Organoleptic Characteristic of Frozen Beef on Different Thawing Methods

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**Abstract.** The meat freezing has commonly been practiced to extend the shelf life of meats, and the frozen meats are required for thawing before further usage. The objective of the present study was to evaluate the effects of thawing on organoleptic characteristics of frozen beef particularly in the area of longissimus dorsi. Two-year-old prarigor male Bali cattles were used in the study and treated with three different thawing methods (thawing at room temperature, water tap thawing and warm water thawing). The measured organoleptic characteristics were tenderness, texture, smell, and juiciness. The results showed that different thawing methods significantly affected the texture and juiciness of the meat ( $P < 0.05$ ), but the tenderness and smell were not significantly affected by the methods ( $P > 0.05$ ). Meat thawed out using tap water was more tender and moister than that of room temperature and warm water method. The smell of the meat thawed out using tap water, room temperature and warm water was equally preferred, while thawing using tap water and room temperature made the meats more juicy than that of warm water. In conclusion, tap water thawing showed better organoleptic qualities than the other two thawing methods.

Keywords: meat, thawing, organoleptic, tenderness, texture, smell, and juiciness.

## I. INTRODUCTION

Meats are prone to microbial growth due to excessive level of water content (68%-80%), rich in nitrogen, carbohydrate and minerals. The growth of microbial in meats is affected by several factors, such as temperature, oxygen, pH, and nutritional quality [1].

Meat freezing has been used to inhibit microorganism from growing and to preserve the meats before further usage. The meat freezing has commonly been practiced to extend the shelf life of meats. Even though the method is easy, freezing can be physically and chemically deteriorating to meats. Deterioration not only occurs during freezing but also in thawing.

Thawing of frozen meats before further usage is important to see the extent of physical and structural deterioration of the meat. This then will affect the quality of meat, where good quality of meat plays an important role in producing better quality products. Therefore, research into the effects of thawing on physical and organoleptic in Bali Cattle was conducted.

## II. METHODS

The study was conducted in June 2016 at the laboratory of livestock technology, Faculty of animal science, University of Halu Oleo and the samples were collected from a slaughter house.

Two-year-old pre-rigor Bali cattle were used to collect a 6 kg meat in the area of Longissimus dorsi and os vertebrae lumbalis. The study used completely randomized design (CRD) as recommended by Gazpers (1991), conducted in three treatments and involved 15 trained panelists. The panelists were recruited from the students and alumni of

faculty of animal science, University of Halu Oleo who were interested and previously had background in the science and meat processing technology. The panelists were explained about hedonic test (organoleptic assessment) in order to have the same perception.

The collected meats were treated with the following thawing methods:

**T<sub>1</sub>** = Room temperature thawing (28 – 30 °C)

**T<sub>2</sub>** = Tap water thawing (25 – 27 °C)

**T<sub>3</sub>** = Warm water thawing (60 °C for 15 minutes)

The measured organoleptic characteristics were tenderness, texture, smell, and juiciness. The hedonic scale used is presented in Table 1.

TABLE I  
HEDONIC SCALE OF ORGANOLEPTIC ASSESSMENT

Sensory evaluation	Hedonic Scale	Criteria
Tenderness	1	1. Highly tough
	2	2. Tough
	3	3. Moderately tender
	4	4. Tender
	5	5. Highly tender
Texture	1	1. Too rough
	2	2. rough
	3	3. Moderately rough
	4	4. moist
	5	5. Too moist
Smell	1	1. Highly disliked
	2	2. Disliked
	3	3. Moderately preferred
	4	4. Preferred
	5	5. Highly preferred
Juiciness	1	1. Highly juicy
	2	2. Juicy
	3	3. Moderately juicy
	4	4. Dry
	5	5. Highly dry

Source : Hafid, *et al* [2]; Hafid and Syam [3]

The collected data were then analysed using one-way analysis of variance (ANOVA) and least significant difference (LSD) to find out if there were significant differences among the treatments. Differences among the treatments were considered significant at  $P < 0.05$ .

### III. RESULT AND DISCUSSION

Organoleptic assessment of Bali cattle by using different thawing methods is presented in table 2.

TABLE II  
ORGANOLEPTIC ASSESSMENT OF BALI CATTLE BY DIFFERENT THAWING METHODS

Organoleptic quality	Treatment		
	T1 (room temperature)	T2 (Tap water)	T3 (Warm water)
Tenderness	3,32 ± 0,53	3,55 ± 0,37	3,04 ± 0,79
Texture	3,13 ± 0,41 <sup>a</sup>	3,48 ± 0,30 <sup>b</sup>	2,83 ± 0,48 <sup>c</sup>
Smell	3,28 ± 0,38	3,35 ± 0,50	3,43 ± 0,62
Juiciness	2,69 ± 0,40 <sup>a</sup>	2,64 ± 0,36 <sup>a</sup>	3,19 ± 0,46 <sup>b</sup>

Different superscripts in the same line show significant difference among treatments at  $\alpha 0.05$  ( $P < 0.05$ )

#### Tenderness

Statistical analysis showed that tenderness level was not significantly affected by different thawing methods ( $P < 0.05$ ). The highest mean value of tenderness in the study was found in T2 reaching  $3.55 \pm 0.37$  (tender), followed by T1 and T3 that reached  $3.32 \pm 0.53$  and  $3.04 \pm 0.79$  (moderately tender) (Table 2).

Tenderness and texture of meats might be the major factors to evaluate the quality of the meat. The level of tenderness is varied, depending on the species, order, cattle from the same species, carcass cuts and between muscles as well as the same muscle [1].

#### Texture

Statistical analysis showed that different thawing methods significantly affected the texture of the meat ( $P < 0.05$ ). The LSD test showed that there was a significant difference among the treatments ( $P < 0.05$ ). The highest mean value of texture was  $3.48 \pm 0.30$  (T2) which means moist, and followed by  $3.13 \pm 0.41$  (T1) and  $2.83 \pm 0.48$  (T3) belonging to moderately moist category.

Meats thawed out using room temperature method made the texture moderately moist, while thawing by tap water made the texture increasingly moist. However, the texture became rough when the meats were thawed by warm water. The difference in texture was due to thawing temperature. When meats are exposed to higher thawing temperature, more ATP will be utilized and the process is so quick that the muscle will shrink to high extent, known as rigor shortening process. The high extent of muscles shrinkage will make the texture become rough [4].

#### Smell

Statistical analysis showed that the smell of the meats were not significantly affected by thawing methods ( $P > 0.05$ ). The highest mean value of smell was obtained in T3 attaining  $3.43 \pm 0.62$  (mostly preferred), followed by T2 and T1 that reached  $3.35 \pm 0.50$  and T1  $3.28 \pm 0.38$  (sufficiently liked). Based on color scoring, the smell of the meat in

treatment T1, T2, and T3 showed preferred smell by panelists.

Trantono (2011) reported that the smell of the meat was affected by the types of feed given to the cattle. Abnormal smells will often be generated after the cattle were slaughtered. This may be caused by some abnormalities suffered from the cattle and or the cattle were under medical treatment. The unhealthy cattle, particularly those suffered from acute internal inflammation will generate smelly meat like rancid butter. Meanwhile, cattle treated with antibiotics will generate smell like medicine.

#### Juiciness

Statistical analysis showed that different thawing methods significantly affected the juiciness of the meat. The LSD test showed T1 and T2 were not significantly different ( $P > 0.05$ ), yet T3 was significantly different from T1 and T2. The highest mean value in this study was found in T3 reaching  $3.19 \pm 0.46$  (moderately juicy), and followed by T1 and T2 attaining ( $2.69 \pm 0.40$  and  $2.64 \pm 0.36$  (juicy)).

The mean value of juiciness showed that thawing at room temperature generated moderately juicy meat, while thawing by tap and warm water made the meat quality highly juicy. Soepamo (2009) reported that the juiciness the meat is originated from two factors. The first factor is liquid produced during mastication, and the other factor is saliva produced by flavors such as intramuscular lipid. This occurs during mastication, where the liquid is drawn out as a result of centrifugation and pressure.

