

Revitalizing of Vocational High Schools for Productivity Improvement and Graduates Competitiveness

(Standard Formatting for Alternative Excellence of Vocational High Schools)

Sohidin

*Faculty of Teacher Training and
Education, Sebelas Maret
University, Indonesia*

sohiddien@gmail.com

Abstract— The main problem in this study is how to see the government focus on preparing qualified Human Resources (HR) Indonesia so that Indonesia can make a leap of progress and catch up with other countries. A competent and skilled workforce one of whom was born of a qualified vocational education and training and relevant to the constantly evolving demands of business and industry. However, data from the Central Bureau of Statistics shows that the largest proportion of unemployed graduates is Vocational High School of 9.84 percent. The concept discussed in this paper is to develop a roadmap for Vocational High School development; perfecting and aligning the Vocational High School curriculum with competencies according to the users of the graduate (link and match). Revitalization Program that must be implemented by Vocational High School includes development and alignment of curriculum with business and industry; learning innovations that drive 21st century skills; the fulfillment and improvement of professionalism of teachers and education personnel; standardization of facilities and basic infrastructure; updating of industrial cooperation programs; management and organizational structuring; as well as increased access to competency certification. The result of this critical analysis and analysis is through the revitalization program of Vocational High School, it is expected to be realized the following conditions: 1) Vocational High School serves 5.5 million students with IT-based education; 2) 80 percent of Vocational School graduates work in their fields, 12 percent are entrepreneurs, and 8 percent of 1,650 referral schools have licensed LSP-P1; 3) 750 Teaching Factory and Technopark in Vocational High School serves as Home Innovation; 4) 1,000 Course and Training Institutions, and 350 Special High Schools integrated with Vocational High School. 5) 45,000 Dual Expertise Skills and 2500 Course Structures; 6) 1.75 million Vocational High School graduates; 7) Vocational High School becomes the primary choice for junior high school graduates to continue their studies to secondary education.

Keywords— *Vocational High School revitalization, Productivity, Competitiveness, Graduates, Demand and Driven, Link and Match*

I. INTRODUCTION

Vocational or Vocational High School since 2016 as if given priority and special attention from the President of the Republic of Indonesia Joko Widodo. The President even instructed the Ministry of Education and Culture to revitalize Vocational High School. President Joko Widodo's seriousness is contained in Presidential Instruction No. 9 of 2016 on the revitalization of Vocational High School in order to Improve the Quality and Competitiveness of Indonesian Human Resources. In his instruction, the President mandated Ministry of Education to do synergy between departments and institutions to be able to answer the challenge of demographic bonus and competitiveness in the international market.

In the Presidential Instruction President specifically assigns the Minister of Education and Culture to; 1) Create roadmap for Vocational High School development; 2) Improve and synchronize the Vocational High School curriculum with competencies according to the users of the graduates (link and match); 3) Increase the number and competence for teachers and educators Vocational High School. 4) Improving cooperation with ministries/agencies, local government, business/industry; 5) Improving access to certification of Vocational High School graduates and Vocational High School accreditation; 6) Establish working group of Vocational High School development.

Also in Presidential Instruction No. 9 of 2016, President also specially assigned a number of other ministers to participate. Among the ministers are

Minister of Research and Technology, Higher Education, Minister of Industry, Minister of Manpower, Minister of Transportation, and Minister of Marine Affairs and Fisheries. Other, Minister of State Owned Enterprises, Minister of Energy and Mineral Resources, Minister of Health, Minister of Finance, and Head of National Agency for Certification of Profession.

In fact, the President specifically assigned to the Governors to: 1) Provide convenience to the public to obtain quality Vocational High School education services in accordance with the potential of each region; 2) Providing educators, education personnel, facilities and infrastructure of Vocational High School adequate and qualified; 3) Conducting institutional arrangement of vocational high school covering opened vocational program and location of Vocational High School. Finally, the Governor is asked to develop the leading Vocational High School in accordance with the potential of each region.

Meanwhile, referring to Presidential Instruction No. 9 of 2016, Widyana and Mukhadis (2017) stated that the number of graduates of Vocational High School that more and more must be held revitalization for some components of curriculum, educator, cooperation with the government and pass the competency and certification test by Business and Industrial World. The curriculum should be tailored to the needs of the industry in order to graduate with skills and expertise such as criteria in the world of work. Educators also have an important role as an effort to improve the quality of graduates so it needs to be held revitalization by improving teacher competence. Both of these should be revitalized to support changes to the quality of education in vocational schools.

Seeing the various efforts made by the government arises the question why Vocational High School is urged to be revitalized? What really happened? Judging from the various sources that exist, the data presented quite astonishing. Apparently, Vocational High School became the largest contributor to the open unemployment rate. Data from the Central Bureau of Statistics in 2016 states that; supply job seekers (job seekers) in the last four years, Vocational High School graduates beyond high school graduates. Nationally, the number of job seekers (unemployed) Vocational High School graduates until February 2016 reached 1,348,327 people.

