

# VOCATIONAL EDUCATION PERSPECTIVE ON CURRICULUM 2013 AND ITS ROLE IN INDONESIA ECONOMIC DEVELOPMENT

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## Abstract

Curriculum 2013 in vocational education, especially on vocational high school (SMK) not only aims to produce graduates who are ready to work, but also produces Indonesian people who are productive, creative, innovative, through strengthening affective attitudes, skills, and knowledges which are integrated. One of the challenges for the SMK future is how to increase the contribution of vocational education for Indonesia development, particularly in economic development. Thompson (1973) stated that "vocational education is economic education as it geared to the needs of the job market and thus contributed to the national economic growth". Basically, vocational education is designed to fulfill needs of the labor market, and it is clear this will provide a positive contribution to the world of productive work that produces goods and commodities that have economic value. Because of that, the implementation of curriculum 2013 is expected to answer that challenge. This paper presented about the development of vocational schools in Indonesia, the implementation of the curriculum 2013 on vocational education, particularly SMK, and efforts that can maximize the contribution of SMK in Indonesia economic development.

**Keywords:** Curriculum 2013, SMK, economic

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## 1. Introduction

Economic growth is essential for a country. Economic growth is believed to reflect an increase in the society's welfare. To increase economic growth, a strategy which is considered effective is to do industrialization. Skilled workers who are not only able to operate the technology but also able to maintain it is needed in the process of industrialization. Therefore, in order to support economic growth, vocational education becomes important.

Historically, vocational education developed in some countries. The development of vocational education started in Ancient Egypt around 2000 BC. The organized apprenticeship program involved learning basic skills of writing and reading literature. This was the beginning of integration of classroom

learning for basic skills and direct learning in the workplace. This method had spread to other parts of the world until about the 19<sup>th</sup> century (Ana: 2009).

In China, the development of vocational education was begun at Confucianism Period, late 19<sup>th</sup> century until early 20<sup>th</sup> century. The purpose of education at that time was to create an ideal social order in which people could live in harmony, respect and sincerity (Confucianism). Vocational Education was taught by old people of the lower class. The philosophy of Vocational Education was introduced by Mo Tzu (476-390 BC). He argued that vocational education should not only focus on skills but also on science, morals, and how to create meaning (Schmidtke, C., & Chen, P.: 2012).

In Indonesia, the early

development of vocational education was started in the Dutch colonialism era. Forced cultivation System (Cultuurstelsel) in 1830 and liberal system in 1870 implemented by the Government of the Netherlands in its colony, the Dutch East Indies, was a political dredging with tremendous advantage. That era was the beginning of the Political Ethics proclaimed by the Queen of the Netherlands in the Dutch parliament in 1901. Since the declaration of Political Ethics, Netherland's government tried to develop the economy in order to have its own budget and in the end, the elements need addressing and building was education. Vocational education was one the education addressed in which graduates with engineering skill are obtained. At the outset, the first vocational education was Carpentry School, a school that was a mean to advance Indonesia's carpentry (Supriya: 2002).

Today, vocational education is entering a new phase, which is adjusting the curriculum set by the government, in this case is the Curriculum 2013. Curriculum 2013 is the result of an evaluation toward KTSP and become reinforcement in improving the competence of the balance between attitude, skills, and knowledge. Competence will not only strengthen the cognitive but also contains attitude, knowledge, and skills that are the basis of core competence. In Curriculum 2013, the learning process takes place by using five thematic learning models which are integration, discovery learning, problem based learning, project based learning and scientific learning. The learning process is based on competencies supported by four pillars of learning activities, namely: productive, creative, innovative, and affective emphasizing on soft skills (Dit.PSMK: 2013).

The presence of curriculum 2013 brings some changing element. Based on the Materials of Public Test November 2012, changing element on the vocational school are among

others: the number of normative and adaptive class hours are reduced to provide more hours on productive subjects. In the process of learning, competence skills will be aligned with the development trend of DU / DI (Business and Industry) including the addition of skills basedon the spectrum of global needs and taking into account of the hard skills and soft skills. That changes are intended to make the maximum contribution so that vocational graduates are in accordance with the purpose of Curriculum 2013.

On the role of vocational education to economic growth, we must first understand the philosophical goals of vocational education. There are three alternate philosophies for TVET. These three philosophical positions are applicable to TVET. Specific choices about the nature and scope of TVET depend on the specific combination of philosophies selected to define a particular program.

