

# Analyzing Working Skill Influence on the Working Readiness of Vocational High School Student of Construction Engineering In North Sulawesi

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**Abstract:-**The purpose of this study is to analyze the direct influence of students' working skill on the students' working readiness in North Sulawesi. This research used quantitative design using survey method. The variable of this research consisted of exogenous variable, working skill and endogenous variable, working readiness. The population of this study was the entire vocational high school student of Construction Engineering concerning on stone and concrete construction in North Sulawesi. The entire number of students were 138 and using simple random sampling then the sample of this study was 103 students. The data of this study were obtained through test instrument. The data analysis of this study employed descriptive statistics and inferential statistics, assumption testing and simple regression analysis for hypothesis testing. The result of this study indicated that working skill has significant and positive influence on the students' working readiness. It contributed 25.70%. It means that the degree of working skill directly influence on the degree of working readiness. The higher the students' working skill, the higher working readiness and vice versa.

**Keywords:-** Working Readiness, Working Skill, Vocational High School, Construction Engineering.

## I. INTRODUCTION

Education as the priority of the government takes an imperative role in supporting national development. It is expected to be the paramount apparatus to empower the society in order to generate creative, innovative, and productive individual in dealing with complex challenge these days. It is further in line with the function of education in Law No. 20 of 2003 concerning on the National Education System stated that National education aims at developing the ability and generating a character as well as manufacturing national civilization in order to achieve a capable individual. It further aims at developing the potency of learners to construct a faithful, devotee, healthy, knowledgeable, competent, creative, independent, democratic, and responsible.

Vocational High School in Indonesia plays an important role within national education system. It plays to prepare the students to be able to possess knowledge and skill in order to be beneficial for the job they would obtain after graduating according to the major and study program of the students. Furthermore, it ensures the adaptable degree of the individual and the competitiveness of the individual before applying for a job. As stated in UUSPN No 20 of 2003 Article 15 stated that vocational high school aims at preparing the students to be able to work for particular field.

According to the data, the number of unemployment in January 2016 reached 92.6 people with the open unemployment rate in recent year underwent fluctuation, where on February 2015 amounted to 8.69% increased to 9.03% on August 2015 and it decreased to 7.82 on February 2016. On February 2016, open unemployment rate of vocational high school reached the highest point, 16.05%. it followed by the open unemployment rate of university which reached 11.59%. while the lowest open unemployment rate was elementary school which reached 3.95%. During 2015, it indicated that only open unemployment rate of Junior High School and university graduates underwent increasing.

The high rate of unemployment of vocational high school graduates indicates that the degree of competitiveness vocational high school graduates in working world is still depressed. In addition, the job opportunity in North Sulawesi is still insufficient to cover the vocational high school graduates. The fresh graduates of vocational high school will not be capable of competing with the experienced graduates who are ready to w

The aforementioned gap occurs due to the vocational education conducted by vocational high school is still not able to adapt and keep up with the existing changing, particularly a changing trend within working world. Therefore, the graduates of vocational high school are not maximally ready for working. The graduates of vocational high school, in fact, are highly required to be a worker in construction engineering service. The high number of unemployment rate indicates that the graduates of vocational high school are relatively lacking in terms of working readiness and they do not understand what is

needed and what the industry looks for, particularly within construction engineering service industry.

In addition, those phenomenon indicates that most of the graduates of vocational high school do not meet the qualification imposed by the company or industry. The graduates competencies do not meet the minimum standard relevant to the need of the industry, thus at the end, the graduates of vocational high school are pretty difficult to enter the industry. Relevant to the high unemployment rate of vocational high school graduates, Deputy of Social Statistics Central Bureau of Statistics, M. Sairi Hasbullah stated that the probability of the high unemployment rate of vocational high school graduates is because the school can not accommodate the education compatible with the demand of the industry or company. Essentially, vocational high school accommodate students to possess particular professional skill. However, what is lacking is how the school could accommodate the expectation of the industry or company. Does the education in the vocational high school compatible with the standard of the industry? This needs to be answered further.

Practically, the working circumstance of construction engineering service primarily deals with serious risks which requires a comprehensive and precise approach. Construction engineering service is consisted of several working concentration which includes: 1) consultation service on construction or construction working; 2) construction consultation comprises of complete or partial consultation which includes assessment, planning, designing, supervising, and managing of particular building construction; and 3) construction working is a complete or partial working which includes building, operating, maintainance, demolition, and re-building particular construction (Law No. 2 of 2017). Within the spectrum of vocational high school mastery 2008 related to construction engineering program study comprises of steel construction, wood construction engineering, stone and concrete construction engineering, and building structure design.

Therefore, working readiness is strongly important for both students and graduates of vocational high school, particularly on the stone and concrete construction engineering to be able to qualify with the demand of the industry and company expectation as well as ensuring the successful of working. Working readiness serves as the primary source and capital of the graduates of vocational high school to be able to acclimate with the work related with engineering to achieve the desired working outcome maximally. The graduates of vocational high school are expected to be productive and competent individual who are capable of becoming a proficient and qualified employee and ready to confront the challenge during the professional work circumstance.

