

# The Role Of Vocational Education In Fulfilling Labor In Industry

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**Abstract—** Development of vocational education is an effort that aims to realize the Indonesian community who are qualified, advanced, independent, and modern. The development of vocational education is an important part of a thorough and serious effort to improve the dignity of the nation. The success in building education will contribute greatly to the achievement of overall national development goals. In such a context, the development of education encompasses a very wide range of dimensions: including the ideological, political, economic, social, cultural, defense and security dimensions. Vocational education is a provision in dealing with and solving the problems of living and life, both as an independent person, a citizen, as well as a citizen. If this can be achieved, then the dependence on the availability of employment resulting in increased unemployment can be lowered, this means that national productivity will increase gradually and the development of vocational education has contributed to the improvement of people's welfare.

**Keywords—** *role, vocational education, labor, industry*

## I. INTRODUCTION

Government policy in this case the Ministry of National Education that states that in the future the proportion of the number of SMK and SMA in Indonesia should approach 70% to 30%, this consideration seems logical considering Indonesia requires many middle skilled workers to meet the needs of the world of work and industry. To realize this expectation is certainly not easy and need to get support from various parties including the community and the business community and industry. Business and industry parties should provide support for education in vocational schools, as it is known that the existence of vocational high schools (Sekolah Menengah Kejuruan / SMK) requires adequate infrastructure and facilities for the sustainability of vocational schools [1].

To build a vocational school required adequate practice and required teachers / instructors who have the ability and high skills for the existence of SMK get recognition from the users / users. If we compare in developed countries such as Germany, Japan, Singapore, etc., that the existence of SMK gets support from the business and industry, and there is a good cooperation, mutual benefit both in the industry and on the school side. Based on the above it seems to develop vocational

education in Indonesia needs to make the right breakthrough in developing vocational education.

In an effort to produce qualified graduates and be able to adapt to technological developments, adaptive, productive, and practice teaching lessons in SMK need to be improved, as this kind of approach can foster students' critical attitude in dealing with various issues. Broadly speaking, it seems that the mindset that arises from studying the existing conditions in SMK is very helpful in studying vocational theory and vocational practice in SMK. On the other hand, teachers or instructors who teach in vocational schools should have the skills and creativity for skills learning in SMK.

Based on the description above, the following explanation aims to explain the concept and objectives of vocational education, life skills in relation to vocational education, vocational education as the provision of entering employment, and improving the quality of vocational education through work base learning.

## II. VOCATIONAL EDUCATION

### A. Vocational Education Concept

Vocational education is a combination of theory and practice in a balanced manner with an orientation to the readiness of work for its graduates. The curriculum in vocational education is concentrated in the apprenticeship of learning system on specific trades. The advantages of vocational education include that learners can directly develop their skills tailored to the needs of the \ field of tasks that will be faced.

Vocational education is a central issue in education services. It is a bridge between the preparation of learners in educational institutions with the community and the business / industry. Vocational training specifically becomes the content of the curriculum in the form of functional skills and professional personality lessons. In addition to vocational training through science and technology subjects with the thematic, inductive, and people-oriented approach in their area.

### B. Vocational Education Objectives

Vocational education of various types and levels aims to prepare labor who are expected to meet the needs of employment. In line with the development in Indonesia, the need for labor is increasing. In general, labor users require a ready-to-use labor or at least require only a short "lead time" to achieve the required expertise. In relation to this matter, vocational education needs to prepare educational programs relevant to the needs of employment. This has not been widely achieved because many vocational education graduates have difficulty finding employment because the number and type of graduates are less appropriate with the number and type of employment available; the graduates gained ability are less in accordance with the skills required by the world of work, especially in the mastery of technology. The problem is not only happening in Indonesia but also in other countries. Rapid technological developments have caused some new technologies to become obsolete before reaching the market. Thus, the business world has difficulty projecting its needs. On the other hand, vocational education must have the flexibility to react quickly to the needs of the business/industry. This condition indicates that the gap between labor users occurs because the inability of the education world to make adjustments immediately with changes that are so fast and continuous in the business world.

Although the problems that have been raised generally involve vocational education, it is seen that technological development is one of the main contributing factors as has been pointed out. For that we need to make efforts to anticipate problems with all the advantages.