### IV. CONCLUSIONS

To sum up, the texture and juiciness of the meats were significantly affected by different thawing methods ( $P < 0.05$ ), but the tenderness and smell were not significantly influenced

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Organoleptic quality	Treatment		
	T1 (room temperature)	T2 (Tap water)	T3 (Warm water)
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Different superscripts in the same line show significant difference among treatments at  $\alpha$  0.05 (P<0.05)

# Effect Of Different Types Of Containers To Growth Rate And Survival Rate Of Manggabai (*Glossogobius Giuris*)

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**Abstract.** The aims of research to review determine growth and survival of fish Living Manggabai (*Glossogobius giuris*) are maintained at different types of containers. The method used is a method of experimental research with complete random design (RAL). The treatment of consists from differences of containers and each treatment consists of three replicates. The Treatment consists of two types of container treatment is an aquarium and a concrete pool. The research variables consisted of the growth and survival of test animals. Test animals used were Manggabai fish measuring  $\pm 10$  cm to 60 head. Maintenance is carried out for five weeks to determine the growth of test animals. Data were analysed using descriptive analysis of the data length and weight growth during maintenance test animals. The results showed that the weight gain and the highest length obtained at treatment by using an aquarium container, whereas the lowest in concrete tank containers. Length and weight maintenance long aquarium containers 0.47 cm and weight of between 0.37 gram. The length and weight of the concrete maintenance of tank containers, which is 0.27 cm length and weight of 12.16 gr.

Keywords: Aquarium, concrete pool, Manggabai, Growth Rate, Survival Rate

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## I. INTRODUCTION

Fish Manggabai (*Glossogobius giuris*) is one type of fish consumed by many people in Gorontalo. The price of fish Manggabai (*G. giuris*) in Gorontalo is quite high when compared to other types of freshwater fish. This is due to low number of catches in the Limboto Lake as prime fish habitat Manggabai (*G. giuris*). The fishing communities in the area of Lake Limboto today reported a decline in the productivity of fisheries in the waters of Limboto Lake. The survey showed a continuing lack of fish populations and species of fish endemic to the lake Limboto.

Based on data from the Department of Marine Capture Fisheries, stated that the number of fish caught Manggabai in Gorontalo 3 years preceding the year in 2011 reached 84.70 tons / year, in 2013 reached 19 tons / year, and in 2015, at only 13, 6 tons / year. The number and size of fish Manggabai are getting lower due to changes in water quality in the Limboto Lake. In addition, the area of the lake silting and shrinking habitat dependent Limboto Lake cause so feared Manggabai fish populations will become extinct. This happens because the quality of the waters of the lake as a natural habitat Limboto Lake damaged.

Habitat is one factor that is quite important for the sustainability of aquaculture commodities. One attempt to do to overcome the natural habitat destruction is to perform controlled cultivation or make natural commodity into a commodity cultivation. This can also be done to avoid the extinction of endemic organisms that exist in a natural habitat such as Limboto Lake.

Fish Manggabai as endemic commodities contained in the waters of the Limboto Lake will become extinct if no prevention as early as possible. One of the activities that can be done is fish farming Manggabai using controlled container maintenance. Maintenance container used to represent the characteristics of the natural habitat that can support the needs of living organisms cultivation. Fish Manggabai is still obtained naturally in the lake Limboto, so that the necessary research that can be used to support the fish farming Manggabai. This leads to the need for research on the type of container that is suitable for pisciculture Manggabai controlled manner.

## II. METHODS

The tools used in the research are container maintenance, analytical balance, water quality checker, blowers, aeration hose, faucet aeration, aeration stone. Materials used during the research that fish seed Manggabai, silk worm, pellet F-189, and freshwater. The container used in the study is the aquarium container and concrete ponds each with three containers.

The study was an experiment with completely randomized design (CRD) consisting of two treatments and three replications of each treatment. The treatment in question is the maintenance by using a different container, the aquarium and concrete tanks. Maintenance container used has a size of 70 x 40 x 40 cm consists of three aquariums and three concrete tanks.

Seeds were used in this study is Manggabai fish seeds derived from a number of arrests in the lake Limboto tail length of  $600 \pm 10$  cm and a weight of  $\pm 40$  grams per fish. Stocking density of fish as much as 1 fish / L. Feeding is given as much as 5% of the weight of the biomass by feeding frequency 2 times a day ie morning and afternoon.

Maintenance of fish seed Manggabai conducted for 5 weeks. Measurement of the length and weighing of fish seed Manggabai done by sampling technique is to take a fish sample 20% of the total number of seeds in each container and is done once a week. Water quality measurements carried out every week and the observed parameters such as temperature, pH, and DO.

### Research variables

#### Absolute growth

The growth rate of fish seed Manggabai measured in this study is the absolute length growth and absolute weight of fish seed Manggabai.

##### a. Absolute Length Growth

Calculation of absolute length growth of fish seed Manggabai according Effendie [1] in Tarigan (2014) are as follows:

$$L = L_t - L_o$$

Information:

$L_t$  = length of fish at time t (cm)

$L_o$  = length of fish baseline (cm)

##### b. Weight Absolute Growth

Calculation of absolute weight gain of fish seed Manggabai according Effendie [1] in Tarigan (2014) are as follows:

$$W = W_t - W_o$$

Information:

$W$  = weight gain of fish seed (gr)

$W_t$  = weight of fish seed time to the end-t (g)

$W_o$  = Initial weight of fish seed (gr)

#### Survival Rate

Survival, or the survival rate (SR) is the percentage of organisms that live at the end of a certain time. Calculation formula according Goddaard survival rate (1996) in Tarin [2] are as follows:

$$SR = \frac{N_t}{N_o} \times 100\%$$

Information:

SR = Survival Rate (%)

$N_t$  = Number of fish at all t (tail)

$N_o$  = number of fish baseline (tail)

#### Data analysis

Data obtained include absolute growth, daily growth, specific growth rate and survival of fish seed Manggabai analyzed using descriptive analysis and shown in the graph. The analyzed data is data length and weight of absolute growth and survival of fish seed Manggabai maintained for five weeks.

## III. RESULT AND DISCUSSION

Growth is increase the length, weight, and volume within a specified time. Growth can be used as an indicator to see the physiological condition of individuals or populations. Absolute growth consists of two, such as growth in length and weight growth.

#### Absolute Length Growth

Absolute length growth on the seed Manggabai fish reared in aquariums and ponds concrete for five weeks shows that the highest growth in length obtained in maintenance, using an aquarium container. While the fish seed Manggabai that use container maintenance of concrete pools generate long lower growth. Value growth in the absolute length of the aquarium fish seed Manggabai and concrete pool can be seen in Figure 1.

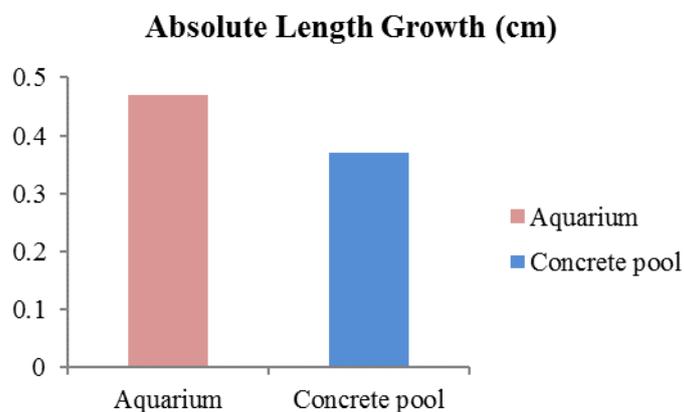


Fig. 1 Growth Absolute Length Fish Seed Manggabai

#### Weight Absolute Growth

The results of the measurement of absolute weight gain showed that seed Manggabai fish reared at the aquarium container is higher than the seeds are kept in a concrete pool These results suggest that heavy growth is influenced by different types of container maintenance. Value absolute gain in the second container can be seen in Figure 2.