First, essentialism. Purpose of TVET is to meet needs of labor market. Characterized by sequential organized curriculum, instructors need extensive business / industry-related experience. System separated from academic education. Second, pragmatism. The purpose of TVET is to fulfill the individual needs for personal fulfillment and life preparation. Characterized by an emphasis on problem-solving and higher-order thinking, learning is constructed from prior knowledge. Third, Pragmatism (reconstruction strand). Purpose of TVET is to transform work into democratic, learning organization. Proactive rather than perpetuating existing workplace practices. Adopts a stance against injustice and inequity in work issues. (Rojewski, 2009). From the three vocational philosophies, we can determine which philosophy has more role in economic growth, especially in Indonesia.

Then the question is how is the implementation of Curriculum 2013 at the SMK?, How is the contribution to

economic development? What efforts can be done to maximize the contribution of SMK in Indonesia's economic development?. This paper will present the perspectives of vocational education in the curriculum of 2013 and its contribution to the economic development of Indonesia.

## 2. Discussion

Vocational education has a very important role in the effort of creating skilled workers and with specific skill. Jandhyala BG Tilak (2002) states that "Vocational education has an advantage, imbibing the specific relevant job skills, that can make the worker more readily suitable for a given job and would make him / her more productive Thus". Vocational education has some advantages because it can produce skilled and relevant, employable and productive human resources. If the process of vocational education, especially vocational curriculum of 2013 goes well and in accordance with plan and objectives set, the unemployment rate is expected decreasing and the Indonesian economy globally increase. To understand and explore vocational education, either good development, curriculum implementation and strategic efforts that might be an important input to improve the quality of the Indonesian economy through vocational education, below is elaboration and critical thinking regarded as one of the discourse to develop ideas about vocational education.

### 2.1 SMK Developments in Indonesia

The development of vocational education in Indonesia is divided into two periods: Pre-Independence and Post-Independence. In the Pre-Independence period, the vocational education in Indonesia was started from the idea of Queen of the Netherlands' Political Ethics (Etische Politiek) which is a form of political accountability, the Government of the

Netherlands to the Dutch East Indies (Indonesia) toward the enactment of the Cultivation System (Cultuurstelsel) in 1830 and Liberal System in 1870 implemented by the Dutch government.

The first vocational education was Carpentry School, which was a school used to advance carpentry in Indonesia. The next vocational school was vocational school of agriculture, which was a school that concentrated on practical agricultural education. Technical vocational school was then built where a lot of expertise developed as skill building, mining expertise, driver education, and others. Here's a brief history of the history of vocational education and the process of an education which was originally established by the Dutch government and the European nationality only for China, but eventually developed for Indigenous people (Supriya: 2002).

As described Supriya (2002) in his book History of Technical and Vocational Education in Indonesia, in the Post-Independence period, vocational education was divided into three stages: First, the years 1945 to 1968 which was the period after Indonesian independence was proclaimed before the Pelita (Pembangunan Lima Tahun) I. In this period, an approach to the importance of education (social demand approach) was begun. Vocational education was considered able to produce graduates who can immediately work yet the condition of vocational school facilities was not good. Vocational education known that period was STM and SMEA used an approach based on the subject matter (curriculum 1964 SMK).

Second, the implementation of Pelita year 1969/1970 until the end of Pelita VI in 1997/1998. At that time manpower demand approach was conducted limitedly, the process of searching for the right shape for the education of industry technicians. At that time, the economic growth in Indonesia was in a good level with the growth rate of 7% per year that it required a lot of manpower to fill the

vacancy in the world of work. However, vocational education was only able to fill 50% of the total needs. The involvement of the industry in vocational education was not formally institutionalized. Vocational education at that time consisted of industry vocational education (STMP, SMEA Pembina, 4 years of SMTK ), and the interpreter techniques (STM-BLPT, SMEA, SMKK). Approach Community needs was also used (for schools that had not been rehabilitated): SMEA, SMKK, SMPS, SMM, SMIK, and SMSR. New policy was also introduced for the development of education, called "Link and Match" which in its implementation used Double Education System in SMK.

