

Environmental and Personal Factors Affecting Students' Career Competencies in an Indonesian Vocational High School

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This research aims to analyse environmental and personal influences on student's career competencies, in vocational education in Aviation Vocational High School, (AVHS) Surabaya, Indonesia. This research is causal, and uses a quantitative approach. The research population consists of all (50) of the AMR (avionic maintenance repair) class XII, in AVHS. Data collection is through questionnaires. The data analysis technique used for SEM analysis is by the PLS program. The results show that: (1) learning environment influences significantly and positively toward career competencies of the students in vocational education in AVHS (the students); (2) personal factors influences significantly and positively toward career competencies of the students.

Key words: *Students, Vocational School, Career Competencies*

Introduction

Education is very important in the improvement of HR qualities. By education, it is hoped that people can gain various kinds of abilities, knowledge, skills and expertise, so they can choose, decide, and prepare themselves for entering appropriate occupational worlds. However, Indonesia shows that there are still many labourers who have less skills. According to National Statistical Agency (2011), there were 82.1 million Indonesian labourers who lack

skills or competencies in their fields. Most are general school graduates. 'Skilled workers' have skills or competencies in their fields. They number 20.4 million people, whereas 4.8 million people have the most skills, as top, expert workers.

By investigating Indonesia, it can be known whether Indonesia will find it difficult to compete with other countries in the era of globalization, and tight competition, today and in the future. Therefore, it becomes the responsibility of the educational world, especially vocational education, to create competent graduates. Its learning processes will develop competencies required by the industrial world.

Vocational education is part of national educational systems. They are very strategic in forming skilled labourers. On the commercial side, businessmen hope that new employees will have more knowledge and more skills, and will be considerably motivated intrinsically (Bailey, Hughes & Moore, 2004). But the available conditions show that there are still fewer skills owned by most new labourers, although the labourers are vocational educational graduates. This case shows that vocational educations have not met hopes of improving graduate student qualities.

Educational graduate qualities are considerably related to learning environments. They are influenced by many factors such as curriculums, educational employees, learning processes, facilities and infrastructures, aids and materials, school management, school environments and student work training fields. Facilities and infrastructures, teacher abilities and curriculums should be also adjusted with educational dynamical improvements, to optimize student understanding of lesson materials.

This research is based on theoretical and empirical literature reviews. Its purpose is to analyze environmental and personal influences toward students' career competencies in vocational education, in the Aviation Vocational High School (AVHS), Surabaya.

Research methods

This research includes causal research, because one variable relates to other variables; i.e. there are independent variables and dependent variables. According to Sugiyono (2014), a causal relationship characterizes cause and effect; i.e. there are independent variables (variables that influence) and dependent variables (influenced). This research uses a quantitative approach; i.e. research data, such as numbers and analysis utilising statistics, are employed (Sugiyono, 2014).

Population is the generalization that consists of objects or subjects, with qualities and characteristics determined by the researcher for learning, and then concluding (Sugiyono,

2014). The population in this research consists of all 50 students of AMR (avionic maintenance repair) class XII, in the AVHS. The sample is separate from totals and characteristics owned by the population (Sugiyono, 2014). The sampling technique involves taking samples, to select the research sample (Sugiyono, 2014). This research uses total sampling, i.e. the method of determining samples if all population members are used in the sample. So, the sample in this research is the AMR student class (50), in class XII of the AVHS.

An operational definition is one concept, something that can be measured and seen in dimensions of attitudes, aspects or characters showed by the concept.

Learning environment (X1)

Learning environment is one of the most important influences upon learning motivation and learning achievement. Variable indicators of learning environment refer to Kujipers et al. (2011). They are:

- a. Method
- b. Instruments
- c. Program organization
- d. Career guidance

Personal factor (X2)

Personal factors are the deepest characteristic difference in humans, the characteristic difference that describes the unique features of each individual. Variable indicators of personal factor refer to Kujipers et al. (2011). They are:

- a. Gender
- b. Age
- c. Ethnic

Career Competencies (Y)

Career competencies involve employee motivations and identities, their knowledge and skills, and organizational network skills inter and intra them. Variable indicators of career competencies refer to Kujipers et al (2011). They are:

- a. Career reflection
- b. Career forming
- c. Networking

This researcher used the survey method, with instruments such as questionnaires. According to Sugiyono (2014) a questionnaire is collecting data by giving a set of written questions to the respondents for answers. The scale arrangement method uses a Likert scale. The variables measured in a Likert scale are described again as sub-variables, in which the sub-variables are described again to be the components that can be measured.

Result and Discussion

Data analysis is simplifying data into a form that is easier to read and implement. The technique chosen for analyzing data and examining hypotheses in this research is the Structural Equation Model (SEM). For answering hypotheses, the Partial Least Square (PLS) is used. According to Ghozali (2012) calculations are conducted by using Smart Aid of Partial Least Square (PLS), because it has a multi-lane form and the model has a Reflective form. The samples in this research have been fulfilled by 50 respondents. The formative model shows relationship direction, from indicators to latent variables. The Reflective model shows relationship from latent variables to the indicators.