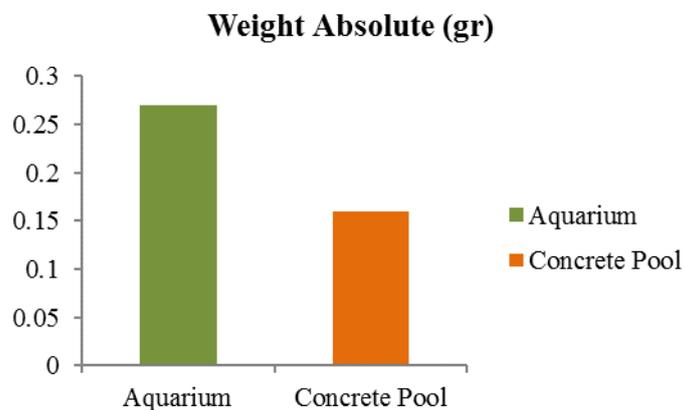


Fig. 2 Added weight Absolute Fish Seed Manggabai

The container used in the maintenance of the organism is the replacement for the environment or the natural habitat of an organism. Maintenance container type used affects the growth and survival of an organism. Different types of containers will also affect the quality of the environment in a living organism.

Container maintenance will also affect the space, thereby reducing the fish to obtain the feed. Feed shortage will slow the growth rate of the fish and also a space for outside factors that affect the rate of growth, with ample movement space fish can move optimally. This opinion is in accordance with the opinion of Grace (2010), said that the artificial container will restrict fishing to obtain food because it depends on the feed given, so it will affect the growth rate of the fish.

Feed is one of the factors that play a role in the growth of fish Manggabai. The more varied and high nutrient content of feed would be good for the growth of fish. According Noegroho (2000) in Syamsunarno (2008), protein plays an important role in the preparation of tissues and organs of animals, including fish. In the feed given to fish, protein should be available in sufficient quantities. Low level of protein feed which will lead to growth to be slow.

### Survival Rate

Fish survival is a percentage of the number of fish that live on the number of fish that are kept in a container. Survival demonstrated by mortality (death). After doing research, data showed an average survival rate of fish seed Manggabai presented in Figure 3.

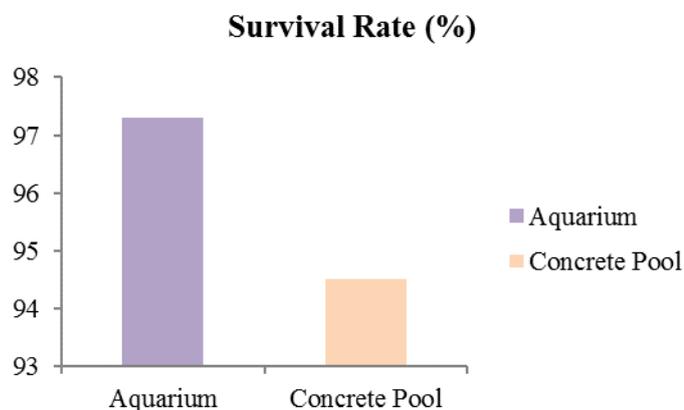


Fig. 3 Survival Rate of Fish Seed Manggabai

In this figure, it appears that the percentage of seed survival rate of fish Manggabai are maintained on the container which provides distinct survival value. Survival may be influenced by the content of available habitat and feed on habitat or container maintenance. One effort to overcome the low survival rate that is by maintaining the seeds in appropriate containers and also pay attention to proper feeding both in size, quantity and nutritional value of the food that will be given during the maintenance process (Wijayanti, 2010).

Based on the pictures can be concluded that the highest survival rate obtained in maintenance, using an aquarium that is equal to 97.3%, while the concrete tank container

survival by 94.5%. Kind of container will influential on the growth and survival. This is because the container can affect the availability of feed naturally. In a controlled container maintenance or artificial feeding can not be obtained naturally, but must come from feed given during the maintenance process takes place.

Mudjiman (2000) in Suhenda et al (2003) which states that feed that have good nutrition plays an important role in maintaining the viability and accelerate the growth of the fish. In addition, the feeding does not spoil the quality of water and do not leave food remains such as the provision of pellets, the pellets granting media faster dirty water conservancy. This is in accordance with the opinion of Ward (1985) in Hutasoit (2014) which states that the survival rate of fish seed of life is largely determined by the quality of the water. During maintenance death occurred a few fish on all treatments, it is more common in the first week to the second week of maintenance, allegedly because the fish have not been able to adapt to the new container maintenance.

### Water quality

Water quality is a very important factor in fish farming because it is required as a medium of life. Results of water quality measurements during maintenance Manggabai fish seed can be seen in Table I.

TABLE I  
WATER QUALITY MAINTENANCE ON CONTAINERS

Treatment	Parameter		
	Temperature (°C)	pH	DO
Aquarium	26,83 – 26,93	7,17 – 7,22	6,00 – 6,45
Concrete Container	26,85 – 27,19	7,18 – 7,41	5,55 – 6,04

Several environmental factors in the water that affect the lives of fish, among others, temperature, acidity (pH), dissolved oxygen (DO) and others. The water temperature during the study ranged from 26-27 °C. It shows that the media in accordance with the opinion Djokosetiyanto maintenance, et al (2005), which states that the water temperature is good for culture Manggabai range between 26-30 °C. The relationship between the temperature of the fish growth by Huet (1971) in Syamsunarno (2008) that is the growth of small or nonexistent below a certain temperature (20 °C). Further growth increases with increasing temperature until it reaches the maximum point (30 °C), and decreased again or even become negative (lethal) at temperatures above the maximum point (33 °C). In general, the magnitude of the pH of water to be used as a medium for the maintenance of fish seed Manggabai must correspond to their natural habitat in the wild, which is between 6.5 to 8.5 (BSN, 2009). Non-compliance with the terms of living water pH Manggabai fish seed will result in the development and growth is not optimal. Based on the results of measurements of pH of water during the study ranged from 7 to 7.5, a pH range of water during the study strongly supports the growth of fish fry fish Manggabai.

Besides these two factors the temperature and pH of the water above, oxygen is an important element in the life of the organism. Oxygen in the water is called dissolved

oxygen (DO). From the measurement results of dissolved oxygen values in media studies ranged from 5.5 to 6.5 mg / l. Rise and fall of the soluble oxygen value associated with the value of the water temperature. The range of dissolved oxygen in the above, the present study is still worthy of media in supporting the growth of fish seed Manggabai. According Djokosetiyanto (2005) that the dissolved oxygen content both for maintenance (maintenance) fish Manggabai above 3 ppm.

#### IV. CONCLUSION

Based on the results of research on the growth and survival of fish fry Manggabai (*G. giuris*) are maintained on a different container, it can be concluded that:

1. Growth and Survival of fish seed Manggabai maintained at different container types show different results.
2. Growth of the length and the highest weight obtained on aquarium maintenance, using a container that is equal to 00:47 and 12:37 gr cm. While the length and weight of the lowest growth in container maintenance obtained using concrete tanks are 0:37 and 0:16 gr cm.
3. Survival of the highest obtained at the aquarium container that is equal to 97.3%, while the lowest was obtained on a concrete tank container that is equal to 94.5%

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# Study of Minimum Wage, Level of Education, Employment Opportunity, and Unemployment Educated : Empirical Study in Padang

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**Anstract.** Unemployment may occur as a result of the high rate of change in the labor force that is not offset by sufficient jobs and labor absorption that a little, which is due to the low rate of growth in job creation to accommodate workers who are ready to work. In other words, in the labor market, the number of labor supply is higher than the amount of labor demand. This article analyzes the effect of the minimum wage, education, and employment opportunity toward unemployed educated in the city of Padang. The data used is secondary data obtained from the BPS, Padang dalam angka, Susenas, and other institutions that are linked from 2001 - 2015. Data were analyzed using multiple regression models with SPSS data processing. And this model is free from classical assumptions. The results obtained showed that the level of education that is reflected by graduates of bachelor significantly and positively affect the level of educated unemployment, means if more and more of labor force who successfully completed their education, so the educated unemployment is increasing. The minimum wage is a significant and negative effect on unemployment of educated, meaning that if minimum wage is high, the unemployment lower. While employment opportunity has no significant effect.