Third, the reformation period in 1998 which continued with the implementation of regional autonomy since 2001 until now. During this period, the growth momentum of quantitative vocational education increased and the relationship with the industry was better. The Government was very aware of the importance of developing the technology and vocational education in Indonesia. We all know that Indonesia has a huge potential to grow and develop into a prosperous nation. In addition to its rich natural resources, Indonesia has abundant quantities of labor. To make this potential to be renewal resource, good and relevant education is needed. Similarly, the Vocational Training is required to improve the competence of Indonesian youth who will enter the workforce, retrain and improve the competence of those who are already working, in line with technological developments and changes in the labor market.

## **2.2 Implementation of Curriculum 2013 at the SMK**

The concept of vocational education is secondary education that prepares students mainly for working in a particular field. Therefore, the vocational education in SMK should not only prepare students as fulfillment (to

fit) and preparation (to prepare) market requirements but also serve as a vocational education that develops education (to develop) the skills, abilities, understanding, attitudes, work ethic, and is required by workers to enter and make progress of useful and productive work (Rojewski, 2009). This is what is raised by the Curriculum 2013, which is to create productive, creative, innovative, through strengthening affective attitudes, skills, and integrated knowledge for Indonesians.

Based on EPIC system (Electronic Monitoring the Implementation of the Curriculum 2013) 1142 schools were registered as implementation target of curriculum 2013, while until August 2013, SMK has entered the limited-phased implementation to Class X in 1021 SMK throughout Indonesia. The initial step that has been done in the preparation of the implementation of Curriculum 2013 for Vocational Education, training and education are given to teachers and schools as well as other elements directly involved in the educational process. To speed up the improvement of the understanding and mastery of skills to implement the curriculum, mentoring programmed is given to teachers and principals. Mentoring program is conducted as a reinforcement to understand the concept of Curriculum 2013 and the various changes in the implementation in the field, as well as to help to overcome the obstacles that arise during the implementation in the school curriculum. This mentoring program is also an effort towards the implementation of Curriculum 2013. Complete assessment of the implementation of the national curriculum will be conducted in June 2016.

There are several factors supporting the implementation of Curriculum 2013 in the vocational school, some of them are: First, the suitability of teachers competence with the curriculum taught and textbooks used. Second, the availability of books

as teaching materials and learning resources that integrate the four formers of curriculum standards. Third, strengthening school management and culture. Fourth, strengthening the government's role in the guidance and supervision. And the last, a good cooperation between SMK with DU / DI to create link and match.

However, in practice there are some problems in the implementation of Curriculum 2013. For example in the learning process, (1) a total of 48 hours per week plus Mulok deemed burdensome by both teachers and students, (2) scientific approach cannot be implemented in all subjects, (3) regulations of industry practices implementing is still doubt, (4) the National Exam is not entirely clear, and Furthermore, Alumnus of SMK is still not ready to work in industry and the implementation of apprenticeship (prakerin) for 6 months has not received a positive response from the industry (FGD implementation of Curriculum 2013 FPTK UPI).

Therefore, the implementation of Curriculum 2013 in the SMK is still must be addressed, ranging from preparedness and competence of teachers, school management and culture, and government policy in improving and developing the deficiencies that have occurred in the process of implementation of Curriculum 2013.

### 2.3 Contributions of SMK in Indonesia Economic Development

According to the Law 17/2007 on the Long-Term National Development Plan (RPJPN), the government through the Master Plan aimed at the Acceleration and Expansion of Indonesia's Economic Development.(MP3EI) which integrates three main elements: (1) developing the economic potential of the region in the six corridors Indonesia, namely; Sumatra Economic Corridor, Java Economic Corridor, Borneo Economic Corridor, Sulawesi Economic Corridor, Bali-Nusa Tenggara Economic Corridor, and Papua-Maluku Islands Economic Corridor.(2) strengthening the national connectivity locally integrated and globally connected, and (3) strengthening the capacity of human resources (HR) and science and technology national to support the development of major programs in each economic corridor. The program must have the support of various parties for the smooth running and success of its. And SMK is a practical education that can contribute directly as the booster of the program. One of the ministry that have responsible of SMK quality is the ministry of national education, particularly General Directorate Of Secondary Education (DitjenDikmen) which takes a part and contributes in labor force so that the acceleration of economic development can work well.

