

# The Implementation of Industrial Internship of 4-Years-Competence Skills in Vocational High Schools

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**Abstract**—Industrial 4.0 has changed fundamentally human life with new technological advances. New advances in technology that integrates all disciplines of the system and affect education, economy, industry, and governments. This study aimed to describe Implementation of Industrial Internship of 4-Years-Competence Skills in Vocational High School. This study uses qualitative research with a descriptive approach. The study used the method of observation, interviews, and documentation. The data source is a documentation and resource persons from the Principal, Vice Headmaster of curriculum, Head of Bursa Kerja Khusus (BKK) and alumni of Vocational High School in Yogyakarta. Techniques data analysis techniques including data collection, data reduction, data presentation, and conclusion. The results of this research are (1) Learning Implementation of Industrial Internship of 4-years-Competence Skills in one of Vocational High School in Depok Sleman conducted in schools and industry (2) Implementation of learning in schools consists of Administration, Workshops and Learning Implementation (3) Implementation of Learning in industry consists of Inviting DU / DI, Making validating DU/DI, Doing Industrial Mapping, Socializing Industry Internship in Schools, Industrial Placement, Monitoring and Withdrawing. (3) Obstacles that occur are lack of overall monitoring and lack of preparation when street vendors. To overcome these obstacles schools are expected to involve alumni and synchronize with industry.

**Keywords**—*vocational education; vocational high schools; implementation learning*

## I. INTRODUCTION

Industry 4.0 is a demanding phase change technology and human activity means both the scale, scope, complexity, and transformation of previous life experiences [1]. In Industry 4.0 now is time to collaborate to change for the better. Strengthening institutional networks is a prerequisite for making contact with the business world and society needs to be done to obtain information about the needs, development and condition of businesses and the community to be targeted by educational institutions. Strengthening the network can be carried out by Business World and the World Industries with the school. Schools are strengthening this network are vocational high school schools (SMK). Therefore, the Indonesian government is encouraging these educational programs in vocational trades leading, in particular to deal with industry 4.0.

Vocational education is a part of the national education system in Indonesia a very crucial role in generating

employment competent and professional [2]. Professional workforce required to face global competition and the demands of industry and the business world. Therefore, it is a challenge for vocational schools in Indonesia to make students skilled in the face of global competition and as expected by the industry. The effectiveness of vocational education and training depends on the quality of interaction between personnel of the education system and the industrial world is sure to demand the industrial world [3]. The quality of vocational education graduates is closely associated with the implementation process of learning is influenced by many factors, including the curriculum, educators,

Aspects that play an important role in vocational education at the vocational school is the curriculum and learning. The Vocational education curriculum requested must always adapt to the conditions, changes, and needs of the workforce. In principle, the curriculum should accommodate the needs of both the physical needs of learners, non-physical, and moral and future students to be safe, comfortable, happy, and prosperous [4]. Education and vocational training, especially on productive programs that correspond to areas of expertise, are ideally required to implement a learning approach that can provide a learning experience to students in the mastery of the competence or the ability to work per the demands of business and industry [5]. Competence is needed in the world of work in obtaining employment for vocational students who are required to have soft skills and hard skills. To support optimal learning process, the material in school more emphasis on vocational learning theories, whereas the material in the industry with more emphasis on relevant work practices [6].

One of the government programs in maintaining the quality of vocational graduates is conducting vocational education program 4 years. The main purpose of the development of two models of vocational education is to equip students and graduates in the development of graduates in finding and maintaining a job, obtaining a job, self-employed as well as the skill to deepen always ready to get into the industry of work that his career flourished. The main objective of the vocational education program 4 years can make graduates become productive workers [7]. Vocational High School 4- Years program is a solution to produce good quality and skilled of human resources and student ready to work in the world of industry because students have a long time to conducted industrial internship so that students will feel confident [8].

One of the vocational schools in Yogyakarta that organizes a 4-year vocational education program is the most famous public vocational school located in Sleman. Implementation of Vocational Education at SMK for Competency Skills (KK) 4 years are intended to be able to provide an important role in poverty alleviation, improvement of local revenue, an increase in the quality of labor, improvement of welfare, strengthening and conservation of culture and values.

This study is relevant to the study "Evaluation of Policy Implementation Vocational High School 4-Year Program to Improve Employability Graduates of 2017" [9]. The results of this study are some of the aspects that such a curriculum, the competence of graduates, the competency of teachers by school and students, facilities and infrastructure, the result is a PK at SMK KK 4 years is better in almost every aspect than in SMK KK PK 3 years. Based on that research can be concluded that a 4-year vocational education program preferably the industry than vocational education program graduates three years. The difference with this study is that this study explains the implementasion industrial internship of Vocational High School 4- Years program.