**Keywords :** labor force, unemployment educated, minimum wage, level of education, employment opportunity

## I. Introduction

Unemployment is a situation where a person who included the labor force wants to get a job but they have not been able to obtain the job (Prasetyadewi, 2013). While the educated unemployed is someone who has passed the education and want to get a job but can not get it. Unemployment educated usually from upper-income groups that allow their guaranteed survival although unemployed. unemployment educated in the city of Padang showed a fluctuating and tends to increase in the years 2012-2015, and showed a drastic decline in 2002 to 2003. This is very encouraging, but implies a question mark to know how the reality of the situation (Table 1). Educated unemployment be related with problems of education in developing countries in general, among others revolves around the issue of quality of education, the readiness of educators, facilities and public opinion. In developing societies, education prepared as a means of enhancing welfare through the utilization of available job opportunities.

The main causes of educated unemployment is educational development unplanned and development of jobs that do not correspond with their majors, so that the graduates are not absorbed into the existing employment. In fact educational institutions in Indonesia only produces job seekers is not the creator of the work (Elwin, Tobing, 2004). Meanwhile, according to BPS (2008) that the rate of unemployment is a measure that indicates how much of the total labor force who are actively looking for a job.

**Table 1**

**The Number of Educated Unemployment in City of Padang In 2001-2015**

Year	Unemployment Educated (person)
2001	250.860
2002	261.372
2003	40.472
2004	28.410
2005	21.324
2006	23.706
2007	26.628
2008	31.118
2009	31.786
2010	32.373
2011	61.064
2012	35.436
2013	45.243
2014	40.526
2015	42.499

Source : BPS and Susenas (2001-2015)

One alternative being done to reduce unemployment is to improve the quality of human resources by improving education, the provincial minimum wage policy and employment opportunity. The many negative effects of unemployment such as increased crime in each area, that encourage the region to improve the education of its citizens both formal and informal education. A good education is expected to produce good human resources as well. But in reality today, education is also considered to be closely related to unemployment, especially unemployment of educated labor. There is tendency for the increasing levels

of education will result in increased unemployment educated labor force rather than an increase in labor productivity which has an accordance productivity with the needs of the working world.

## II. Materials and Method

Unemployment educated in developing countries are generally in young age and educated, and tend to be more concentrated in cities than in villages. They are mostly workers who just completed his education and is waiting to get a job that matches their aspirations. During the wait for the desired job, their living costs are borne by the family are relatively rich. This implies that the unemployment problem in developing countries is less related to poverty.

Education reflects the level of intelligence or skill that I owned, where the higher one's education, the higher the ability to work or one's productivity at work. Improving the quality of human resources through education graduates is expected to reduce the unemployment rate, assuming the availability of employment opportunity. In general, to work in prestigious place require people with a qualified workforce, professional and intelligent so as to carry out tasks effectively and efficiently (Anggun Kembar Sari, 2011).

Workforce educated generally have higher labor productivity than non-educated workforce. Labor productivity are basically reflected in the wage rate, for each job opening is generally always associated with education level requirements for candidates who will fill it. The supply of educated labor force must go through the school system a long time, therefore, the elasticity of supply of educated workers usually smaller than the supply of uneducated workers.

The participation rate of skilled manpower higher than uneducated workforce. Educated workers typically come from families more affluent, who send their children to study undergraduate program (S1). The otherwise the labor of poor families generally can not afford to continue their education and are forced to seek employment after completing basic or secondary education (Sidabutar, 2016). The basic assumption of human capital theory is that a person can increase their incomes by improving education, every additional of school one year, on the one hand improve the work ability and the level of a person's income, but on the other hand delayed acceptance of the income for a year because attend the school and wished to increase revenue by improving education (Simanjuntak, 2001).

One of the factors that influence unemployment is wages. Wages is a problem that is quite interesting because most of the existing unemployed prefer to work in the informal sector to make ends meet (although still looking for a job with better wages), rather than be forced to work in the formal sector at minimum wage. So it does not mean jobs are not available, but information from the employment opportunity is a little so it is difficult to find a job with wages appropriate even though an understanding of the appropriate wage is relative to current needs (Utomo et al, 2006).

The relationship between wage to unemployment expressed by Bruce E Kauffman and Julie L Hotckchkiss (2013), Agustina Chandra Dewi (2010) problem that touches directly the workers is the low income earned, which is not

in accordance with subsistence. The necessities of life is increasing, while the wages received little or under the Provincial Minimum Wage (UMP).

The wage rate is an important element affect the lives of workers due to wage a source of income to meet the needs of workers and their families living either in the form of clothing, food, housing and other needs. If wages are set in an area is too low it will result in higher unemployment in the region (Kurniawan, 2013).

The minimum wage is an acceptance of the lowest monthly from entrepreneurs who are given to employees for employment or services that have been or done or declared or assessed in money terms are set on the basis of an agreement or legislation and are paid on the basis of a agreements between employers and employees including benefits, both employees and their families. Provincial Minimum Wage (UMP) is the minimum wage that applies to all regencies / cities of a province. The minimum wage is set annually by the Governor upon the recommendation of the Commission and the Social Security Wage Research Council of Local Employment (now the Provincial Wage Council).

The Phillips curve illustrates the character of the relationship between the rate of wage increase with the unemployment rate, or between the price level to the level of unemployment, proposed in 1958 by A.W. Phillips, who at the time was a professor at the London School of Economics, published a study on the characteristics of changes in the level of wages in the UK. The study looked at the nature of the relationship between the unemployment rate and rising wages. The conclusion of the study is: there is a negative correlation properties (reversed) between rising wages with unemployment rate. On when the unemployment rate is high, the percentage increase in the wage rate is low and if the unemployment rate is low, the percentage increase in the wage rate is high (Philips, 1958 cit Mankiw, 2000).

Employment opportunities is a situation where all workers who want to work at a certain wage level will easily get employment. Meanwhile, according to (Sumarsono, 2003) defines that employment is employment that is already occupied (employment) and there are still vacancies.

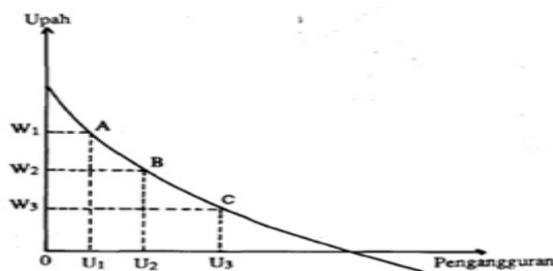


Figure 1. Phillips Curve

The large population resulted in less employment opportunities. The amount big of population with the ability can increase productivity and create new jobs, but if the large number of people who have not skills and ability can inhibit employment opportunities and can be cause unemployment. The population that many are not accompanied by enough employment opportunities will

cause a lot of people who are not accommodated in the work world or jobless.

Model of multiple linear regression equation is as follows:

$$UE = \alpha + b_1W + b_2G + b_3EO + e$$

Where:

UE = Unemployment Educated (person)

MW = Minimum Wage (Rupiah)

G = Graduation

EO = Employment Opportunity

$\alpha$  = Constanta ( Y if  $X_1, X_2, X_3 = 0$ )

b = Coeffisien regresion

e = eror term

Meanwhile, to measure the elasticity of dependent variable on the independent variable is to show the percentage change in the independent variable, then formed logarithm as follows:

$$\log UE = \alpha + b_1 \log W + b_2 \log G + b_3 \log EO + e$$

Where :

Log UE = Elasticity of Educated Unemployment

$\alpha$  = Constant

b1 = Elasticity of Provincial Minimum Wage

W = Minimum Wage

b2 = Elasticity of Education Graduate degree

G = Education Graduates

b3 = Elasticity of Employment Opportunities

EO = Employment Opportunity

e = Error term

### III. Result and Discussion

Before the regression analysis, it first has performed classical assumption. Where the overall of model of this free from the problems of the classical assumption test, such as

**Table 2**  
**Result of Normality Test**

Jarque-Bera	2.264261
Probability	0,322346

Source : From Analysis with Eviews 8

From analysis obtained probability value of 0.32, indicating that the probability > alpha, that is  $0.32 > 0.05$ , meaning that the data contained in this study normal distribution. Furthermore, the multicollinearity test, its results showed the following:

**Table 3**  
**Result of Multikolinearity Test**

	LG	LW	LEO
LG	1.000000	-0.009516	-0.587734
LW	-0.009517	1.000000	-0.185531
LEO	-0.588734	-0.185531	1.000000

Source : From analysis with Eviews 8

Based on the results of this Multicollinearity test, it can be seen that the correlation coefficient (r) is smaller than 0.80 (Coefficient and Correlation <0.80) whereas Rule of Thumbs said problem of multicollinearity occurs when the coefficient between independent variables greater than 0.80. So with this we can concluded that all independent variables used in this study has been free from multicollinearity problems.

