ABSTRACT

Dual system, as a combined partnership in education between vocational schools and companies is a teeming phenomenon all-over the world. Indonesia is one of the countries that for sometimes has been practicing this system seriously using huge amount of resources all-over the nation. However, the result is not typical for different schools. Originally the researcher was interested in evaluating the implementation of Dual System Program, but after sometimes during qualitative data collection, the researcher was more interested in some important factors affecting the success of dual system. The study shifted to explore key success factors in implementing dual system at YKTB 2 vocational High School in Bogor Indonesia. Using a Discrepancy Evaluation Model (DEM) and beyond, the researcher evaluated the implementation of the System at the Vocational School in Bogor Indonesia and conclude that the success of implementation is very much depends on harmonious association of school supervisory activities and the capability of training specialist in the industry to translate the objective of vocational schools for providing graduates to work in several positions available in the economy.

Keywords: dual system, vocational school, intermingle

Kata Kunci: sistem ganda, sekolah kejuruan, kerja sama
INTRODUCTION

Indonesia agreed to sign Asian China Free Trade Area (ACFTA) which will formally be implemented in January 2010 and further the World Free Market in 2020. The agreement has consequences in trade competition among nations both for products and services. Indonesia as a big country in Asian must prepare for providing productive human resources coming from vocational schools to compete other nations particularly in Asean countries. This responsibility involves the Ministry of Education, the Ministry of Workforce and the Ministry of Trade. Not to mention the involvement of Chamber of Commerce and the community in general.

The Central Bureau of Statistics mentioned that unemployed work forces in February 2005 were 10.9 million. This happened due to imbalances between workforce and employment. On the other hand, the government planned to create jobs to reduce unemployment as many as 10.3% of the total workforces. Educational reform is needed to respond to the new challenges, if not, education will only produce workforce that cannot be absorbed by job market. Relating to this problem, ideally the graduate of vocational education can be absorbed by employment around 80 to 85%. By rough estimation, the number of graduates that can be absorbed by employment were under that figure. Under this condition a reformation in vocational education is a must to overcome unemployment problem in Indonesia. Considering the limited availability of national budget which was allocated only to solve poverty problem, unemployment problem and other social aspects. One possible way that can be taken by the government at the present time is to change the proportion of vocational schools and high schools. At the present time the proportion of vocational schools to high school is 30 to 70%. It is believed that by changing this proportion the unemployment problem can be reduced.

The Ministry of Workforce and Transmigration in collaboration with The Ministry of Education has initiated to innovate “job-oriented” education system. In line with this initiation, the governor of West Java said that the number of vocational schools in West Java will be increased gradually. At the present time the proportion of high school and vocational school is about 70% to 30%. In the future, the proportion will be 30% to 70%. This policy is based on the fact that the quality of job seekers is very low. As a result, job seekers do not have bargaining positions. The increase in the number of vocational schools will hopefully improve the number of graduates entering employment.

In addition to the low quality of job seekers, according to the governor the availability of employment is lower than the number of job seekers. Therefore, the mindset of the youth and job seekers must be changed from seeking a job to creating a job.

Two European countries can be taken as an example for their success in implementing dual system are Denmark and Germany. What these two countries did was to provide the apprenticeship for students to be trained in companies or industries or involved students directly in working environment. This practice is well known worldwide for its ability to prepare students to go to labor market with
qualified labors. They are easily adjusting themselves to the fast-changing conditions and technologies. The dual system provides skilled labors to work directly in industries or to be entrepreneur. This system provides harmonious connection between education and industrial challenges. Another countries apart from Germany that practicing dual system are Austria, Switzerland, Holland and Norway. (Billett et al., 2012)

What the school cannot teach is intrapreneurship skill. Intrapreneurship is a kind of behavior needed in the firm and industry as a potential substantial value in the enterprises. According to (Frank, Korunka, Lueger, & Weismeier-Sammer, 2016) the selection processes of apprenticeship, corporate social responsibility are among the process for shaping intrapreneurship behavior. Intrapreneurship is needed when a firm or industry confronts internal problems such as inefficiency and ineffectiveness. Developing this skill becomes a big challenge for modern industries where competition become very tight and harsh. By implementing Dual System, students of vocational schools can learn from the industries to develop intrapreneurship. Since intrapreneurship is the very critical skill that the schools cannot provide, they must work together with industries by implementing an appropriate Dual System.

Many countries will look at German experience when they want to do dual system in education (Deissinger, 2015). Because they think that Dual System can overcome the integration problem between school-leavers outgoing from vocational education and skills deriving from training in industries to reduce youth unemployment. Education and training system as a whole is very complex and still considered to be in the transitional process in Germany, however the lesson learned from Germany can promote spirit for many countries to follow or to imitate and even innovate in some ways the form of Dual System to be applied in their respective countries.

Islamic education has also rich examples of doing Dual System. In early days, Islamic education was considered have a holistic approach in the developing humankind and Islamic civilization. This kind of education has been practiced by Nigeria and Malaysia prior to Euro Colonial Adventures. (Abubakar, Abdullah, Ubale, & Embong, 2016). This is done because the fact that education that focused itself on physical well-being of temporal life achievement may have negative impact on the individual family and even on the entire communal life. This Islamic study proposed recommendation for reforming contents, methods and curriculum as an integral part of educational system with balanced policy as promoted by Islamic education.