This assessment is also relevant to the study "Implementation of SMK 4 Years Supporting Students Graduates Competitiveness Machining SMK N 2 Depok" [10]. The results of this study are SMK N 2 Depok Sleman is one of the schools with graduation rates and the rate of absorption in the industry is high.

But the reality in the field, Implementation of Industrial Internship of 4- years competence skills in one of Vocational High School in Sleman had many obstacles. Based on interviews with alumn, students complained about the lack of draft preparation while plunging the field so that when the industrial internship, they are less aware of what to do. School should be preparing to plan field practical work with the industry so that when students go into the field not impressed unemployed . He also complained about the lack of regular monitoring of the school so that students feel less supervision from the school.

Based on the background of the problems above, this research question is how the implementation of learning vocational education programs 4 years 4 years Vocational Skills Competency and what is the limiting factor in its implementation?

**II. METHODS**

This study used a qualitative descriptive study. The method of qualitative research is a research method which is based on the philosophy postpositivism, is used to examine the condition of the object that is natural, (as his opponent is an experiment) where researchers are a key instrument, making the data source is purposive and snowball, gathering techniques with triangulation (combined), data analysis is qualitative and qualitative research results further emphasize the significance rather than generalization [11]. Qualitative descriptive study aimed to describe and illustrate the phenomena that there is both natural and human, are more concerned about the characteristics, quality, linkages between activities [12]. The subject of this study is totaled 4 people.

The subject is consist Principal, Vice Headmaster of Curriculum, Head of Bursa Kerja Khusus and alumn. Data Collection Methods this study uses interviews, observation, and documentation. To check the validity of the data, the researchers used data triangulation. Analysis of the data used is data analysis Miles and Huberman data collection, data reduction and data display, and conclusion.

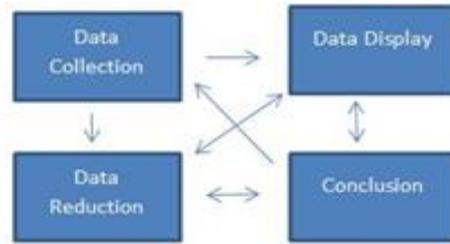


Fig. 1. Interactive analysis model of Miles and Huberman

**III. RESULTS AND DISCUSSION**

*A. Learning Industrial Internship Vocational High School 4 years program at one of Vocational High School in Depok Sleman*

*1) Implementation in Schools*

*a) Administration*

In lessons, teachers were prepared to undertake the administrative charges by the rules. The administration in question is the teacher who makes a Learning Program Design for 1 semester and tailored to the semester program and curriculum that has been applied. Administration do teachers will teach by the learning objectives to be set.

*b) Workshop*

After doing administrate, teachers conducted a workshop with DU / DI and discuss the theory and practice of learning to be tailored to the needs of DU / DI. In this activity is focused on keeping the link & match the implementation of learning and Those materials needed updated industry world as well as rules set by the government in order to maintain the quality of graduates, Upon completion of the workshop, the teachers are ready to carry out the task of learning in the classroom with a maximum preparation.

*c) Learning implementation*

Implementation of teaching and learning activities by the competency test structures that have been made to maintain the quality of schools. Implementation of learning in one of Vocational High School in Depok Sleman consists of learning theory and practice. Learning theory or the theory of space held in a regular classroom, while teaching practice is done in the workshop or the practice room. Learning theory students need to introduce the practice to be implemented. In the implementation of learning, there are industries held during the visit once a year and usually performed at industry partners or existing MOU with the school. Implementation of this industry is expected to visit the student will be given an overview of the implementation of the Industrial Intership.

## 2) Implementation in Industry

### a) Involve DU / DI

Before learning in vocational schools DU/DI invite parties to provide input and plan learning for 1 semester and any competency skills required by the DU/DI. Competence expertise adapted to the global development and force students to master the skills desired competencies of DU/DI. Parties involved DU DI is a partner of SMK N 2 Depok Sleman.

### b) Make Validation of DU/DI

Draft compiled learning has been completed then the schools involved DU / DI back to make the validation. Parties involved in an internal side of the school, consisting of the principal, the head of each department membership program and supervisors from outside the school. The results of the validation activities of DU / DI are applied curriculum that is integrated with a link and match Vocational High School

### c) Mapping industry

The mapping industry is beginning Industrial Internship. The activities is conducted by Public Relation (PR). Event industry mapping aims to determine which industries could be done for the activities of street vendors, who following the competencies of students, industry and the public is beneficial to be working with the school.