**Table 4**  
**Result of Heteroskedastisitay Test**

Heteroskedasticity Test: *White*

F-statistic	1.519374	Pron. F(3,11)	0.3360
Obs*R-squared	10.98380	Prob. Chi-square	0.2768
Scaled explained	7.426975		0.5928

Source : From Analysis with Eviews 8

In Table 4 above shows if the probability > 0.05 then H0 is accepted and Ha rejected, but if the probability <0.05 then H0 rejected and Ha accepted. On the table shows that the probability obs \* R-squared produced is 0.27. These results indicate that the probability value  $0.27 > 0.05$  so that it can be concluded that all the variables that formed in the regression model has been free of symptoms heteroskedastisitas.

Based on the results of autocorrelation test that has been done shows that the value of DW generated 1.804528, this indicates that the value of the coefficient DW has in between  $-2 < 1.804 < 2$  so that it can be concluded that in this study did not happen autocorrelation is negative or positive

**Table 5**  
**Result of Autokorelasy Test**

Durbin-watson stat	1.804528
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Source : From Analysis with Eviews 8

Further analysis can be performed multiple linear regression model with the results:

Dependent Variable : LUE

Method: Least Squares

Date: 12/26/16 Time: 10:21

Sample: 2001 2015

Included observation: 15

Variable	Coefficient	Std Error	t-statistic	Prob
C	5.187613	4.882954	1.062392	0.3108
LG	1.384355	0.268100	5.163575	0.0003
LW	-0.646271	0.179356	-3.603281	0.0041
LEO	0.053284	0.053284	0.231021	0.8215
R-squared	0.831295	Mean dependent var		10.70529
Adj R-squared	0.785285	SD depent var		0.757944
SE of regression	0.351211	Akaike into criterion		0.968320
Sum square resid	1.356842	Schwarz criterion		1.157133
Log likelihood	-3.262399	Hannan-Quinn criter		0.966309
F-statistic	18.06757	Durbin-Watson stat		1.804528
Prob (F-statistic)	0.000147			

Can be formed into a multiple linear regression model as follows:

$$LPT = C + LG - LW + LEO + e$$

$$LPT = 5.187613 + 1.384355 LG - 0.646271 LW + 0.053284 LEO + e$$

From the regression results above were Obtained by 5.187613 constant value that indicates if the independent variable Graduate degree, wage, and employment opportunity is zero then unemployed educated amounted to 5.187613. From regression coefficients obtained variable of Graduate degree positive value of 1.384355 pales education graduates rose by 1 percent, the number of unemployed educated in Padang City will increase by 1.384355 percent. This means that the higher the level of education graduates tend to increase the educated unemployed in the city of Padang with assumption of *ceteris paribus*. Where the high level of bachelor graduates was not followed for employment opportunity. Furthermore, the results of the regression coefficient is negative minimum provincial wage of -0.646271, meaning that if the minimum wage increased by 100 rupiah, the number of educated unemployment fell by 0.646271. If wages are set in an area is too low it will result in high levels of unemployment that occurred in the area (Pratomo and Saputra, 2011). And the results of regression coefficient of Employment opportunity positive value 0.053284, meaning that if employment opportunity rose by 1 percent, the educated unemployment rose by 0.053284. This means that the high employment opportunity tends to increase the educated unemployed in the city of Padang with assumption of *ceteris paribus*. This occurs because there is employment opportunities that unwanted of graduate, so do not reduce unemployment educated, even increase it. For these variables showed significant results, which means that unemployed educated in Padang city can not be absorbed by the employment opportunities available.

#### IV. Conclusion

The results of this study can be concluded that variable of minimum wages and education levels have a significant effect on the unemployment rate of educated, where the level of education that is represented by graduate bachelor positive sign which means that if graduates increases, the rate of educated unemployment will increase. As well as wages have opposite direction (negative slop) which means that if the minimum wage increases, the rate of educated unemployment will be reduced. While variable of employment opportunity showed insignificant results, which means employment in Padang city can not absorb the educated unemployment rate in the city.

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# STUDY POPULATION WITH GROWTH ALLOMETRI AND CONDITIONS INDEX FISH OF KURAU (*Polynemus taeniatus*) ACQUIRED IN BUNYU ISLAND WATERS, NORTH BORNEO

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**ABSTRACT.** Research purposes is analyzing comparison the sexes *P. taeniatus* based on the number of the catch and weights fish catch jarring gills drifting (drift gill net). Analyzing population growth in a *P.taeniatus*. Analyzing the population uses the index condition *P.taeniatus*. The research was conducted over 3 months from november 2016 until january 2017. The sample was conducted by following fishermen jarring gills drifting (drift gill net) catch *P.taeniatus* in the waters off bunyu Borneo North. The methodology in use the research is the methodology descriptive kuantatif with a case study. The determination of the use of sampling purposive. The location is done follow the sample fishermen jarring gills drifting (drift gill net) the fishing kurau (*P.taeniatus*) in the vicinity of waters off bunyu district bulungan Borneo Northern province. Technique data collection use design research survey. Fish catch that derived from fish catch jarring gills drift (Drift gill net) kabupaten bulungan the province North of Borneo. The samples from 4 times during the three months. The results of the study about comparison the ratio sex fish kurau male and female of 1: 3.6. Growth use the model linear regression relations long heavy fish kurau male and female kurau fish or the same result that is having the nature of growth allometri negative. Index value condition fish kurau male the average the form of the body most on the form of a thin body, while index value condition fish kurau female the average the form of the body most on the form of obesity.

**Keywords:** Growth of Population, Condition Index, Fish of Kurau, *Polynemus taeniatus*, Bunyu Waters

## 1. Introduction

Introduction indonesia has a very wide waters being yet in use maximally resources biological the sea enough abounding .Waters bunyu is waters which borders directly and open to the sea sulawesi and waters freshwater bring sediment/element hara derived from the mainland borneo north. A meeting between the sea sulawesi and waters freshwater (bring sediment /element hara) was is the feeding ground so to cause the presence of the food chain a high. Many the food chain was producing areas the type of a species resources biological sea like fish selangi, fish beronang, red snapper, fish otek, shark machete, fish mackerel and fish kurau. Fish kurau is the type of species of herring which has big size compared to other fish. Size fish kurau can reach 147 cm with gravity of about 42,8 kg (Kelen, 2017).

These fishes have teeth a sharp increase so that this fish in familiar with carnivorous fish. Fish kurau is an appellation in know by the community on the island of bunyu and the city of Tarakan, commonly of fish kurau in get by the community fishermen in know with a get jarring gills drift. The language of science / transcription of fish kurau namely *polynemus taeniatus* (Guther, 1860). The results of the interviews to research this to fishermen drift gill net (jarring gills drift) that fish kurau is the catch main, where the survey in the field in november 2016 stated that instrument get jarring gills drift used almost more than 50 percent of is the catch main fish kurau (*Polynemus taeniatus*). Advanced the interview said that the call kurau having economic values quite high because fish kurau is one of resources of the sea having

the value the market price of meat is approximately Rp.125,000-150,000 every kilogram. In addition from the flesh of kurau, fish kurau having economic value those in the part of the stomach fish kurau/ose. Ose it is part of the bubbles its belly kurau who having the price are high about Rp. 5.2 million heavy dry every kilogram. The big potential kurau fish species *P. taeniatus* especially in matters research , causing the lack of information, science on the kurau especially in matters study uses the population growth and index the condition of fish kurau (*P. taeniatus*) derived of the catch use jarring gills drift (drift gill net) derived from waters bunyu kabupaten bulungan borneo north.