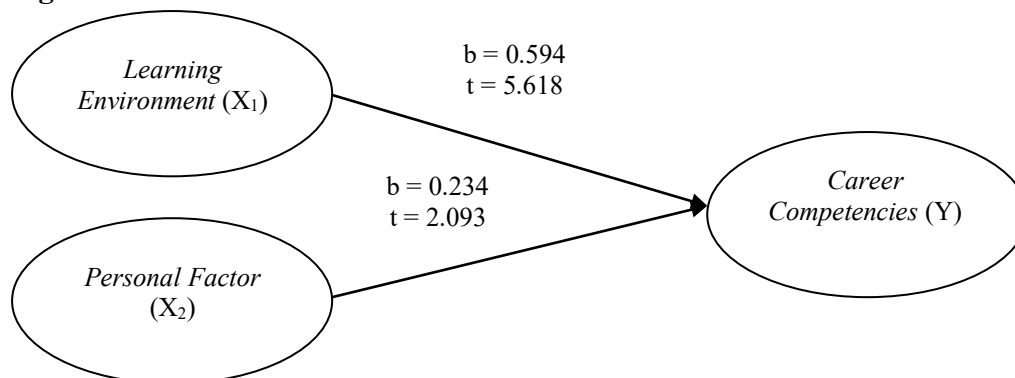
Inner Model Evaluation

The name 'Inner Model' refers to an inner relation, structural model and substantive theory. It specifies the influence of inter research (a structural model).

Inner Model Test or Structural Model Test

The results of the structural model conformity level were developed. They lead to the conclusion that an overall model has been "Relevant" for explaining the variables researched, and the influences in each variable. Evaluating models by PLS is begun by seeing an R-Square for each dependent latent variable. Value changes of R-Square can be used for evaluating certain independent latent variable influences, toward dependent latent variables, as to whether they have substantive influences. For endogenous latent variables in structural model that have the result of R² as 0.67, it indicates that the model is "good". R² as 0.33 indicates that the model is "moderate". R² as 0.19 indicates that the model is "weak" (Ghozali, 2012; Farhani, 2013).

Figure 2. PLS Inner Model



The results show that variables of Learning Environment and Personal Factor that influence the variable of Career Competencies have the value of R^2 as 0.565. That indicates the model is “moderate”. This means that Career Competencies that can be explained by Learning Environment and Personal Factor, achieving 56.5%, whereas the rest is 43.5%, explained by other variables not used in this research.

Hypothesis Testing Results

Hypothesis Test 1 (H1)

The first hypothesis in the research is proven. The data analysis shows that value t as 5.618 means bigger than 1.96, so it can be said that Learning Environment has significant influences towards Career Competencies. The relationship direction of both variables is positive. That means the better the learning environment, it can improve and improve the career competencies by having the total influences as 0.594.

Hypothesis 2 (H2)

The second hypothesis in the research is proven. The data analysis results show that value t as 2.093 means bigger than 1.96, so it can be said that Personal Factor has significant influences toward Career Competencies. The relationship direction of both variables is positive. That means the better the personal factor owned, it can improve and improve the career competencies by having the total influences as 0.234.

Conclusion

The data analysis results show that learning environment influences significantly and positively toward career competencies of the students in vocational education in Aviation Vocational High School (AVHS), Surabaya, proven from the value t as 5.618. That is larger than 1.96, so it explains that improvement of career competencies can be formed through

good adoption of a learning environment. Influences of learning environment toward career competencies are positive. They show that the better the learning environment created in AVHS, the better the student career competencies.

The findings in this research show that learning environment is important to improving career competencies. This case is parallel with Kujipers et al (2011) who explained that students are not allowed to have more (or even better) information before decisions need making, but they should be helped to learn how to collect their information themselves. That would enable them to change this information, by developing career competencies to find meaningful knowledge and actions related to personal matters, jobs, and careers. These research results are parallel with Kujipers et al. (2011), who found that learning environment stimulates real life experiences with jobs and dialogues about these experiences, and contributes in using career competencies.

The data analysis also found that personal factors influence significantly and positively toward career competencies of the students in vocational education, in AVHS, proven from the value t as 2.093 that means bigger than 1.96. So it can be explained that improvement of career competencies can be formed through personal factor owned by the students. Influences of personal factors toward career competencies are positive. That shows as the personal factor is better, so it can improve and improve the career competencies.

The findings in this research show that personal factor is important to the improvement of career competencies. The research by Hensel (2010) about development of personality features among professionals similarly shows that the same learning environment drives development of career competencies.

- a. *Learning environment* influences significantly toward *career competencies* of the students in vocational education in AVHS. Influences of *learning environment* toward *career competencies* are positive. So as the *learning environment* is better, so the *career competencies* of the students are also better. This case shows that the first hypothesis is accepted and proven as true.
- b. *Personal factor* influences significantly toward *career competencies* of the students in vocational education in AVHS, Surabaya.

Influences of *personal factor* toward *career competencies* are positive, so the better the *personal factor*, so the better the *career competencies* of the students. This case shows that the second hypothesis is accepted and proven true.

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