The high number of unemployment rate of vocational high school graduates is the real depiction of the aforementioned condition. The graduates of vocational high school are

prepared to be well-adjusted in relevant professional working circumstance, thus the preparation of vocational high school should rely upon man power planning approach instead of social demand planning approach to ensure the relevancy of vocational high school graduates competency (Slamet PH, 2014). The working readiness of vocational high school graduates is definitely influenced by numerous factors, one of them is working skill. Abas (2016) explains that one important measurement of the successful in the industry is the ability of the employee in utilizing the knowledge, skill, and competencies relevant with the field and the need of the working to fulfill the demand of the industry.

Safitri, et. al., (2012) expose that according to the field of occupation, skill, and knowledge, steel construction engineering and wood construction engineering belongs to the irrelevant category; 2) that according to the field of occupation, skill, and knowledge, stone and concrete construction engineering and building structure design belong to the relevant category.

The Education Sector Analytical and Capacity Development Partnership (ACDP) states that in general, the industry or company felt dissatisfied with the quality of Indonesian graduates competence. They claimed that the graduates working skill is insignificant and irrelevant with the demand of the industry and company. In recent days, the industry or company demands highly an employee possessing hard skill. However, in fact, vocational high schools in Indonesia are still insufficient in transferring a skill to the students. It further becomes a reason why Indonesian vocational high school is incompatible with the demand and expectation of the industry (Kompas, 2016).

Hanafi (2012) reveals that there are several important reasons of the incongruity and the incompatibility of the graduates of vocational high school in the industry which include vocational high school is less flexible in responding on the demand of the industry and company, particularly related to the skill and competency imposed by the industry and company.

According to Power (1999) Technical and Engineering Education (abbreviated as TVE) is an educational component which is closely related to the knowledge and skill acquisition and mastery required by the entire society and labor within manufacture and service industry. Eventhough in fact Technical and Vocational Education arouses a debate over whether it generates a job vacancy, it is inevitable that Technical and Vocational Education provides the individual skill which further opens a chance to obtain a job and generates a qualified individual. This education is expected to be able to assist students in accomplishing competence in accordance with the skill acquired based on the students' study program.

Sofyan (1993) explains that the working readiness is one particular ability of certain individual to accomplish

particular job according to the standard of operating and regulation imposed without facing any obstacles and difficulties which results on the maximal outcomes based on the desired goal and objectives. Working readiness could be accomplished through education process and experience attained by individual. When education process is in progress, students can grasp the source of the knowledge as an initial starting point in constructing their working readiness. While the experience could be obtained through the real life or during the process of education formally and/or the education process during internship.

More specifically related to Vocational High School (SMK) on Government Regulation No. 17 of 2010 concerning on the Management and Execution of Education, Vocational High School aims at assisting students in preparing knowledge, technology, and professional competence in accordance with the need of society. In addition, it aims at improving the physical and mental readiness to be able to be independent in terms of working or continuing higher degree.

According to Robinson (2000), working skill is generally divided into three parts which includes: a) basic academic skill (reading, writing, science, mathematics, listening and spoken communication), b) high-order thinking skills (learning, reasoning, creative thinking, decision-making, problem-solving), and c) personality (responsibility, self-confidence, self-management, social ability, honesty, self-integrity, able to adapt, flexible, passionate, prompt and punctual, independence, professional, decent, cooperative, self-motivated, and well-managed).

Skill is defined as learning outcomes within psychomotoric sphere which is constructed from cognitive learning outcomes and thus generate the ability of individual in doing or performing particular activity. Therefore, the existence of internship for vocational high school students, it encourages the desire of the students in performing the work better in order to obtain an experience related to the study program and will be beneficial in the future. In fact, the vacant occupation in the industry is contributed from the insufficient skill possessed by the students which does not meet the standard of the industry.

In accordance with the aforementioned issues regarding the working skill of vocational high school students which influence the working readiness, thus it is necessary to discuss and analyze the existing issues. Furthermore, the outcomes of this discussion will generate an answer regarding the problems and assist both teacher and students in preparing the working readiness.

#### A. *Research Problems*

In accordance with the explanation above, thus the research problem of this study can be formulated as: Does the working skill of students influence the working readiness of vocational high school students?

#### B. *Research Objective*

According to the research problem above, thus the objective of this research is formulated as: Analyzing the direct influence of working skill on the working readiness of vocational high school students.

#### C. *Research Significance*

According to the research problem and the research objective above, then the significance of this study is giving a depiction and illustration of testing result performed based on the empirical data. This research aims at proving the direct influence of working skill on the working readiness of vocational high school students which in the long-run this study is useful to provide a suggestions for Education Office, particularly Vocational High School of Construction Engineering, Stone and Concrete Construction Engineering.

## II. METHODOLOGY

#### A. *Design*

The design of this study is a quantitative design using survey method approach. According to Singarimbun (2008), survey study can be used to explain the causal relationship between variables proposed through hypothesis testing. Within this study design, variables employed in accordance with the existing theory are determined. The variables tested are working skill and working readiness.