The aim Research is:

1. Analyze comparison the ratio sex fish kurau (*P. taeniatus*) based on the number of the catch and weights the catch fishermen jarring gills drift ( drift gill net).
2. Analyze uses the population growth fish kurau (*P. taeniatus*).
3. Analyze population uses the index condition fish kurau (*P. taeniatus*).

## 2 .Methodology

### Time and place

This study conducted in 3 months from november 2016 until january 2017. The sample was conducted by following fishermen jarring gills drifting (drift gill net) the fishing kurau (*P. taeniatus*) in the waters off bunyu borneo north.

### Tools and materials

Tool used the stationery , GPS (Ground Position System), the meter, weight, digital camera. Material used to research it is all sample kurau fish (*P. taeniatus*) found in waters bunyu district bulungan borneo northern province .

### The methodology

The methodology in use the research is the methodology descriptive kuantatif with a case study.

### Procedure research

The determine locations the sample of the use of sampling purposive. The determination of location is the sample collection done follow fishermen jarring gills drift (drift gill net) who catch fish kurau (*P. taeniatus*) in the vicinity of the waters bunyu

kabupaten bulungan the province north borneo. Design research technique data collection use design research survey. Fish catch that derived from fish catch jarring gills drift (drift gill net) kabupaten bulungan the province north borneo. The samples from 4 (times during the three months). The sample collection done by following fishermen jarring gills drift (drift gill net). Each sample taking having susceptible time between 2 to 5 days in waters bunyu, kabupaten bulungan , north borneo. Fish out of get use jarring gills drift (drift gill net), in measuring length and weight. The data in extract of a length of fish kurau (*P. taeniatus*) and weight of fish kurau (*P. taeniatus*).

### Data analysis

#### Growth allometry (relations lenght and weight)

Growth allometry is growth that explains comprehensively about the population of the species of the biota with fish kurau manner of using a method of the relationship between the length fish kurau (*P. taeniatus*) and weight of fish kurau (*P. taeniatus*). Growth allometri data obtained in the form of the value of the lenght and weight value for analysis population growth overall is representing (estimate = approximate), where the use of relationship model lenght fish kurau and weight of fish kurau reference to a method of Effendie ( 1979 ) that is formulated as follows:

$$Y = a + X^b \quad \text{or} \quad \text{Log } Y = \text{Log } a + b \text{ Log } X$$

Description :

Y	=	Weight fish of kurau ( <i>P. taeniatus</i> ) (gram)
X	=	Lenght fish of kurau ( <i>P. taeniatus</i> ) (mm)
a+b	=	Constant (intercep)

According to effendi ( 1979 ) of the growth between lenght and weight of calculation use test a correlation coefficient. Santoso (2001) , stated that to know different or not value b with 3, of the equation relations long to the weight of to continue by test t (test ) , where the value of b this illustrates of the nature of growth fish.

Value b was also is the coefficients allometrik that reflect the relative growth . If the b = 3 growth will called isometry namely growth

length equal (proportional) with weight growth. While if value  $b < 3$  (allometrik negative) or value  $b > 3$  (allometrik positive and growth length not in the same proportion by weight growth.

**Index conditions ( growth individual according to the form the body)**

According to Salim (2016) explained that the condition is a figure nominal having meaning of a growing condition one individual look at of the form of a fish kurau (*P. taeniatus*) good shape of the body of very thin, the shape of a fish bony, the shape of a fish proportionate, a body fat fish, anatomy a very fat. The value of the index refer to data on allometri model growth based on growth obtained there are two the model allometri growth and growth isometry . The formula used different from the results obtained model growth , grew allometri uses the method developed in use by Weatherley ( 1972) and growth isometry using methods used by lagler ( 1961 ) in effendi ( 1979 ). According to lagler (1961) in effendie (1979) to know the condition of fish with the nature of its growth isometric namely :

$k$  = in the metric system , long in ( mm ) and heavy in ( gram ) , the formula as follows

$$K_{(TI)} = 10^5 \times \frac{W}{L^3}$$

Description :  $W$  = Weight fish kurau (*Polynemus taeniatus*) (gram)

$L$  = Length fish kurau (*Polynemus taeniatus*) (mm)

$10^5$  = rumus  $K_{(TI)}$   
Approaching a price.

According to weatherley ( 1972 ) to achieve know factors condition fish with of the nature of its growth  $\hat{w}$  rik namely by method as follows :

$$K_n = \frac{W}{L^3}$$

Description :  $W$  = Weight fish of kurau (*Polynemus taeniatus*) (gram)

$\hat{w}$  = Heavy fish conjecture from fish of kurau (*Polynemus taeniatus*) (gram)

$\hat{w}$  = ( $W = a L^b$  model regression from relationship weight and length).

**The results and discussion**

**1 .The ratio sex fish kurau (P. taeniatus)**

The research fish kurau (*P. taeniatus*) based on the results of fish catch jarring gills drift (drift gill net) in waters bunyu kabupaten bulungan, borneo north, can be present in table 1 under this:

table 1 .Fish catch kurau (*P. taeniatus*)

No	Research	Weight (kg)	Length (cm)	Male	Female
1	Week 1	8.6	57 cm		<input type="checkbox"/>
2	Week 1	7.7	76.8 cm	<input type="checkbox"/>	
3	Week 1	8	79.4 cm		<input type="checkbox"/>
4	Week 1	6.9	65,7 cm		<input type="checkbox"/>
5	Week 1	22.9	126 cm		<input type="checkbox"/>
6	Week 1	13.9	70,3 cm	<input type="checkbox"/>	
7	Week 2	20.6	110 cm	<input type="checkbox"/>	
8	Week 3	8.5	80,7 cm	<input type="checkbox"/>	
9	Week 3	8.8	78,6 cm		<input type="checkbox"/>
10	Week 3	15.7	113 cm		<input type="checkbox"/>
11	Week 3	15.9	118 cm	<input type="checkbox"/>	
12	Week 3	42.8	147 cm		<input type="checkbox"/>
13	Week 3	10	145 cm		<input type="checkbox"/>
14	Week 3	5	90,8 cm		<input type="checkbox"/>
15	Week 3	12.8	90,6 cm		<input type="checkbox"/>
16	Week 3	14	90,9 cm		<input type="checkbox"/>
17	Week 4	19.6	126 cm		<input type="checkbox"/>
18	Week 4	16.5	116 cm		<input type="checkbox"/>
19	Week 4	23	132 cm		<input type="checkbox"/>

The result of this research describing on the ratio of sex of fish kurau (*P. taeniatus*) found based on the catch fishers from using jarring gills drift (drift gill net) done as many as 4 times the sample collection to field in the areas of waters island bunyu kabupaten bulungan borneo north. Fish kurau found during the sample collection obtained various sizes whether length

or weight kurau fish. Fish kurau (*P. taeniatus*) having the long range total from the smallest by 57 cm to length of the highest about 147 cm with an average length of fish kurau range  $102 \pm 45$  cm. Besides that of the result of this research obtained the range weight of fish kurau smallest which is about 5kg and weight of highest about 42,8kg with an average weight of fish kurau range  $23.9 \pm 18.9$  kg.

The results of research kurau fish of the catch fishermen in fish kurau get as many as 5 a tail with sex male and as many as 14 a tail with a female sexes (see figure 2) with the percentage to fish kurau the type of male sex as much as 26,32 % and the percentage for fish kurau sexes female 73,68 % as much as, by comparison the

ratio of sex between a male fish and a female fish as much as 1 : 3.6.

Fish kurau female on would expect more in catch because out of fish catch using jarring gills drift (drift gill net) due to allegedly of female fish does not have a aggressive while a male fish are aggressive so when jarring gills fishermen started off, would expect in a male fish easy to menghidar of jarring. It is in the form of thought because the body of fish from our observation physical outward form kurau fish, the average male kurau fish that are caught having the form of a body that slender bony / elongated and the average female kurau fish that are caught having a body round and short / fat.