The phenomenon as well as other facts are also surprising is the level of vocational graduate work, it is lower than high school graduates (89: 91persen). In other words, out of 100 job seekers each from Vocational High School and Senior High School graduates, only 89 Vocational High School graduates are accepted. While 91 high school graduates received work.

It seems that some phenomena as well as that fact that is the central government's special attention to

the Vocational High School. In the beginning Vocational High School was established with the expectation, the amount of employment is much larger. However, the facts and facts are reversed. Therefore, it can be understood the government's seriousness to revitalize Vocational High School in all aspects, as an effort to realize one of the important agenda of Nawacita, namely: to increase the productivity, independence, and prosperity of Indonesian people. The government views the role of vocational education should continue to be strengthened, as a strategic step to increase the productivity and competitiveness of the nation.

It is also supported by the opinion of Alhasan, Usman and Tyabo (2013) that is Technical, Vocational Education and Training (TVET) in Nigeria carried out revitalization efforts to reduce the number of unemployment and poverty. This revitalization is focused on empowering graduates to improve the country's economic status and people's welfare. Efforts to revitalize this can also be done in Indonesia with skills training in accordance with the criteria of the world of work so as to increase productivity and competitiveness in the global economy.

As we know that a competitive and skilled workforce is one of them is born of quality vocational education and training and relevant to the demands of the business and industry which continues to grow. However, Statistics Center Bureau data shows, the largest proportion of unemployed graduates of Vocational High School is 9.84 percent. In view of these conditions, the government immediately instructed the reshuffling of vocational education and training systems, and the government will reorient education and vocational training towards demand driven.

The above statement is consistent with the opinion of Nasir (2012) that initially the Technical, Vocational Education and Training (TVET) is focused on improving the physical skills of learners physically, but as TVET technology develops, it must evolve to form future generations that produce integrity leaders. Therefore, TVET's work capability must be improved in accordance with the needs of each country so as to produce graduates as demand driven. TVET provides training to prepare learners to be productive. TVET is one of the foundations of a person to step into the world of business/industry in the future.

The seriousness of the government is realized in the form of Presidential Instruction Number 9 of 2016, the President affirmed the need for revitalization of Vocational High School to improve the quality of human resources. The Inpres commissioned the Ministry of Education and Culture to create a roadmap for Vocational High School development; perfecting and aligning the Vocational High School curriculum with competencies according to the users of the graduate (link and match).

Those are some interesting phenomena presented in the data, facts as well as the government's serious efforts to revamp the various sides, to re-establish the presence of Vocational High School as a producer of skilled and qualified personnel as a solution to the prediction of future demographic bonus. This paper will try to analyze in more detail the various efforts that have been made by the government, by looking at the various possibilities of realizing or not the special plans.

II. LITERATURE STUDY

1. History of Vocational Education

Integrated vocational education development milestone in Indonesia began in a five-year development plan, through the enactment of Law no. 2 of 1989 on the National Education System, followed by the enactment of Government Regulations. 29 of 1990 on Secondary Education which contains several provisions in the development of vocational education. In this period, through the decision of the minister of education and culture no. 490/1992 on Vocational High School began to be implemented as well as the development of production units as part of the learning process in Vocational High School, the activities of this production unit include activities producing goods and services by utilizing all the resources that exist in the school and its environment.

Further development policy was undertaken by the government through the implementation of Dual System Education through the concept of Link and Match, starting in 1997 (Ministerial Decree Number. 323/U/1997) which was the beginning of business/industry engagement in vocational education. The system adopts the Dual System model in Germany, by making some adjustments. Theoretically, PSG is an education system that is considered ideal to improve the relevance and efficiency of Vocational High School. Student practice in the industry is part of this implementation activity. A number of activities that have been undertaken by Vocational High School to involve the business/industry among others through the implementation of gebyar vocational education activities, the signing of school cooperation with the business/industry, the establishment of internal organizations in schools, and visits of teachers regularly to the business/industry. This effort was followed up with the establishment of Vocational Education Assembly of National and Provincial Vocational Education Assembly.

Development of vocational education to produce graduates who are experts in their field and ready to work can not be separated from the role of government. The statement is in line with an expert in Vocational Education and Training (TVET) by Stephen (2010): the government has an important role in the success and failure of the TVET system. Some government policies such as TVET should be

developed in accordance with the demands of the labor market criteria. The relevance of the TVET program with the world of work will make it easier for graduates to find industry that suits their field of expertise. In addition, it needs to involve the business community and have policies that support this TVET program.

The implementation of the vocational education program at the Course and Training Institute has become a major part of the programs and activities of the Ministry of Education and Culture. The establishment of the Directorate for the Development of Courses and Training demonstrates the need for government involvement and facilitation in the management and organization of vocational education programs at training and course institutions. In contrast to vocational education on formal channels, vocational education on non-formal channels in skill and training institutions, learning centre, learning activities studio and other non-formal education units are organized on the basis of (1) flexibility, more flexibility in the use of time, place, and learning programs; (2) practical, aimed at addressing the problems and needs of the community and business and industry in the short term; and (3) functional, learners directly benefit from the outcomes of course and training activities organized.