Technology is needed for a basic needs strategy in developing countries, especially aimed at low-income groups such as farmers, small industries, people's crafts, and those working in the informal sector. This form of technology is called appropriate technology. There are two requirements required for this type of technology: 1) technology that adapts imported personnel from developed countries to the typical situation in developing countries, and 2) the equity income support technology needed for the strategy. The various skills required to develop, create and apply this type of technology is a major concern in vocational education.

Technology is needed as a strategy to face new challenges in the information era, current, and future globalization era. Along with various advances in knowledge and technology, Indonesian people need to prevent not to become technologically blind, various types of technology categorized as advanced technology such as computers, communication media, electronics, automotive, internet, and others, have begun to be adopted by the community. And for some types already applied time. Thus, the skills, knowledge, of the existing equipment is naturally a concern or at least applied in technology education to industrial technology as an orientation. Along with the appropriate technology and advanced technology, the concept of industrial technology should be a reference to the current technological and vocational education movement. Djojonegoro [1] saw the importance of education in increasing industrial productivity. Vocational education and

training are put in place as a strategic effort to be further encouraged in sustaining industrial productivity.

### C. Life Skills in Relation to Vocational Education

Life skills according to Anwar [2] include five types, namely: (1) self-knowing skills, (2) thinking skills, (3) social skills, (4) academic skills, and (5) vocational skills. Life skills are interactions of various knowledge and skills so that one is able to live independently. Life Skills are self-development to survive, grow, and develop, have the ability to communicate and connect both individually, in groups and through systems in the face of certain situations. The definition of Life Skills is not solely a vocational job, but it also has a functional support base function such as reading, writing, and arithmetic, formulating and solving problems, managing resources, working in groups, and using technology. From the concept, it is clear that vocational education is a skill that can practically equip learners in overcoming various problems of life and life.

According to Anwar [2] based on the concept, life skills can be divided into two main types, namely: Generic Life Skills (GLS), and Specific Life Skills (SLS). Each type of skill can be divided into sub-skills. Generic life skills consist of personal skills (skills), and social skills (social skills). Personal skills include self-awareness skills and thinking skills.

Self-knowledge is basically a self-appreciation as a creature of God Almighty, as a member of society and citizens, and realize and be grateful for the advantages and disadvantages that are owned as well as capital in improving himself as an individual who benefits the environment. Thinking skills include the ability to recognize and find information, process, and make decisions, and solve problems creatively. While in social skills include communication skills (communication skills) and collaboration skills (collaboration skills).

Specific life skills are skills for dealing with specific jobs or circumstances. This skill consists of academic skills (academic skills) or intellectual skills, and vocational skills (vocational skills). Academic skills are related to areas of work that require more intellectual thought or work. Vocational skills are related to areas of work that require more motor skills. Vocational skills are divided into basic vocational skills and special vocational skills (occupational skills). According to the above concept, life skills are the ability and courage to face life's problems, then proactively and creatively seek and find solutions to overcome them.

Vocational education is a provision in solving the problem of life, whether as an independent person, community members, and as citizens. If this is achievable, dependence on job availability, resulting in increased unemployment, can be lowered, which means that national productivity will increase gradually. The development of vocational education is an effort that aims to create quality, advanced, independent, and modern Indonesian society [3]. The development of vocational education is an important part of a thorough and serious effort to improve the dignity of the nation. Success in building education will contribute greatly to the achievement of overall national development goals. In such a context, the development of education covers a very wide range of dimensions: including social, cultural, economic, and political dimensions.

From a social perspective, vocational education will give birth to educated people who have an important role in the process of social change in society. Education is a determinant factor in accelerating mobility of society, leading to the establishment of a new social formation. This new social formation consists of a layer of educated middle-class society, which is an important element in strengthening social cohesion. The education that gave birth to the educated society layer became the gluing force that linked the social units within the society: family, community, community association, and social organization which later became a large organization of state institutions.

Thus, vocational education can make an important contribution to strengthening social integration. In a cultural perspective, education is an important vehicle and an effective medium for teaching norms, socializing values, and instilling work ethics among citizens. Vocational education can also be an instrument to nurture the nation's personality, strengthen national identity, and establish a national identity. Even the role of vocational education becomes even more important when the flow of globalization is so strong, which brings about the influence of values and culture that are often contrary to the values and personality of the Indonesian.