**METHOD**

The method, the way the researcher accomplishes data collection and analysis, brought forward steps and activities to arrive at the conclusion. This is an evaluation research using a discrepancy evaluation model as initially developed by Provus (1972). Initially, the purpose of the study was to evaluate the effectiveness of Dual System program run by vocational school. However, during the implementation of data collection the researcher was interested in expanding the purpose of the study.
to explore the key factors influencing success of Dual System. The study was conducted at YKTB 2 Vocational School at Bogor Regency West Java Province. To complete the study, researcher went beyond using discrepancy model which enabled him to see the differences between what is said in the standard and what's happened in the field as a result of implementation. The researcher explored determining factors that might enhance the success of Dual System by examining the interaction between school supervisory team and training specialist in the industry.

The Researcher used qualitative and quantitative analysis after careful data collection. In this study the researcher took several stages as followed. Definition stages, defining the objective processes and activities as well as describing the needed resources. This information becomes measuring standard to evaluate the program implementation. Installation stage, in this stage research established the standard measurement to judge the success of the implementation of the program and to know how far the deviation from the standard happened. Process stage, this stage included data collection, the examination of preliminary impact of the program. Product stage, at this stage the researcher analyzed all data measuring the degree of achievement or outcome. Through these four stages. The researcher can examine the degree of success of dual System Program. And the final stage is exploring factors most influential to the success of the program implementation.

In completing the study, the researcher followed several steps below.

1. Preparation, this step included literature reviews, explored theories, developed key performance indicators, developed instruments, prepared research design, and conducted preliminary observation on the location. Prior to data collection, instrument was carefully pilot tested. Key informants were carefully selected both supervisory team at school and training specialist in the industry. Only those meeting certain criteria were selected in the study.

2. Data collection (primary, and secondary), this step included observation and in-depth interview. During in-depth interview the researcher used open ended questions. The researcher listened to the respondents, confirmed narration and recorded respondents’ stories. The following are respondents in this study: school principal, curriculum vise principal, head of office administration program as supervisory team, tutors, teachers responsible for production, normative teachers, adaptive teachers, training specialist from industry, Dual System instructors, and students. This process is an iterative process until the information is saturated. To improve the quality of information, triangulation technique was applied during data collection and processing.

3. Data processing and Analysis. These included data reduction data presentation and conclusion. Also included in this step are data verification.
4. Report writing as the final step of the research cycle. This is the final stage of the study

Before the report was reviewed by the involved parties both in school and in industry. The researcher assigned School Supervisory Team as key informant and training specialist in the industry to describe how close the interaction between them and how they can solve training problems during the implementation seen from their respective responsibilities.

![Figure 1. Provus discrepancy model](image)

**FINDINGS AND DISCUSSION**

Practical activities of students under Dual System in the Department of Office Administration is conducted for grade XI in semester IV for two up to four months in industry. The students work for five days in industry Monday through Friday from 07.30 up to 15.00 with half hour break at 12.00 up to 12.30 for taking lunch and pray. And the students must come back to school on Saturday for making consultation on the problems they faced in the industry or to learn normative and adaptive contents. They call this “Five to One System”. However, in “PT Asuransi Jasindo” the students are obliged to come to the office from 08.00 up to 16.00 as regular employees do. These activities are required after the students take midterm examination at school. The activities are meant to provide students with materials, norms and ethical information. These activities are intended to make students adaptable to job and have full experiences from preparation until the completion. This is done under guidance and supervision of training specialist in the industry. Billet, Future et al. (2012) argued that this cooperation should be understood if vocational education is to be strengthened.

As part of the cooperation between school supervisor and training specialist in industry, a monitoring system is established that school supervisor involved in monitoring activities for three times – preparation, implementation or formative evaluation and summative evaluation. During this process school supervisors regularly make visit to the industry to examine industrial practices conducted by
students. This monitoring activities is followed by written report. During monitoring, the students are assessed on their skills, attitude and behavior and certified by industry for the purpose of obtaining recognition for their competence.

<table>
<thead>
<tr>
<th>NO.</th>
<th>DURATION (IN MONTH)</th>
<th>GROUP NUMBER</th>
<th>VISIT FREQUENCY</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>15</td>
<td>1 2 3 4</td>
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<td>2</td>
<td>2</td>
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<tr>
<td>3</td>
<td>3</td>
<td>70</td>
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</tr>
</tbody>
</table>

This table shows variation of duration of visit to different groups of students. It was found that the evaluation of student’s performance was conducted using a special form to be completed by students and then checked by training specialist in the industry. The overall evaluation was made at the end of the training program. - at the time students are about to return to the school. According to both school supervisory team and training specialist there are no significant difficulties and problems during the implement of Dual System and the students feel satisfied about the program. However, it was found that the most critical problem lays in the “how” to reconcile and align harmonious cooperation between in school and out of school programs and the distribution of resources for education and practical training. As the consequences of Dual System, the cooperation between school supervisor and training specialist in industry is to balance between monitoring made by school supervisor team and certification by training specialist in industry. And as mentioned by (İşgören et al., 2009), that the cooperation should be orderly updated.

CONCLUSIONS

Dual System students does not only learn knowledge from theoretical perspective through instruction but also are introduced as early as possible to hard and soft skills needed for employment. More importantly, they learn by their own experiences how to discipline and to behave based on work ethics guided by training specialists in the industry. These two institutions basically have different but interrelated functions claiming limited resources. They must work together toward a common end – providing skilled workforces who are able to compete in the global market. Of course, this is not an
easy task for both school and industry. It needs an intermingling harmonious cooperation between school supervisor and training specialist in the industry in terms of strategies and the use of competing resources and the student needs to reconcile what they learn in school and what they do out of school. Therefore, student visit to the industry becomes a crucial part to ensure the success of Dual System

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Jurnal Kepemimpinan Pendidikan | 396