Meanwhile Education for children with special needs is provided through special education/special schools and inclusive education. Special education is provided for children with visual impairment (visually impaired), hearing impairment (deaf), intellectual barriers and autism. Special education is conducted separately with children in general. The inclusive education is held in public schools so that children with special needs learn together with the children in general, and the school accommodates all the needs of children with a variety of diversity.

Basically the purpose of vocational education is to prepare learners to face the business world/work world. It also applies to persons with disabilities to prepare for their independence in the workplace. Some developed countries, people with disabilities are given training in the form of skills as the provision of his life later. Research in America shows that students with special needs are guided by participation from parents and help find alternative jobs after they graduate (Haryanti, 2018).

2. Vocational High School Graduates Opportunities

The State of Indonesia faces two major challenges. The first challenge is the presence of the fourth industrial revolution that is now beginning to take place. There are no factors driving the change of world civilization as strong as the industrial revolution that produces technological progress. Due to technological advances, the world is changing so fast.

In contrast to the third industrial revolution when the machines worked independently, in the era of the fourth industrial revolution all the machines were connected with others, based on a cyber physical system that would radically change the way humans live, work, and communicate. The innovations generated to make life more comfortable are not limited, but the challenges to be solved are also very complex. The work that was originally done manually by relying on man power alone has been replaced by machinery and information technology.

An estimated 35% of basic skills will change by 2020 and nearly 2 billion workers risk losing their jobs. For Indonesia, this challenge needs to be transformed into opportunities. By empowering the abundant young generation and technological advancement, Indonesia needs to prepare a generation of innovators to cultivate the abundance of abundant natural resources into valuable products/services, and create millions of new jobs. Therefore, learning in vocational schools should develop the skills of the XXI Century to produce graduates who are "innovative, inventive, self-motivated and self-directed, creative problem solvers to confront increasingly complex global problems" (Trilling and Fadel, 2010).

The second challenge is globalization, particularly the enactment of the ASEAN Economic Community (MEA) from late 2015 which allows for increased mobility and free labor competition among ASEAN member countries. It is estimated that in 2010 to 2025, demand for skilled workers in the ASEAN region will rise by about 41% or about 14 million people. Half of these figures are Indonesia's needs and followed by the Philippines with the need for skilled workers of 4.4 million. In accordance with the MEA scenario, in 2025 in Indonesia there will be an increase in employment opportunities of 1.9 million (about 1.3% of total employment).

3. Governance of Vocational Education

Law Number 23 of 2014 on Regional Government has consequences in the management and organization of vocational education because the management of Special Education and Special Services, Secondary Education is conducted by the Provincial Government. Early Childhood Education Management, Basic Education (Primary and Junior High) and Community Education (courses and training) are undertaken by District/City Governments.

Provinces need to be prepared to accept responsibility for management of Vocational High School from Districts/Cities, from aspects of planning, funding, guidance and evaluation. The transfer of authority of the Course and Training Institution to the District/City Government also requires time to adjust. The District/Municipal Government should begin listing the existing courses and training institutions in the region and also prepare

planning, budgeting, fostering, and non-formal education evaluations for courses and training institutions.

Formal and non-formal education policies must be in harmony with each other. Therefore, there is a need to regulate the management of both. This is the same as that proposed by Addis in Nasir (2012) that the relevance of vocational education in Technical, Vocational Education and Training (TVET) on both formal and non-formal channels aims for equality so that graduates on formal channels have skills relevant to the non-formal sector.

III. RESEARCH METHODS

This research uses descriptive qualitative method which is done by studying the literature from various research both national and international. According to Whitney (1960), descriptive method is fact-finding with proper interpretation. A review of research results in other countries for Vocational High School revitalization policy is intended to compare whether the steps taken by the Indonesian government have been in line with the successful experience of revitalization in other countries. Many policies have been issued by the government, however, when compared with the policies of other countries that have already done revitalization, there are many differences between the two. Thus the policy of revitalization in Indonesia can be more analyzed whether it is right on target, effective or efficient.

IV. RESULTS AND DISCUSSION

Looking at the various situations, phenomena and facts above, and responding to various efforts that have been done by the government mentioned above, there are some things we need to discuss the following.

Revitalization

Revitalization is an absolute step to revamping various aspects, especially in the strengthening of education at the vocational school level. Revitalization is needed, however, it requires commitment from various parties to unite to implement it. There must be synergy between various institutions, government and private agencies to be able to realize the stages contained in the roadmap that has been established.

Technical and vocational education is restructured to improve the quality of provision and learning outcomes to make it easier to access and relevant to the world of work. In this case, effective leadership becomes one of the most important areas in education at the vocational level. This can be done by fostering individual characterization to create and influence successful leadership performance (Boateng, 2012).

