

# OPTIMIZING THE ROLE OF INDUSTRY IN THE DEVELOPMENT OF VOCATIONAL EDUCATION AND TRAINING IN INDONESIA

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## ABSTRACT

Objectives of vocational education is to prepare students to enter the workforce and to develop a professional attitude. To achieve these objectives, the concept had been born a Link and Match between education and the workplace. One of the real form of policy implementation on the link and match Vocational High School (VHS) is the implementation of the Dual System of Education (*PSG*). Implementation of the Dual System of Education (*PSG*) is not fully yield insight management reform of vocational education and training as expected. Although in some schools already have agreements with industry partners, but the implementation is not optimal because the components of *PSG* supporters, such as joint training and education programs, standardized materials, and guide the implementation of the *PSG* is prepared jointly by the school with the industry have not been realized to the optimum. Therefore, the implementation and development of *PSG* on the VHS should be optimized in accordance with the concept of Link and Match, namely: 1) Optimizing the Quality Improvement. This program is basically optimizing the conditions and available resources. Model implementation of *PSG* is expected to involve a lot more jobs, so more of the School and industrial based program, in which the design or implementation of educational programs is the design and agreement between VHS and the industry is concerned that a partner; 2) Optimizing the Development of Standardized Systems. In this program a number of efforts are optimal, so that the program has been designed to support standardized human resources, management, facilities and infrastructure are also standardized, and 3) Optimizing the Development of Vocational Skills Center. The program is intended to expand the implementation of the *PSG* through the establishment and development of skills development centers. Through this program, industries are encouraged to build training centers, so as to participate actively implement the *PSG* since the beginning of vocational programs. Optimization of industrial support for the development of vocational education and training in Indonesia is expected.

**Keywords:** Optimization; Link and Match; development; joint program

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## 1. INTRODUCTION

Vocational education as one part of the National Education system plays a very strategic for the realization of a skilled national workforce. Secondary vocational schools have an important role for the achievement of the objectives to prepare students with the skills and professional attitude until ready to enter the workforce. The American Vocational Association (Thompson, 1973: 111) states that:

*“Vocational education as education designed to develop skills, abilities, understandings, attitudes, work habits, and appreciation needed by works to enter and make progress in employment on useful and productive basis”.*

Vocational education is basically designed to develop the skills, abilities, understanding, attitudes, work habits, and knowledge workers to meet and develop and improve job skills of workers so that they can be genuinely useful and productive. Vocational education is education designed to

prepare a person in entering employment, and / or intended to help develop one's abilities related to the world of work. Vocational education seeks to produce graduates who are expected to adjust quickly to the world of work.

Law No.20 of 2003 on National Education System is defined as: "Vocational education is an education that prepares students to work in a particular field". Objectives of secondary vocational education is a priority to prepare students to enter the workforce and develop a professional attitude (PP No. 19 of 2005).

Vocational high school (VHS) to prepare human resources that are ready to enter the workforce and become a productive workforce. Vocational school graduates into the workforce ready to use, that could work directly in the business and industry. Problems faced by vocational schools now generally associated with limited equipment, the low cost of the practice, and learning environment that is similar to the world of work. This condition can lead to the unpreparedness of graduates entering the workforce. Therefore,

support the industry in the development of vocational education and training, especially Vocational high school (VHS) in Indonesia is still very necessary.

The concept of relevance and proportionality (Link and Match) between education and the workplace who coined the former Education Minister Wardiman Djojonegoro need to be optimized again. One of the real form of policy implementation on the link and match Vocational High School (VHS) is the implementation of the Dual System of Education (*PSG*).

Link and Match as a basis for vocational education reforms carried out by dual-based program, school management maturity, development production unit.

Restructuring and renewal occurs dimensions of vocational education: (1) "Supply Driven to Demand Driven, (2) school-based education into double-based education, (3) subject-based teaching (subject matter ) a competency-based instruction (based competencies), (4) program is a narrow base (narrow based) to the basic foundation program (broad based), (5) multi-entry multi exit;(6) recognition of prior learning, (7) distinct separation between education and training to integrate education and training; (8) education is terminal (dead end) to the continuing education (bridging program); and (9) centralized management (centralized) to be independent of management (decentralized).

Dimensions of vocational education will be achieved if supported by the industry. Implementation of the Dual System of Education (*PSG*) is not fully yield insights into the management of vocational education reform as expected. Although in some schools already have agreements with industry partners, but the implementation is not optimal because the components of *PSG* supporters, such as joint training and education programs, standardized materials, and guide the implementation of the *PSG* is prepared jointly by the school with the industry have not been realized to the optimum. In addition, the indicators of competence required in the industrialized world has not been studied in depth, because the development of vocational curriculum not involve user industry as a graduate. Therefore, in this review will discuss "Optimizing the Role of Industry in the Development of Vocational Education and Training in Indonesia".