### d) Industrial Internship socialization at school

Socialization is the strengthening of the students before plunging into the field. Socialization is very useful to further strengthen the current mental foray into the field. Socialization activities will prevent student difficulties in carrying out street vendors. Socialization was carried out in the initial activity before students carry out street vendors. PKL socialization material provided is the direction of the principal, administrative requirements Industrial Internship, the strategy in the selection of DU / DI, Industrial Internship curriculum, discipline and no direction from the messenger industry and counseling and guidance teachers

### e) Industry placement

One of Vocational High School in Depok Sleman has a Skills Competency 4 years and 3 years. Industrial In implementation industrial internship of- 4-years and 3 years competence skills had a different time, the implementation of industrial internship of 4-years- competence skill is 6 months, while the implementation of industrial internship of 3-years competence skills is 3 months. Search Industrial Internship is an activity where students choose and determine where Industrial Internship corresponding to the areas of competence of students. At One of Vocational High School in Depok Sleman, students were released to find his own industrial internship that they want but by each department. Each industrial placement, students will get a tutor who will motivate, guide and direct what is required in the implementation of Industrial Internship. Students will also get a mentor from the industry who will guide,

### f) Monitoring

Monitoring Industrial Internship is a student monitoring activities when conducting street vendors. Monitoring Industrial Internship conducted to determine how well suited

the competency of the students with their work in the industry and a shortage of students in carrying out street vendors. Implementation of monitoring can be done when

The submission, direct monitoring the implementation of the mid-Industrial Internship after two months, and the time of withdrawal. Monitoring can be done by teachers, and staff of the school or school employee who deign monitoring by a letter of assignment from school. The school rarely monitor the students to carry out street vendors outside of Java. However, the school is currently trying to add a colleague outside of Java to assist in the implementation of the monitoring street vendors.

### g) Withdrawal of Industrial Internship

Withdrawal of Industrial Internship is the return of students to school activities after carrying out street vendors. Withdrawals made under the letter of withdrawal from school duty and under the letter of the initial filing. After mailing industry submissions received, the school will receive a reply from the industry, where it has been listed by when street vendors and how long can the industry as a place of execution for Industrial Internship. So students will be withdrawn automatically or from the industry will carry out the release of student /street vendors under the agreed date.

## B. Barriers and solutions

The obstacle that occurs when implementing the 4-year KK learning program at the famous State Vocational School located in Depok, Sleman, is the lack of comprehensive student supervision in implementation industrial internship, especially the placement of student street vendors outside of Java. Another obstacle is the lack of prep school and industry in the activities of street vendors so that the students confused about what they should do when it plunged into the field The solution is to involve alumni of the school who have worked in industry partners and take advantage of today's technology. The development of information and communication technology continues to increase in line with the increasing human needs, include the field education [13].

Another obstacle is at the planning stage of industrial partnership design so that when students go to the field they don't know what to do. The school should have synchronized with the industry and made a schedule for what students should do when they go to the field. In the context of vocational education and training, students' vocational knowledge is often discussed from the perspective of what should be taught and learned in schools or the different types of knowledge students should acquire in practical work [14].

## IV. CONCLUSION

The implementation of industrial partnership at State Vocational High Schools in Yogyakarta has been carried out well. The implementation of good learning consists of several stages. The implementation of learning carried out in schools consists of making administration, workshops and implementing learning. Teacher administrative activities make learning program designs that are tailored to the needs of students and must be in accordance with the semester program that has been applied. workshop activities are focused on

maintaining the link & match for the implementation of learning and updated materials needed by the industrial world as well as regulations set by the government in order to maintain the quality of graduates. The implementation of teaching and learning activities is in accordance with the competency test structure that has been made to maintain school quality. The implementation of learning at the famous State Vocational High School located in Depok, Sleman, consists of theoretical and practical learning. The implementation of learning in Industry consists of inviting DU DI, making validation from DU DI, conducting industrial mapping, socializing street vendors in schools, proposing Industrial Placement Monitoring and PKL withdrawal. The obstacle in implementing the 4 year KK program learning lies in the supervision and planning stage of the PKL design. The solution to these obstacles is that student supervision involves alumni, using technology for street vendors supervision and street vendor planning must involve industry.

The benefit of this research are in giving information about the implementation of vocational education learning of 4- year competence skill to society and helping the school to implement the learning to be better.

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