Regulation

The government has issued Presidential Instruction No. 9 of 2016 as an appropriate step to

mobilize institutions, agencies, departments and sections within a government and private organization to facilitate the realization of revitalization targets. In addition to regulation should be consistent government in every step. As a practical example the government has been incentive to emphasize and even make jargon, slogans and sentences that essentially Vocational High School graduates are ready to work, but in reality the government actually kills the spirit by pouring the number of “bidikmisi” that automatically make the morale of the switch to the spirit of college or continue to education higher.

Curriculum

Curriculum development is not merely done according to industry demands, however, it is also necessary to think of a more appropriate format for the education category at Vocational High School level. The Vocational High School curriculum that alternates each year and every turn of personnel in the ministry has a negative impact that is the focus of teachers' attention shifting from teaching and learning activities to focus on teaching and learning administration. On the other hand Vocational High School curriculum that seems to have been established and in accordance with industry needs that curriculum “education level unit curriculum” actually castrated with the emergence of the 2013 curriculum that seems more prepared graduates to be ready to continue to college. Curriculum discussions have been focused solely on the problem of name alone, while the contents remain unchanged. For example the change of 2013’s curriculum to 2013’s curriculum revision does not change in the contents of the curriculum.

The government should pioneer the curriculum change from its strategy problem, which is changing the pattern and mindset of the curriculum. Looking at the need for development and revitalization, the most appropriate curriculum for applied Vocational High School is the project-based curriculum and research. In the author's thoughts, the effort that can be done to produce high quality Vocational High School graduates is to apply the project-based curriculum and research. This curriculum is made based on the need to create a project to create a product, then accompanied by research to develop it into a ready-to-sell product on the market.

Characteristics of Good Vocational Education

To achieve the objectives set forth above, revitalization of vocational education is needed to change the process of vocational education for the better. Here are some of the characteristics of good vocational education.

- a. Learning of the XXI Century and Education for Development Sustained
Through the Learning of the XXI Century, learners are expected to master the skills,

which include life skills and career, skills in learning and innovation, and the ability to use information, media, and technology.

- b. Learning of the XXI Century: from Competence to Capability

The world of education recognizes three models of education, namely; (1) training model, (2) professional development model, and (3) capability development model. The first and second models are very popular in industrial education, which “exploits” human resources for the purpose of economic reproduction through education. The cornerstone of thinking is the theory of social efficiency, namely that the curriculum of education is designed based on competence with the main reference work needs (job) in the occupation area or a particular profession.

- c. Cooperate with industry

A good vocational education is a vocational education that also produces graduates that meet industry needs. In order to do so, the teaching and learning process must be in harmony with the industry. The presence of industry is not only a place for vocational education students to practice internships. However, the involvement of the industry should reflect the implementation of industry's dual expertise with schools so that educational objectives can be achieved.

The industry engagement process can be in curriculum development so that the curriculum becomes more relevant to the needs. Industry also can provide training for teachers and educators to keep updating knowledge by following the development of machinery or techniques in accordance with vocational programs. There are times when industry sends its professionals as companion teachers or mentors to enable students to interact directly with professionals.

- d. Entrepreneurship Soul Planting
(Entrepreneurship)

Entrepreneurship skills can be built from learners in schools by selling the results of the skills of learners to the community or industry directly. These entrepreneurial skills can not be caused simply, there must be a process of fertilization into the students themselves. Entrepreneurship skills can also be established when there is a skill unit in educational units that receive capital assistance and sell their products so that profits can be directly used to turn the wheel of business. This entrepreneurial experience should be nurtured and practiced as long as the learner follows the teaching and learning process.

- e. Adaptation and Local Contextualization

The process of planning and learning of vocational education should involve the

community, which can be done through dialogue, to ensure that schools can respond to community/community demands. In this regard, schools and communities have a common understanding of the importance of education for the development of local cultures and economies. The provision of educational services must address the needs of the community and address social, cultural, reality, and language needs, not just provide curriculum and teaching uniform.

Road Map Revitalization Vocational High School

a. New Paradigm of Vocational Education

In his monograph entitled *The Teachers of 2030: Creating a Student-Centered Profession for the 21st Century*, Barnet Berry describes a dramatic shift in the role of educators in educational praxis this century. The point of view that the mission of education is to prepare the participants educate to enter a certain profession on the type of social role already structured in the community will soon be obsolete. Educational tasks will reverse become more primary to meet the needs of self-development of learners in creating his profession (Berry, 2013). In addition to generational demands, changes in the role of education are also caused by the emergence of new realities about the changing ecology of learning, the smoothness of in and out connections cybernetic world, and widespread teacherpreneurism.

Changes in educational orientation from competence to capability have been becoming a common consciousness in the world of vocational education since the decade then (Staron, 2006). As Stephenson & Weil (1992), too, is wrong one model that challenges traditional oriented learning concepts competence is a capability-oriented learning model. Capable people are those who know how to learn, be creative, have a level high self-efficacy, can apply competence in new situations (novel) as well as a familiar situation, and cooperate well with people other.