## 2. DISCUSSION

### 2.1 The concept of Dual Education System

One form of real implementation of the policy link and match is the implementation of the Dual System of Education (*PSG*) at the Vocational High

School (VHS). According Wardiman (1998: 78), the Dual System of Education basically contains two main principles, namely:

**First:** the vocational education program at the vocational school is a joint program (joint program) between the VHS with industrial / corporate partner. These principles are the implications of the transition from supply driven to demand driven. Transition in the sense of authority and responsibility unilaterally by the Ministry of Education and Culture towards unity with the parties concerned with vocational education.

**Second:** The vocational education program conducted in two places, some program that is theory and practice carried out in basic vocational school (SMK), and others carried out in industry / company that is productive skills gained through work in the world of work. Pattern of education in these two places, will force VHS to adjust to the needs of the workplace, to facilitate the transfer of values and work behavior as apply in the workplace.

Dual System of Education is a form of education and vocational skills training that combines systematic and synchronous education programs in schools and program expertise gained mastery through working directly in the world of work, targeted to achieve a certain level of professional expertise (Wardiman, 1998 : 79).

In that sense, there are two sides implied that education and training, and employment (industry / enterprise or specific agencies) are jointly organizing a program of education and vocational training. Both sides are genuinely involved and responsible for the program from the planning phase, implementation phase, to the level of assessment and determination graduation of students, graduates and marketing efforts.

Based on the concept of Dual Education System (*PSG*), which has been described above, several questions arise, namely: 1) Has the industry and companies involved in the program planning process, starting from the curriculum, learning tools, to the evaluation stage?; 2) how big is the industry and the company's involvement in the administration of the program?; 3) how big is the role of industry and enterprise in the marketing efforts of its graduates?.

Based on the observations that have been conducted in several vocational school in Sulawesi, was third on the underlying problems have not been optimally performed by both parties, namely the institution of education and training (VHS) with industry and company.

## **2.2 Dual System of Education Organization purpose**

Providing education and training with *PSG* approach aims to: 1) Produce a workforce professional skills, the workforce has the knowledge, skills and work ethic according to the demands of employment, 2) Improve and strengthen linkages and equivalence (link and match) between educational institutions and vocational training (VHS) with the world of work; 3) Increase the efficiency of education and training of professional-quality workforce, by leveraging existing training resources in the world of work; 4) Give recognition and appreciation of the work experience as part of the educational process.

Objectives of *PSG* will be reached if both parties, namely the organizers of education and training (VHS) and the industries/companies collaborate optimally in the planning, implementation and evaluation of education which always refers to the achievement of competency standards in accordance with the demands of job title or profession applicable in certain jobs.

## **2.3 Dual System of Education component**

*PSG* characteristics as a form of education and vocational training, supported by several factors into its components:

### **2.3.1 Partner institutions:**

Dual System of Education (*PSG*) may only be implemented in the event of cooperation and commitment between vocational education institutions (VHS) and other institutions (industry / company) or other agencies concerned with labor, who have the resources to jointly develop and conduct educational and vocational training.

### **2.3.2 Education and training programs together.**

Because *PSG* is basically owned and shared responsibility between vocational education institutions and partner institutions, the programs designed and agreed by both parties include: 1) Standards of competence graduates. *PSG* is directed to produce graduates who have specific competence in standardized in accordance with employment needs, 2) The standard of education and training. To achieve mastery of skills standards of graduates who have been established, we need a process of education and training designed to standardized the size of the content, timing and specific method. For it should be determined and agreed upon: (1) Materials. The material is divided into three parts, namely the normative, adaptive and productive. Support industries / companies that is required is a productive component in the design, which contains

material relating to the establishment of a specific skill capability in accordance with their respective study programs for the provision to enter the workforce; (2) time. Based on the standards that must be mastered skills and materials to be studied, it was determined how long the education and training was implemented, then agreed how long it is implemented in schools and how long the couple held at the institution;(3) Implementation Patterns. Need to be agreed pattern or model of program implementation arrangements, particularly with regard to when implemented in vocational and when the partner institutions. Design or model release operation can be shaped hour, day-release and block release, or a combination of all three.

### **2.3.3 System Assessment and Certification.**

Measurement and assessment of the success of students achieve the ability in accordance with professional standards (standards of graduate skills) that have been established, should be done through the process and systems assessment and certification agreement. It is therefore necessary to set up a system of test material, test execution, results and certification determination. In order to function optimally, the system should be run by a team of assessors and certification involving school element, the element of institutional partners, professional associations, labor organizations and other elements related to employment.

### **2.3.4 Institutional Cooperation**

*PSG* implementation requires the support and security through cooperation agencies. This cooperation involves the institutions of government (Ministry of Education and Culture) and all interested parties with education and vocational training (stakeholders), among others, the industry (*KADIN*), the Organization of Workers, the Association of Professionals and Community Leaders.