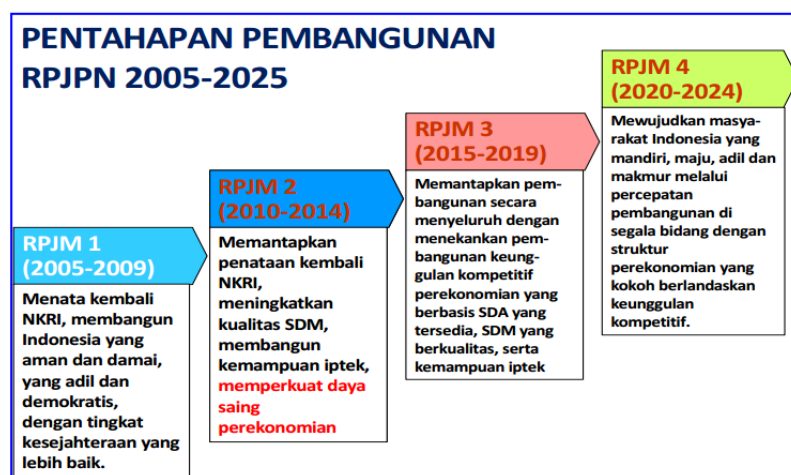


Fig.1 Long-Term National Development Plan 2005 – 2025 (Law 17/2007)

From the picture 2005-2025 RPJPN development above, we can see that we are in a position RPJPN 2<sup>nd</sup> period, namely the consolidation of the reform program NKRI, improving the quality of human resources, building the capacity of science and technology, and strengthening economic competitiveness. The existence of the design that quality of human resources should be improved is a strategic step that had to be done by the government so that human resources who qualified that contribute to strengthening the competitiveness of the economy. Vocational education is one which is formal education which practical so that graduates from vocational education be the workforce that can directly fill the needs of specialists in accordance with their respective scientific disciplines. Supports of RPJPN program with the improvement of the quality of vocational education will indirectly strengthen the economic development of Indonesia.

Contribution of vocational education in Indonesia economic development namely is preparing the labor force according to the demands of the industry. Law 17/2007 on the long-term national development plan (RPJPN) 2005-2025 is a strategic plan for managing and directing an increase in the level of the Indonesian economy into a purposeful and regular. Directions of RPJPN 2005 with the National Development Vision for 2005-2025 are: "INDONESIA YANG MANDIRI, MAJU, ADIL DAN MAKMUR", with the following explanation: (1) Independent: independent nation is a nation that is able to realize parallel life and equal with other nations that have been developed by relying on their own abilities and strengths. (2) Forward: A nation said to be advanced if the human resources have a personality of its nation, noble, and high quality of education. (3) Fair: Fair Nation means no discrimination in any form, whether between individuals, gender, and region. (4) Prosperous: Then prosperous nation is a nation that has

met all the needs of life, so as to give meaning and significance to other nations in the world. RPJPN implementation is expected to run smoothly with the support of various stakeholders so that the Indonesian economy improved and able to compete in the era of free market economy. From the description, we can conclude that vocational education has a very important role to support the successful development of RPJPN, so that the Indonesia economy development can be more quickly and precisely.

*Technological change promotes demand for education, and education promotes technological change. Technological change leads to economic competitiveness and economic growth. Therefore, education is associated with these factors* (Marginson, 1993 in Pavlova, 2009). The results of research on the role of education in economic development also showed that investment in education contributes to economic development, as has been inferred by Boediono and McMahon (2001). Joesoef, J.R, at all (2007) in his journal entitled "The Role of SMK to Support Regional Economic Growth: A Macroeconomic Analysis" states that SMK has a positive role in regional economic growth. This role can be traced from each successive three things, namely: (1) the preferences of society toward SMK, (2) capacity SMK for secondary school graduates (SMP), and (3) the ability of SMK to produce graduates who qualified. In line with the results of previous studies, the Directorate of Vocational High School (2008) conducted a study which concluded that there is a positive relationship between the ratio of vocational students and Gross Domestic Product (GDP). In addition, the research results also found that there is a positive relationship between the ratios of vocational students and the rate of economic growth. Based on the above explanation, it is clear that vocational

education has an important role in economic development in Indonesia.

According to Alhumami (2004), education contributes to economic growth in two ways. First, education creates new knowledge that had an impact on the production process. his approach is commonly called Schumpeterian growth that relies on the role of humans (human capital) played by professionals, experts, technicians and workers as drivers of economic growth. Second, education can change the way of thinking, acting, and behavior of working through the process of diffusion and transmission of knowledge, technology and information, so that it can contribute to the provision of workforce who smart, skillful, and mastering technology so as to increase productivity.