The extension of the competency model to the capability development model this is a fundamental change in the orientation and focus of vocational education in the second decade of this XXI Century, that is what we are familiar with the shift from the "teaching" paradigm to the "learning" paradigm, or from the "job" orientation extends to the "life" orientation, which gives opportunity the growth of independence. Approach to vocational education attached to expert-centered learning and work-based learning, in the XXI century expanding its learning orientation from expert-centered

learning to life-based learning (Staron, 2006). The educational model has expanded from the model training (training model) and professional development model (professional development model) to the capability development model.

b. Institutional Development

Lack of facilities and infrastructure or facilities owned by education vocation becomes an important factor to improve the quality of education. The government allocates budget for each year to fulfill facilities and infrastructure of educational institutions that organize education vocational support in improving the quality of learning.

New school units built on the needs of the region and regional potential in the Business World. New classrooms are built also to increase the participation of learners to continue their education. Therefore, several alternative strategies for fulfillment of infrastructure are required.

1) Involvement of Business and Industry as a forum to influence learning experiences of learners. It is meant for consolidating the experience of using the facility simulative in educational institutions, carrying out real activities in the field work with all the complexities of life, share responsibilities in achieving the achievement of the curriculum in the framework of achievement educational goals. Utilization of facilities not owned by the institution education as a form of industry's contribution to vocational education.

2) The empowerment of facilities and infrastructure is intended to seek independently of the shortcomings or needs of facilities, including efforts inhibit damage to facilities and infrastructure through production programs based training, production & service units and Teaching Factory.

3) Involvement of the community, especially parents of learners, is needed in solving problems in the fulfillment of facilities and needs school plan.

Infrastructure becomes an important part in the development of vocational education system in Indonesia. The completeness of these infrastructure facilities is also needed by other countries, such as in Nigeria that lack of funding for supporting facilities resulting in inadequate facilities. In Nigeria TVET is not equipped with facilities such as laboratory rooms or practice rooms. The completeness of the facilities is only available at the beginning of the school's establishment so equipment is not updated and outdated (Okoye and Arimonu, 2016).

Based on the above statement, vocational education in Indonesia must be equipped with complete infrastructure to improve the quality of education. Complete facilities not only from the room or other supporting facilities, but must be supported by professional educators by training, cooperate with industry involvement of government and community to support the revitalization program of Vocational High School.

c. Business Involvement and the Industrial World

The current vocational education approach still looks supply-driven, as if seen still done unilaterally education providers vocation. This is due to still changing the foot majors vocational so that the curriculum is not able to keep up with the industry which is very rapid. As a result, the industry complained about vocational education graduates not suited to their needs.

Therefore, the reorientation of vocational majors is market demand (demand driven) becomes an important thing done. Vocational majors must be flexible based on the demand and development of the world of work. Working world parties are expected together with the world of education plays an active role in determining, encouraging, and moving the implementation of vocational education starting from planning and implementation.

It is also revealed by Nasir (2012) that the work skills of vocational education should be improved in accordance with the needs of their respective countries so as to produce graduates suitable with demand market (demand driven). Vocational education should provide training to prepare learners to be able to think productively.

To maintain the continuity of demand-driven vocational education planning requires permanent cooperation between the Government and industry. This cooperation may include (1) the drafting and design of the vocational education framework; (2) financing; (3) curriculum development and implementation, and (4) jointly conduct assessment of vocational process and graduate education.

d. Curriculum Alignment

Currently the government has conducted periodic alignment and involves the use of graduates. Alignment is a match between the supply and demand sides that include several dimensions, namely quality, competence, quantity, location and time. The alignment also includes the development of a 4-year Vocational High School that has the name of competence and graduate competence standart that is different from the 3-year Vocational High School. In addition to the reorientation of vocational skills programs in Vocational High

School to better meet the needs of the business world and industry, there are several strategies to ensure that the curriculum can be more aligned so that learners can develop its competence, that is dual system.

This curriculum alignment should be tailored to the needs of the workforce so that skills education and training programs in vocational education are in line with industry criteria. If the applied curriculum is less in line with the quality expected by the world of work, then the more unemployed and can increase poverty. Therefore, revitalization must be done in the presence of curriculum alignment (Widyana and Mukhadis, 2017).

In essence, dual system is a strategy that bring learners closer to the world of work and this is a proactive strategy that demands change of attitude and mindset as well as function of education actors at Vocational High School, society and business/industry level in responding to the change of dynamics.

e. Graduate Competency Certification

The quality of graduates of vocational education is ideally determined based on the mastery of a work competency standard (Indonesian National Work Competency Standards). Based on the standard of competence, formulated a system of testing and certification. However, until now not all skill programs have been available Indonesian National Work Competency Standards it and some existing Indonesian National Work Competency Standards not direct reflection in curriculum. Currently there is coordination of ministry/institution level in making Indonesian National Work Competency Standards for each existing vocational skills program. Several efforts have been made to minimize the competency gaps of vocational education graduates with the needs of the business world/industry, among others through the preparation of certification schemes for vocational education graduates by involving professional associations and industry as well as in the implementation of competency tests.