In this context, vocational education can be a strategic vehicle for building collective conscience as citizens and strengthening social ties, while respecting cultural, racial, ethnic and religious diversity to strengthen national wholeness. In an economic perspective, vocational education will produce reliable humans to be the subject of driving national economic development. Therefore, vocational education should be able to produce qualified graduates who have the knowledge, master technology, and have adequate technical skills and life skills. Vocational education should also be able to produce professionals who have entrepreneurial skills, which became one of the main pillars of national economic activity. Even the role of vocational education becomes very important and strategic to improve national competitiveness and build the independence of the nation, which becomes the absolute requirement for entering the competition among nations in the global era.

In the current global era, many nations in the world have developed a knowledge-based economy (KBE), which requires the support of qualified people. Therefore, vocational education is absolutely necessary to sustain the development of the knowledge-based economy of education for the knowledge economy (EKE). In this context, vocational education institutions should also serve as centers of research and development, resulting in superior research products that support the KBE. The availability of qualified human beings that dominate science and technology greatly determines the nation's ability to enter global competence and free market economy, which demands high competitiveness.

Thus, education is expected to lead Indonesia to achieve excellence in global competition. In a political perspective, vocational education must be able to develop the capacity of individuals to become good citizens, who have an awareness of rights and responsibilities in the life of society, nation and state. Therefore, education must be able to give birth to

individuals who have the vision and idealism to build collective strength as a nation. Vision and idealism must be referring to and derived from the national ideology, embraced by all components of the nation.

### III. VOCATION EDUCATION AS A PREPARATION IN ENTERING THE FIELD OF WORK

Technology and vocational education are developed in Indonesia, in other countries known as Vocational and Technical Education. Vocational education as a specialized education that prepares students to enter a job or work group or to improve their ability to work [4]. In this phrase it is clear that vocational education is concerned with the ability or skills required by a job. Called specialized, because the program imposed for students who have a special interest in a particular type of job or specific work groups.

The expected role of this type of education is primarily related to career or occupation. A clear career development system will work if career development has become an integral part of education as a whole. Each level of education has a certain role in advancing students, have a career and achieve maximum job competence. At the level of early education awareness of careers have begun to be invested. At the middle school level orientation and exploration of career has grown up. At the next level any formal and non formal education personnel should be able to enable students to explore their work clearly, begin to specialize and then achieve advanced career specialization. In this level, educational institutions can hold inservice or retraining career, such career development system is being encouraged in Indonesia. The concept of education for the world of work (education for work) has long been known.

Vocational education is developed to meet the demands of the world of work. Through this education the students will have the opportunity to work. The increasing need of society to technology will also increase the level of professionalism in doing work. The main goal of vocational education is to prepare students to enter a work field and to improve their chosen career.

Billett [5] identifies three goals in vocational education: (1) meeting the needs of the labor in society, (2) providing opportunities for individuals to make work choices, and (3) helping to strengthen motivation in learning. For this purpose to be achieved, the important thing that must be prepared in vocational education is the existence of good resources, including educators, facilities and infrastructure, and a conducive learning environment.

### IV. IMPROVING QUALITY OF VOCATIONAL EDUCATION THROUGH WORK BASE LEARNING

Work-based learning (WBL) as all forms of learning through the workplace, whether the work experience or work shadowing within a certain time. Another definition states that WBL is all learning that occurs because of activity at work [6]. Work-Based Learning (WBL) as a learning approach plays a role in promoting professional development and learning.

Many references to WBL with definitions and implementations vary greatly from place to place. The WBL is used as a terminology in various countries for programs at schools or colleges to gain experience from the world of work [7] and for teenagers to be ready for the transition from school to work to learning the realities of the working world and to be ready for Make the right choice in work [8]. "Work-based learning is any training that relates directly to the requirements of the job on offer in your organization" [9]. Gray [10] states that WBL is learning at the college level that comes from paid and non-employment efforts including work-related learning (eg, work placements), workplace learning (eg in-house training), and work-through learning.

The WBL approach is derived from the premise that real workplace learning settings not only make academic learning easier for students to digest but also improve engagement in the schooling of industry/workplaces [11];[12]. School activities help strengthen and expand learning achieved in the workplace while learners develop attitudes, knowledge, and skills from two-place experiences (schools & workplaces/industries) and enable to connect learning with real-life work activities [13]; [14]; [15].

The WBL is a learning program that describes a program in a college where universities and organizations or industries jointly design learning in the workplace so that the program meets the needs of learners and contributes to the development of the industry. The WBL is a formally organized program in higher education. The goal is to bring learning activities closer to work. The benefits are in addition to being a vehicle for transitioning learners from school/campus to the workplace [16] as well as for knowledge development through the workplace with employer engagement [17]; [18]. There are six characteristics of WBL according to Boud & Solomon [19], described as follows.