#### B. *Population and Sample*

Susetyo (2014:139) explains that population is the entire data or examined objects in the form of particular characteristic on the symptom, phenomenon, events or occurrence. The population within this study is the entire students of vocational high school taking construction engineering in North Sulawesi with the total amount of students are 138. Employing simple random sampling technique, the total amount of sample are 103 students.

#### C. *Research Instrument*

This study measured two variables consisting of variable Exogenous as independent variables, namely the working skills (X), while the endogenous variables, the dependent variable is the working readiness of vocational high school students (Y). The instrument used in this study is an instrument in the form of a written test with a number of questions related to indicators of working skills variables and working readiness of students. The instrument was tested in terms of the validity (accuracy) and reliability (consistent data). For variable working readiness and working skills, the validity of the items was calculated using the biserial correlation, and for the reliability of items was calculated using the formula KR. 20, (Arikunto, 2015 :).

#### D. Data Analysis

The data analysis was using descriptive statistics analysis technique and inferential statistics, assumption testing and simple regression analysis for testing the hypothesis. To calculate the simple regression coefficient which indicates the influence of exogenous variable on the endogenous variable. Before hypothesis is testing, it initially performed data normality testing and significance test on regression coefficient and linearity. Then, the direct influence of independent variable (exogenous) on dependent variable (endogenous) was calculated. The significance of influence is reflected from the significance rate testing with the value of  $\sigma = 0,05$ .

### III. RESULTS AND DISCUSSION

#### A. Prerequisite Testing of Statistics Analysis

##### 1. Data Normality Testing

Using SPSS version 22 software, it obtained that the value of each variable, working readiness variable is  $\text{sig.} = 0,200 > 0,05$ , and working skill variable is  $\text{sig.} = 0,061 > 0,05$ . It states that the data distribution is normal since the significance value reached  $> 0,05$ . Therefore, the hypothesis testing can be continued.

##### 2. Data Linearity Testing

Employing SPSS version 22 software, the results of significance testing indicate that  $F_{\text{count}} = 34,983 > F_{\text{table}}$  and indicate that  $F_{\text{count}} = 1,402 < F_{\text{table}} = 2,07$ . It means that the working readiness of vocational high school students (Y) on the working skill of students (X) significantly influence and both correlation data is linear. Therefore, hypothesis testing can be performed.

#### B. Research Hypothesis Testing

The hypothesis proposed in this study stated that there is a direct influence of working skill on the working readiness of vocational high school students in North Sulawesi. It obtained the value of students' working skill variable on the working readiness with the value of *Sig (2-tailed)* amounted to 0,000, in fact the value of  $\alpha = 0,05$  is higher than the probability value *Sig (2-tailed)* or  $0,05 > 0,000$ . Thus, the  $H_0$  is rejected and  $H_a$  is accepted. It proves that students' working skill significantly influence on the working readiness of vocational high school students in North Sulawesi. The contribution of working skill on the working readiness is 25.70%

#### C. Discussion

According to the hypothesis testing, it indicates that there is a significant direct influence of working skills on the working readiness of vocational high school students. In

addition, the finding of this study shows that the contribution of working skill on the working readiness of students equal to 25.70%. In other words, the hypothesis testing results of this study support the direct influence of working skill on the working readiness of students. It means that the degree of working skill directly influences on the degree of working readiness. The more the working skill of the students the higher working readiness and vice versa.

This finding affirms the findings of the initial research results and theories which argue that there is a direct influence between working skill on the working readiness. The ACT reports (2013) explains that the working readiness is defined as a condition where the individual who possesses basic skill required to fulfill the minimum standard for certain occupation which is designed through working analysis or working profile. Specific requirement of working skill could be identified through working analysis or working profile which comprises of competence, knowledge, skill, ability, and attitude directly related to with the individual performance in the work circumstance. According to Slameto (2010:113), the readiness itself includes three aspects: 1) physical, mental, and emotional condition, 2) individual necessity, motive, and objectives, 3) skill and knowledge. In addition, Dewa (2004:44) argues that factors influencing the working readiness of the individual are the skill or competence in performing particular activity. The skill or competence influences the readiness of the individual in performing certain action or activity.

Furthermore, Customers Service Institute of Australia (2005) explains that the working readiness could be seen as a process and objective which involves and develops the attitude of students' working, score, knowledge, and skill. Abas (2016: 119) explains that one important measurement to succeed on the industry or company is the ability of the individual in utilizing maximally knowledge, skill, and competence in accordance with the necessity of the working to meet the demand of the industry.

### IV. CONCLUSION

In recent days, the unemployment rate of vocational high school students is moderately high. This issue is due to the students' working skill which is not becoming the concern of the vocational school. When students possess low working skill, it affects the way the students performing their job. This present study exposes that the working skill is significantly influence the working readiness. The degree of the students' working readiness rely upon the working skill possessed by the students. To sum up, in order to resolve the unemployment rate of vocational high school, the school or related institution need to take into account the working skill of the students. Vocational high school need to adapt to the current trend and situation of the industry.

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