f. Addition and Improvement of Learning Infrastructure

In improving the quality of vocational education, infrastructure is needed to facilitate learners in practicing the learned theories in school. As described in the previous chapter, needs infrastructure such as laboratory, teaching factory, and technopark still very less in educational institutions. Directorate of Vocational School has made a plan in providing infrastructure assistance. Help includes granting development assistance and rehabilitation of

school equipment spaces, provision of practice equipment, and laboratory rehabilitation.

g. Provision and Improvement of Teacher Quality

In general, the lack of qualified teachers and educators, unequal distribution of teachers in different parts of Indonesia, and not yet the fulfillment of the needs of productive teachers is a challenge related teachers in vocational education institutions today. If searched Furthermore, teacher quality issues in vocational education are also linked with a few things. First, there are still teachers who have not fulfilled academic qualifications as mandated by Law no. 14 Year 2005 on Teachers and Lecturers and Government Regulation no. 74 Years 2008 about Master. According to the two rules, academic qualifications for teachers is Bachelor degree or Diploma four. However, by 2015 about 12% of teachers still has academic qualification under bachelor degree or diploma four. This proportion is larger than high school teachers who are also academically qualified under bachelor degree or diploma four (7%).

Secondly, there are still many doubts about the competence of teachers in institutional units education because the results of the competency test shows there are still many teachers who has not reached the established competency standards. In addition, the teacher does not always have the competence of expertise that is appropriate to that subject he shouted. Third, there are still many teachers who do not master the use of information and communication technology (ICT).

Okoye and Arimonu (2016) argued that vocational education should be equipped with professional educators for the quality of education has a good quality according to industry needs criteria. It is also needed in Nigeria as one of the efforts to be revitalized due to the increasingly high global competition that requires skilled labor in its field. The problem in Nigeria, educators is inadequate because of the small funding resulted in poor quality of learning. Therefore, the need for revitalization to improve the quality of teachers in Indonesia as one of the factors driving the revitalization in the level of vocational education.

h. Accreditation and Governance of Vocational Education

Accreditation of public acknowledgment or external recognition to agencies of a certain standard solely to provide assurance to the public that the educational institution is appropriate and become the main reference for the learning process. Therefore, its output is

guaranteed and can be used by graduate users, in this case the world of work.

Institutional is also very crucial to be organized so that the concept of vocational education can be on target and successful. One of the reasons why the management of Indonesia's vocational education is disrupted is due to the patchwork of institutional arrangements and the lack of agreement among related institutions to achieve the ultimate goal.

i. Regulation

Revitalization of vocational education is getting stronger to do after the signing of Presidential Instruction (Instruction) Number 9 Year 2016. Inpres it regulates the revitalization of secondary education in order improving the quality and competitiveness of Indonesian human resources create and implicate the various institutions ordered in the Inpres. In this Presidential Instruction, the President instructed 12 Ministers of the Cabinet of Work, 1 Head of Non-Ministerial Government Institutions and 34 Governors to perform its role in accordance with the duties and functions in revitalizing vocational education. The 12 Ministers assigned by the President are Coordinating Minister for Human Development and Culture, Minister of Home Affairs Minister of Education and Culture, Minister of Research, Technology and Higher Education, Minister of Industry, Minister of Manpower, Minister of Transportation, Minister of Marine and Fishery, State Owned, Minister of Energy and Mineral Resources, Minister of Health and Minister of Finance. In addition, the President specifically assigned the Head of the National Agency for Professional Certification.

This revitalization effort is done to improve the economic status of the country and its prosperity. For the government to solve the problem of poverty and unemployment this must be done revitalization. In addition, the government is also working to improve vocational education in rural areas. Revitalization of vocational education should improve skills and knowledge so as to provide opportunities in the world of work (Alhaji, 2008).

j. Quick Wins 2016

Quick Wins is an easy and fast-paced initiative step for initiate the implementation of a program. Quick Wins is selected from one or a combination of several areas of change appropriate to the conditions and needs, especially in educational quality improvement programs. Sustainable Development Goals 2030 states that "By 2030 there is an increase in youth and skilled adults relevant skills including vocational and technical skills for work and entrepreneurship". Based on this, the Ministry

Education and Culture has set up some quick wins already achieved in 2016, namely:

- Preparation of Presidential Instruction (Inpres) on the revitalization of Vocational High School in order to Improve the Quality and Competitiveness of Human Resources of Indonesia;
- Development of 150 vocational areas in the Ministry of Marine, Tourism, Agriculture, and Creative Industries;
- Follow-up of President visit to Germany:
 - ✓ sending 45 teachers of Vocational High School for training to Germany;
 - ✓ bring 10 Senior German Experts to Vocational High School;
 - ✓ cooperation Ministry of culture and education with BiBB (German Federal Institute for Vocational Education and Training);
 - ✓ cooperation with Kadin Trier Germany: Pilot Project Dual System in 6 CMS in Central Java and East Java.
- Integrated vocational education pilot project (Vocational High School - Courses – Senior High School - industry) in Batam, Solo, Malang.