**Rasio Kelamin Ikan Kurau (*Polynemus taeniatus*)**

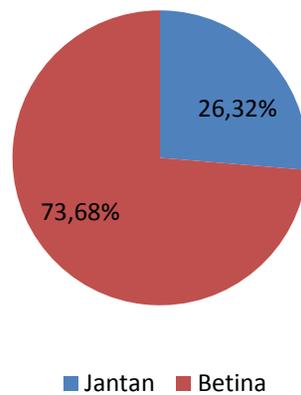


Figure 1 .The ratio sex fish kurau ( *polynemus taeniatus* )

**Rasio Kelamin Berdasarkan Jumlah Hasil Tangkapan Ikan Kurau (*Polynemus taeniatus*)**

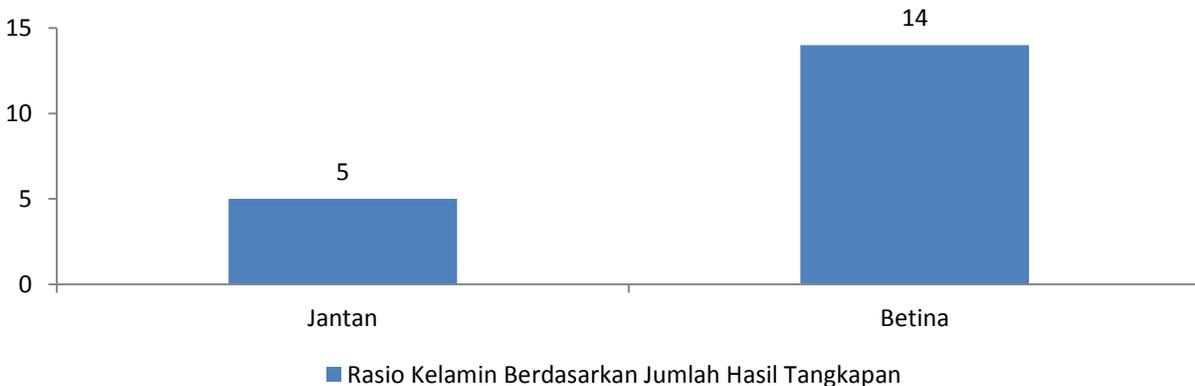


Figure 2 .The ratio of sex based on the number of fish catch kurau ( *polynemus taeniatus* )

### Rasio Kelamin Berdasarkan Bobot Ikan Kurau (*Polynemus taeniatus*)

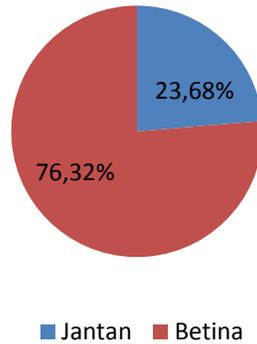


Figure 3 .The ratio of sex based on the weighting of fish kurau ( to polynemus taeniatus )

### Jumlah Bobot Hasil Tangkapan Ikan Kurau (*Polynemus taeniatus*)

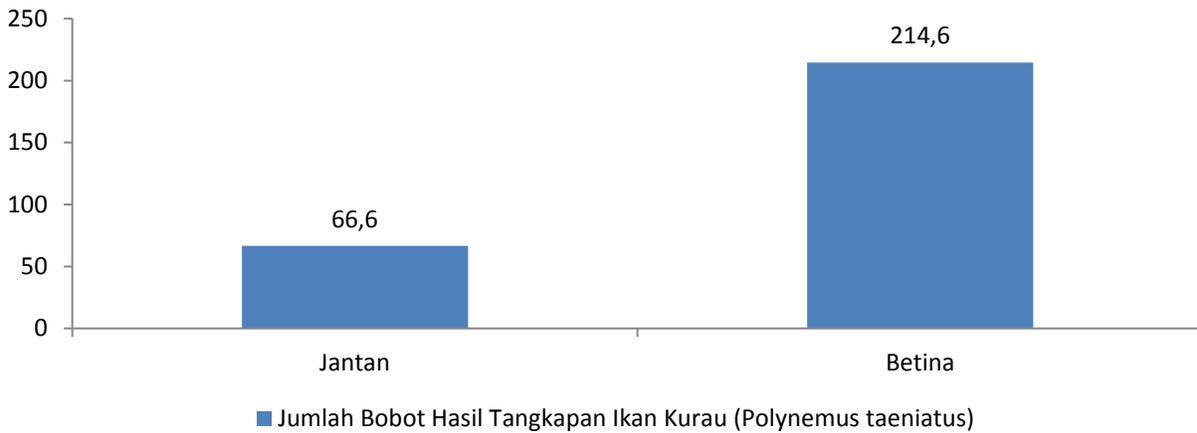


Figure 4 .The ratio of sex based on the number of the weighting of the catch fish kurau (*P.taeniatus*)

2 .Growth allometri fish kurau (*P. taeniatus*) growth allometri fish kurau can look at of the value of linear regression, where the value of regression on the relationship between length and weight of fish kurau male acquired as follows:  $y = 1.2202x + 0.4945$  (Figure 5) The value of correlation of 0.6695 (see figure 5). Based on the results of linear regression between length and weight of fish kurau (*P. taeniatus*) in explain that the value b of 1.2202. Value b of 1.2202 according to Effendie (2003) explained that when value  $b < 3$  means the development is allometri the negative. An explanation on growth allometri negative said the Effendi ( 2003 ), that the between length and weight of fish kurau male did not experience a similar growth periodically, however growth length of

fish kurau male faster than growth weight of fish kurau male. This been strengthen with correlation value of 0.6695 means the development allometri negative between growth length of faster than the growth weight of had strong ties. Growth allometri this explains overall that the condition of the population growth fish kurau (*P. taeniatus*) derived from waters bunyu having a growth is allometri negative in the sense that the long faster than the growth heavy. This is in accordance with the result of the observation visually / directly of the results of fish catch on the kurau that the types of the body of fish kurau physically has a gauge that very length but in this case the form of the body rather small.

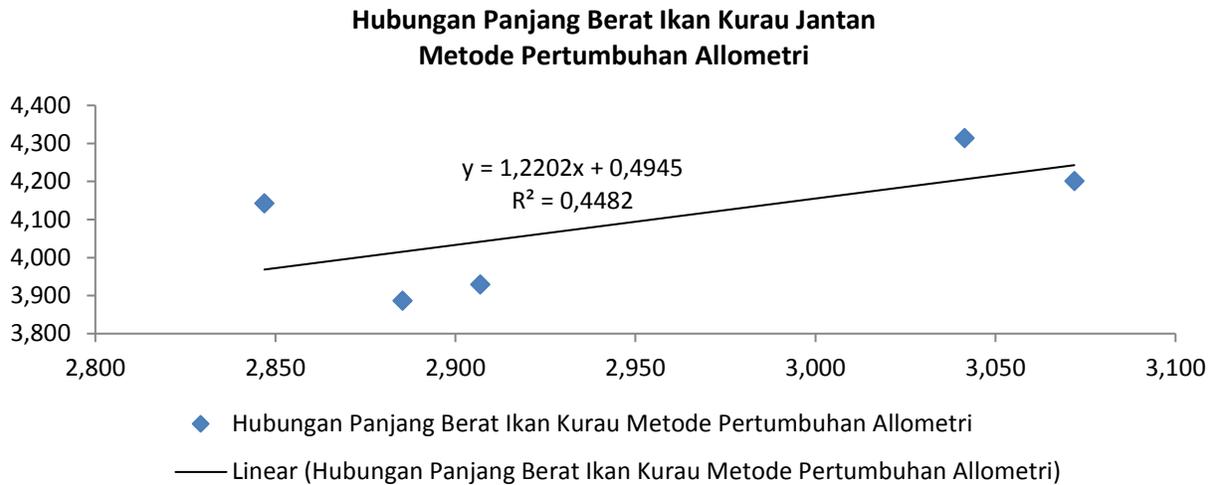


Figure 5. A long heavy fish kurau use of allometri male fish growth

Their research on the growth of fish allometri kurau (*P. taeniatus*) to sex a female fish obtained the value of linear regression between relations length and weight fish kurau of  $y = 1.4002x - 0.0851$  (See figure 6) with as much as the value  $R^2$  of 0.5226 (See figure 6) with correlation value of linear regression is as much as 0.7229. According to growth allometri Effendie (2003) said that the growth of fish kurau sexes female obtained  $b < 3$ , said that if the growth  $b > 3$  having the nature of the growth

of fish kurau female is allometri negative. An explanation on pertumbuhan allometri according to Effendi (2003) said that growth length faster than the weight of growth from fish kurau female. It is supported with correlation value of 0.7229 where explanation correlation value according to sarwono (2006) of the growth length of faster than the growth weight of had strong ties.