### **2.3.5 Added Value and Incentives**

Cooperation between vocational and industry / enterprise, particularly in the implementation of the *PSG*, developed with the principle of mutual help, co-exist and complement each other for mutual benefit. Based on this principle the implementation of *PSG* will provide added value to those who cooperate.

### **2.3.6 Guarantee the implementation of the *PSG***

Due to the implementation of *PSG* involves many parties, it is necessary arrangement on cooperation procedure, which involves the function, structure, mechanism, and the rights and obligations of all parties involved in the implementation of the *PSG*.

## 2.4 Strategy Development / Optimization

Dual system of education is nothing new. Implementation of this program has been implemented in the VHS it's just that the implementation is not optimal because the concept of Dual System of Education which has been prepared by the vocational expert was not implemented properly. Therefore, the implementation and development of the Dual System Vocational Education must be optimized in accordance with the original concept by considering a few things:

### **First: Optimizing Quality Improvement.**

This program is basically a *PSG* in all correctional efforts to optimize the conditions and vocational resources available. Model implementation of *PSG* is expected that more field involving industry / company that is more School and industrial based program, in which the design or implementation of educational programs is the design and agreement between the relevant vocational and industry/company who becomes her partner.

**Second: Optimizing Development of Standardized Systems.** The program is intended to develop a standardized model of *PSG* (standardized System Development). In this program a number of efforts are optimal, so that the program has been designed in standardized supported by Human Resources, management, facilities and infrastructure are standardized.

**Third: Optimizing the Development of Vocational Skills Center.** The program is intended to expand the implementation of the *PSG* through the establishment and development of skills development centers (Skill Development Centers). Establishment of skills development centers will be able to customize and enhance the carrying capacity of the vocational school to accommodate and meet the demands of jobs, particularly urgent (Immediately) and or highly specialized skills (Specific), which may not be served by a regular program is available. Through this program, industry/enterprises are encouraged to build training centers, so as to participate actively implement the *PSG* since the beginning (first year) vocational program.

The three programs mentioned above are the steps that must be re-optimized in accordance with the policy link and match. Optimizing the role of industry in the development of vocational education and training in Indonesia should be properly addressed. May the Partnership between Education and Vocational Training and Industrial / company can be reinforced.

## 3. CONCLUSIONS AND RECOMMENDATIONS

### 3.1 CONCLUSIONS

- 1) Dual System of Education (*PSG*) may only be implemented in an optimal, if there is cooperation and commitment between vocational education institutions (VHS) and other institutions (industry/company) who have the resources to jointly develop and provide education vocational and training.
- 2) *PSG* Model is administration expected to involve more of the industries / companies that are more industrial and School-based program, in which the design or implementation of educational programs is the design and agreement between the relevant vocational and industry/company who becomes her partner.
- 3) Optimizing the development of standardized *PSG* models, which made optimal efforts, the program has been designed to be standardized, supported by human resources, management, facilities and infrastructure are also standardized.
- 4) Expand the implementation of the *PSG* through the establishment and development of skills development centers (Skill Development Centers). Optimization of the establishment of skills development centers will be able to increase the carrying capacity of the vocational school to accommodate and meet the demands of employment.
- 5) The involvement of industry/enterprise in the marketing efforts of vocational graduates are also highly desirable

### 3.2 RECOMMENDATIONS

Optimization of the support industry in the development of vocational education and training can work if they are supported by various parties including the government in this case the Ministry of Education and Culture, *KADIN*, Professional Association, the Organization of Workers and Community Leaders.

## REFERENCES

- Depdikbud. (1997). *Keterampilan menjelang 2020 untuk era global*. Jakarta: Departemen Pendidikan dan Kebudayaan
- Depdiknas (2005). *Peraturan Pemerintah RI Nomor 19 tahun 2005, tentang Standar Nasional Pendidikan*.
- Depdiknas. (2003). *Undang-undang RI Nomor 20, Tahun 2003, tentang Sistem Pendidikan Nasional*.
- Depdiknas. (2009). *Roadmap pengembangan SMK 2010-2014 Direktorat Pembinaan SMK*. Jakarta: Departemen Pendidikan Nasional

- Finch & Crunkilton. (1999). *Curriculum Development in Vocational and Technical Education, Planning, Content, and Implementation*. United State of America : Allyn & Bacon A Viacom Company.
- Thompson, John F, 1973. *Foundation of Vocational Education Social and Philosophical Concepts*. Prentice-Hall, New Jersey
- Wardiman Djojonegoro. 1998. *Pengembangan Sumber Daya Manusia: Melalui Sekolah Menengah Kejuruan (SMK)*. Jakarta: PT. Jayakarta Agung.
- Zuhal. (2010). *Knowledge and innovation platform kekuatan daya saing*. Jakarta: PT Gramedia Pustaka Utama.