Conformity and Linkage with Industry

The Revitalization Program implemented by the pilot Vocational High School includes the development and alignment of the curriculum with industry; learning innovations that drive 21st century skills; the fulfillment and improvement of professionalism of teachers and education personnel; standardization of facilities and basic infrastructure; updating of industrial cooperation programs; management and organizational structuring; as well as increased access to competency certification.

The provision of competent vocational educators is pursued through a dual skills certification program. Up to 2019, Ministry of education and culture will transform at least 45 thousand normative teachers in vocational schools to be productive teachers. In addition, the government encourages industry apprenticeship programs for productive teachers, as well as improving teachers' ability in mastering ICT to support teaching and learning process.

Increasing the vocational skills of Vocational High School graduates will be encouraged through the graduate competency certification through Vocational High School development into a Professional Profession Certification Institution. The formation of certification institutions is focused on schools with learners > 600. Currently vocational school has a student > 600 there are about 4000 Vocational High School which has 90 percent of the total number of students of Vocational High School.

V. CONCLUSION

Based on the results and discussion above, then the conclusion that writer can arrange is the following.

1. The preparation of the Presidential Decree on the Revitalization of Vocational High School is focused on six main tasks, namely:
 - a. make Vocational High School Development Map;
 - b. perfect and align the Vocational High School curriculum with competencies in accordance with the needs of the graduates (link and match);
 - c. increasing the number and competence of educators and education personnel;
 - d. enhance cooperation with ministries/agencies, local governments and businesses/industries;
 - e. improve access to certification of Vocational High School graduates and Vocational High School accreditation; and
 - f. formed a working group of Vocational High School development.
2. The focus of revitalization in Indonesia is limited to the emphasis of education, knowledge and skills, but not on the mental touch of leadership and also mental entrepreneurship, so that the revitalization results become not maximal.
3. In some majors or competence of expertise in Vocational High School especially in the field of business expertise and management less with emphasis on laboratory practice, both physical and learning process, so this field of business and management expertise become graduate producer with big unemployment level.
4. Vocational High School by opening certain majors, of course must have been through the study of the uptake of labor needs and potential areas that should actually be developed; and not just open majors.
5. There should be synergies between institutions well, sitting together, formulating regional potential, talking about the uptake of the needs of Vocational High School graduates, synchronization or alignment between the curriculum and learning materials. Hopefully, the lessons that are held in school "connect" with the competencies needed by the business/industry world.
6. One side, there are still half-hearted areas to explore their potential. Towns on the north coast of Central Java, for example, the number of vocational schools that open majors, still less in number with Vocational High School who opened the office, automotive, and so forth. In fact, the potential of maritime in the cities on the north coast, much larger. The potential of such areas, can actually be handled by the graduates of Vocational High School. That is, the region

should be able to create their own jobs, by giving portions to the vocational graduates, as a workforce.

7. Improving the link and match program is an obligation. The Minister's concept at the time was ideal, linking vocational education with the world of work; starting curriculum preparation, learning process, teacher competence, facilities up to evaluation of learning Vocational High School.
8. The emphasis of the revitalization of vocational education, not solely on graduates and certification institutions. Her teachers. This reinforces that the revitalization of vocational schools should also be targeted to the teachers. Certification can certainly be in a competency test format. Certification is important, because according to the Head of Industrial Education and Training Center of Ministry of Industry, only 22 percent of teachers in vocational school are productive teachers with experience working in the field. Ministry of Education also admitted there is still a shortage of productive teachers in Vocational High School. To that end, ministry education has been increasing the number of teachers with dual competence. Namely, adaptive teachers are encouraged to be productive teachers.
9. It is also important to do in order to revitalize Vocational High School is the realization of cross-sector cooperation. Between the central government, the regions, as well as the industry and the business world. For that, it is necessary to "force" the industry and the business world, to be willing to partner with Vocational High School, by issuing special regulations. That is, regulations that require industry and business owners to partner with Vocational High School. Because, every Vocational High School ideally have industrial partners and businesses.
10. Finally, what is also important in order to revitalize vocational education is a shared commitment. That this problem is not solely the responsibility of one institution, but cross-sectoral including the community to jointly realize the Supreme Senior High School !, Vocational High School, You Can Do It!