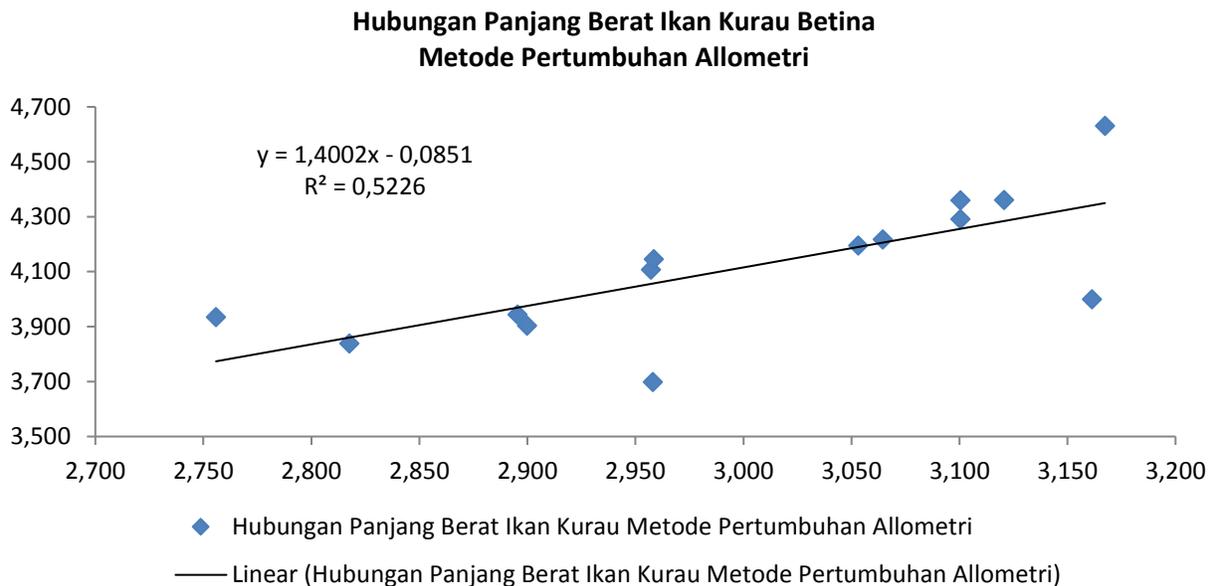


Figure 6. Relations length weight of fish kurau uses the growth allometri a female

### 3. Index condition

Fish kurau (*P. taeniatus*) index condition is a figure which expresses a the form of the body of marine biota especially of fish having a

certain range based on model regression length weight relations. The index condition cannot be separated from regression relations length weight fish kurau (*P. taeniatus*) where from the regressions can determine index conditions under which it will in use.

The results of regression relations length and weight of fish kurau (*P.taeniatus*) given that is obtained overall population is having a growth is allometri. The formula that used in the determination of index value condition using formulas based on growth allometri so that in get index value the condition of fish kurau petulant according to modification Effendi in Salim (2013) indicate that the range points from index condition in for to 5 ( five ) part those:

- 1 .When value ranged from 0,01-0,49 indicating a form of the body of fish greatly flattened .
- 2 .When value ranged from 0.50 -0.99 indicating a form of the body of fish flattened .
- 3 .When value ranged from 1.00 indicating a form of the body fish of temperate .
- 4 .When value ranged from 1,01 - 1,50 indicating a form of the body of fish fat .
- 5 .When value range > 1,51 indicating a form of the body of fish very fat .

The research results show that from the samples from 5 fish kurau male (Figure 2) obtained the condition of the form of a thin body as many as 60 % and the condition of the form of the body fat as many as 40 % (Figure 5). This is in accordance with of the field observation , who claim that fish kurau species of male has a body slender and lenght, in terms of outward form could not set a kind of the gonads, but as this in check kind of the gonads done by means of the dissection .

It is in thought because fish male has the ability to aggressive than female good in search of prey or in menghidari predators or a hook fishermen. This is in accordance with the catch from fishermen during this research, obtained as many as 23,68 % (Figure 1) is the type male sex. In addition also the average the form of the body of fish kurau male having the form of a thin body in accordance with research relationship model a heavy long claim that fish kurau is allometri negative with the  $b < 3$  (Figure 3) where growth lenght faster than growth weighs.

**Persentase Indeks Kondisi Ikan Kurau (*Polynemus taeniatus*) Jantan**

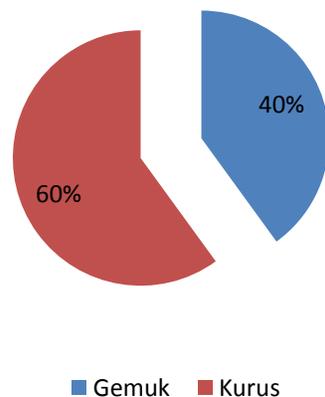


Figure 7 .Index the condition of the percentage of fish kurau (*P. taeniatus* ) male

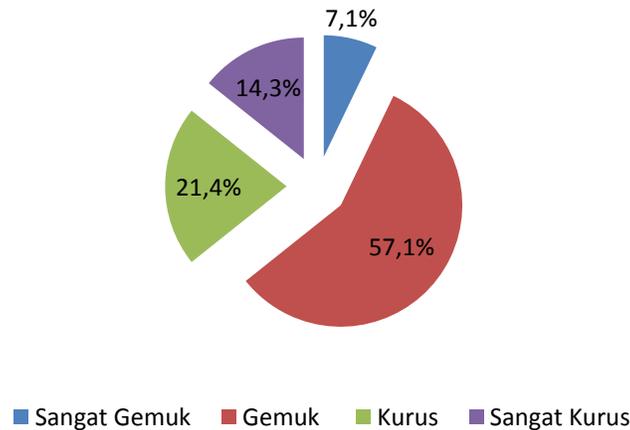
Index condition fish kurau female (*P.taeniatus*) having the form varying body due to the amount of sample fish kurau household except more than fish kurau kind of male, the quantity of fish kurau female on get 14 sample (Figure 2). Based on the formula index

condition a female petulant to formula model linear regression of relations lenght and weight where the results of research on the model was obtained the form of the body as a whole of the population fish kurau female namely is allometri. The model regressions used as studies to count index value condition. The index value

this condition based on modification Effendie in Salim (2013) obtained with 14.3 % fish kurau the females have a body very bony, as many as 21,4 % fish kurau the females have a body bony,

as many as 57.1 % fish kurau the females have a body fat. As many as 7.1 % fish kurau female having the form of obesity.

**Persentase Indeks Kondisi Ikan Kurau (*Polynemus taeniatus*) Betina**



The figure 8 .The percentage index condition fish kurau (*P. taeniatus*) female

#### 4. Conclusion

Conclusions from the result of this research obtained the ratio sex fish kurau male and female fish kurau by comparison of 1: 3.6 .The results of population growth use the model linear regression relations length and weight fish kurau male and female kurau fish or the same result that is having the nature of growth allometri negative. Index value condition fish kurau male have a range between 0.74-1.51 where the average the form of the body most on the form of a thin body, while index value condition fish kurau the females have a range between 0.44- 1.9 where the average the form of the body most on the form of obesity.

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