First, the relationship between business / industry and educational institutions specifically to build and assist learning. This business / industry can belong to the government, private or other economic sectors of society. This relationship is needed to build the infrastructure in assisting the development of learning. WBL can occur if learning is done in the workplace and learning is carried out in a conducive environment. In addition, the project implementation of learning run in the form of cooperation in accordance with what is needed in the workplace. Why is that? Because the WBL requires an individualized learning plan designed within a few years and the learning is oriented so that learners have a skill learning experience and are ready to work. Therefore, through the WBL this relationship was formed by designing an MOU between universities and industry. The agreement relates to how many learners will be involved, how long the program will run, how the WBL can be implemented in accordance with industry capabilities, etc.

Second, Learners are involved as workers. The needs of each learner vary and change over time. Therefore, the WBL learning plan is designed for each learner. With the aim that the learning program can be supported and use the resources available and agreed by the parties concerned.

Third, the WBL Programs follow what is needed in the workplace and what the learners need. Because of the assumptions of work-based learning, the implementation is different from what is held in college. Knowledge is gained in different forms in business and industry, different goals, purposes and outcomes.

Fourth, the level of education in the program builds upon the learner having recognized competencies. The competencies possessed by each learner are not what can be shown with previous skills. But what can be done by the learner after the program. Prior learning and experimental learning assessment are often used in this program.

Fifth, the WBL learning project undertaken in the workplace, presents challenges to meet the needs of future learners, and the industry itself. Learning is not only designed to broaden learner knowledge and skills but also to provide something different for the industry. The project is not only to contribute to the industry, but also to make a real step in working on the project and other jobs. Individual capabilities and management processes are closely related. This project not only allows managers or supervisors to see the participation of learner activities but the project also makes a real contribution to the industry.

Sixth, educational institutions have an agreed outcome in this program with respect to the standards and levels that have been set, in contrast to conventional courses, in the WBL there are no syllabus, material core, and others. In the WBL modules may only be prepared to introduce strategies and techniques to learn "how to learn" and learn from existing work situations. It may be equipped with portfolios and proposals for strengthening the unit and as a reference for preparing documentation for the learning experience.

The problem faced by vocational education providers to establish cooperation with the industry (more over applying the concept of work-based learning in vocational education) is difficult to establish partnerships with industry that is committed to education to help learners transition from school to work. There are not many vocational education institutions (both vocational and universities) who already have MOUs for the transition. In the end, the institution organizes teaching and learning only based on school (school-based learning). This is certainly less favorable for the implementation of vocational education.

The various literature has discussed the role of the WBL in vocational higher education. Gray [10] defines work-based learning as a learning approach to higher education derived from both paid and unpaid employment programs. Programs distinguish between "learning for work (e.g. work placement), learning at work (e.g. company in-house training programs) and learning through work, linked to formally-accredited further or higher education programs". These programs are meant as a discipline/things to be delivered, not to be learned. Other experts [20], mentioned that there are three principal factors affecting collaboration between universities and industry: increasing graduates reaching higher skill levels, recognizing higher value-added activities, and innovating, start a business activity and creativity.

The WBL's experience gives learners the opportunity to develop and apply knowledge, skills, and employability attitudes that lead to better-informed career choices and engagement in productive employment. The application of WBL can be implemented maximally in every level of learners, from primary and secondary school to higher education. Starting from a classroom teacher's lecture on work / vocation, expectations about the world of work to the continuum of competitive job acceptance.

## V. CONCLUSION

### A. Conclusion

Vocational education is a combination of theory and practice in a balanced manner with an orientation to the readiness of work for its graduates. Curriculum in vocational education concentrated on the skill-learning system on specialized vocational. The advantage of vocational education is that learners can directly develop their skills tailored to the needs of the field or field of tasks chosen. Vocational education is a provision in the face and solves the problem of life, both as an independent person, member of the society, and as citizens. Development of vocational education is an effort that aims to realize the qualified, advanced, independent, and modern Indonesian society.

### B. Suggestion

Vocational education will work best if supported by all parties, parents of learners, government, and society, especially the business / industry. All three are Trinity who must commit to building education organized by vocational schools. All three play a role in planning, developing, implementing, and evaluating the vocational education at each level of education according to their ability and their respective roles.

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