REFERENCES

- [1] ADB. *Sustainable Vocational Training Toward Industrial Upgrading and Economic Transformation: A knowledge Sharing Experience*. 2014.
- [2] ADB and Towers Watson Study. *Issues paper for Seminar on 'Jobs and Skills in the Twenty-First Century'*. 2013.
- [3] Alhaji, I. H. Revitalizing Technical and Vocational Education Training for Poverty Eradication and Sustainable Development through Agricultural Education. *American Research Review* 2(1): 152-161.2008.
- [4] Alhasan, Usman, N., & Tyabo, A. Revitalizing Technical and Vocational Education (TVET) for Youth Empowerment and Sustainable Development. *Journal of Educational and Social Research* 3 (4): 149-154. 2013.
- [5] Boateng, C. Restructuring Vocational and Technical Education in Ghana: The Role of Leadership Development. *International Journal of Humanities and Social Science* 2(4): 108-114. 2002.
- [6] Billet, Stephen. *Vocational Education: Purposes, Traditions and Prospects*. 2011.
- [7] Clement, Ute. *Improving the Image of Technical and Vocational Education and Training*, GIZ. 2014.
- [8] Coordinating Ministry for Economic Affairs Republic of Indonesia. *Masterplan Acceleration and Expansion of Indonesia Economic Development 2011 – 2025*. 2011.
- [9] GIZ. *Guidelines Designing TVET Measures*. Germany. ILO. 2014. *ASEAN Community 2015: Managing Intergation for Better Jobs and Shared Poverty*. Bangkok. 2015.
- [10] Haryanti, R. H. *People with Disability in Vocational High School: between School dan Work*. 2017.
- [11] IMD World Competitive Center. *IMD World Talent Report*. Ministry of Education and Culture, Directorate General of Primary and Secondary Education, Directorate of Vocational High School Development. 2015. *Strategic Plan Directorate of Vocational Coaching 2015 - 2019*. Jakarta. 2015.
- [12] Kidwell, Frances L. And Thomas West. *Lessons from Germany and the Future of Vocational Education*. 2012.
- [13] Ministry of Education and Culture. *Master Plan for Compulsory Education 12 Year*. Jakarta.2015.
- [14] Ministry of Education and Culture, Directorate General of Secondary Education, Directorate of Vocational Education. *Overview of Vocational High Schools in Indonesia*. Jakarta. 2015.
- [15] Ministry of Education and Culture. *Grand Design Vocational Education*. Jakarta. 2016.
- [16] McKinsey Global Institute. *The Archipelago Economy: Unleashing Indonesia's Potential*. (September 2012).
- [17] Ministry of Education and Culture of The Republic of Indonesia. *Skills Toward 2020 For Global Era. Taskforce Report on The Development of Vocational Education and Training in Indonesia*. Jakarta. 1997.
- [18] Ministry of Education and Culture. *Overview of the Education Sector in Indonesia. Achievements and Challenges*. Jakarta. 2013.
- [19] National Education Department, Directorate General of Primary and Secondary Education, Directorate of Vocational Secondary Education. *History of Technical and Vocational Education in Indonesia: Building Human Productive*. Jakarta. 2002.
- [20] Nasir, S. B. Strategy to Revitalize Technical and Vocational Education and Training (TVET): Management Perspectives. *Global Journal of Management and Business Research* 12(23). 2012.
- [21] OECD. *OECD Reviews of Vocational Education and Training: Learning for Jobs.Pointers for Policy Development*. 2011.
- [22] Okeye, R., & Arimonu. Technical and Vocational Education in Nigeria: Issues, Challenges and a Way Forward. *Journal of Education and Practice* 7(3): 113-118. 2016.
- [23] Samsudi. "Development of Synchronization Model Curriculum Program Productive SMK Field Engineering". Competitive Grants Research Report, Directorate General of DP3M Task Force of Policy Formulation of Vocational Education Development, Ministry of Education and Culture. 1995. "Interim Report: Skills By 2020". Jakarta. 2005.

- [24] SEAMEO VOCHTECH. *Integration of Transferable Skills in TVET Curriculum, Teaching-Learning and Assessment. Final Report*. 2014.
- [25] SED TVET-GIZ. *Kajian Kemitraan Dunia Usaha-Dunia Industri (DU/DI) dan Sekolah Menengah Kejuruan: Peluang dan Tantangan*. 2012.
- [26] Skjaerlund, Gorm, Theo van der Loop. "Supply of Non-formal Training in Indonesia". TNP2K Working Paper 23. (February 2015).
- [27] Suliswanto, Harry; Thomas Russell. *Study Report. Lesson Learned on Public – Private Alliances in the Vocational Education System of Indonesia*. 2012.
- [28] Suto, Irenka. *21st Century Skills: Ancient, Ubiquitous, Enigmatic?. A Cambridge Assessment Publication*. 2013.
- [29] Suwarna, Achmad. "Skills Toward 2020, A Plan to Improve and Coordinate Skills Training in Indonesia", Paper prepared for UNESCO/ UNEVOC Regional Conference Royal Melbourne Institute of Technology Melbourne Australia 11–14 November 1996.
- [30] The Economist Intelligence Unit Limited. "Driving the skills agenda: Preparing students for the future". An Economist Intelligence Unit Report, sponsored by Google. 2015.
- [31] Widyana, G., & Mukhadis, A. Development of Vocational Education as Demands Revitalization Vocational High School in Dual Skills Program. *International Journal of Research and Engineering* 4 (12): 278-282. 2017.
- [32] World Bank. 2011. *Revitalizing Public Training Centers in Indonesia: Challenges and the Way Forward*. 2011.
- [33] Whitney, F. *The Element Of Research*. New York :Prentice-Hall, Inc. 1960