According to Slamet, PH (2012) attempts to maximize the contribution of vocational education for economic development can be done in four ways, namely: (1) offering vocational education based on the characteristics of Indonesia, (2) strengthening the link and match with the world of work, (3) integrating soft skills into learning, and (4) implementing entrepreneurship education.

First, offering vocational education based on the characteristics of Indonesia. The sciences are taught to students of vocational education should be suitable sciences to facilitate the development of students to become fully human, and sciences in accordance with the characteristics of Indonesia.

Second, strengthening the soft skills of learners. Mathematically, soft skills is intrapersonal quality and interpersonal skills. Intrapersonal

quality is inner quality (spiritual quality) of human which sourced from deep within human heart whose dimensions include, among others, humility, self-respect, integrity, responsibility, commitment, self-motivation, curiosity, and so on. While interpersonal skills are skills related to human relations which dimensions include responsible for all his actions, respect to the others, peace, love of neighbor, good communication, leadership, collaboration, good character, sociability, solidarity, tolerance, and so on. From the many skills above, there are four skills most needed to prepare students in the 21st century (Concept 4C). **Communication**, sharing thoughts, questions, ideas, and solutions. **Collaboration**, working together to reach a goal—putting talent, expertise, and smarts to work. **Critical Thinking**, looking at problems in a new way, linking learning across subjects & disciplines, and **Creativity**, trying new approaches to get things done equals innovation & invention. The term of soft skills is closely associated with other terms, such as character, emotional intelligence, values of life (living values), morality, personality, and employability skills for those already working. The issue of character has been applied in the curriculum 2013, so expect the goal to prepare Indonesian human: Productive, Creative, Innovative, through strengthening Affective Attitude, Skills, and integrated knowledge can be achieved.

Third, Build the relevance (link & match) with other systems as stated in Fig 2, especially alignment with the economic system in general or in particular the work world.

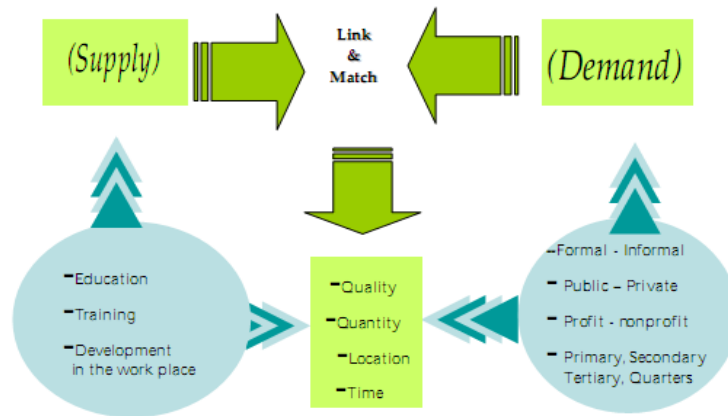


Fig.2 Link & Match – Labor Supply & Demand  
(PH, Slamet: 2012)

vocational education should be directed by the "demand driven" rather than "supply driven" which conducted through actual learning than textual, much more concrete than the abstract, which more refers to the reality than the artificial, and more real than the virtual. All of these require vocational education that proactively get closer to the world of work.

Fourth, teach entrepreneurship to students of vocational education through knowledge, awareness, and practices which real and actual about entrepreneurship. *Lack of technical and vocational education and training, including entrepreneurship and training for creativity, hampers employability* (UNESCO-IBE, 2004 in Hollander, 2009). Therefore, the practice and teaching of entrepreneurship in vocational education is needed. Issues in Indonesian entrepreneurs were maintained in Curriculum 2013, especially in SMK. This is proven that the Entrepreneurship Subject expertise is include in each program.

### 3. Conclusion

The purpose of Curriculum 2013 is to support the success of vocational education programs globally through strategic effort to prepare human resources in order to have the ability to live as individuals and citizens who religious, productive, creative, innovative, skilled, and affective and

able to contribute to the life of society, nation, state, and world civilization. By increasing the quality of education, so did the quality of Indonesian people, so that the goals to promote economic growth can be achieved. Efforts to maximize the contribution of vocational education for economic development can be done in 4 ways: offering vocational education based on the characteristics of Indonesia, strengthening the link and match with the world of work, integrating soft skills into learning and implementing entrepreneurship education.

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