VHS Competency Test, Implementation of Industry Demands, and Graduates' Competence in Indonesia

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Abstract - **Differences of competency test model cause different standards of graduate competency. The differences of the competency test in Vocational High School (VHS) have not had significant positive impacts. The low graduates' competence of the VHS is equal to the productivity of skilled labors in industry. In addition, the number of the workforce that keeps growing is not balanced to the workers' competence that the industry needs. Therefore, it impacts on the low trust to the quality of the graduates' competence of the VHS. In another word, the implementation of industry demands has not met with graduates' competence of the VHS. Such a condition is obtained from an in-depth analysis of the entire literature on the VHS in Indonesia. Currently, most articles related to the VHS only discussed how to get good scores in the competency test without focusing on the industry demands. Data of the competency test and the implementation of industry demands were collected through questionnaires, while data of the graduates' competence were collected from the VHS documents. This article was purposed to analyze the condition of the competency test, implementation of industry demands, states of graduates' competence as an effort of educational development in the VHS field.**

Keywords: VHS, competency test, implementation of industry demands graduates', competence, educational development.

I. INTRODUCTION

Vocational education is an important skill for learning with very high standards [1]. Vocational education focuses on specific trades and imparts the practical skills which allow individuals to engage in a specific occupational activity [2]. Vocational education develops two competencies which consist of general competencies for all aspects of the workplace and specific competencies based on the needs of each work field [3]. Vocational education produces skilled workers with a good attitude in facing what the field needs [4]. Graduates of the vocational education affect the quality of labors in which it is currently still low. Indonesia's Human Development Index in 2015 was in 113th place out of 188 countries in the world [5]. Indonesia has not been able to raise the position at High Human Development level. So, this becomes a benchmark that Indonesia should put more efforts to improve the quality of human resources, as the number of Indonesian workers is the largest contribution of urbanization where the ability and the education level are still far below the average.

Basically, Indonesia has two types of vocational education, Vocational High School (VHS) and vocational college. Both types have similarity in the goal, but have a difference in the education level. Education in the VHS occurs for 3 or 4 years. After all the learning process within the period is completed, then all VHS students are required to follow competency tests. The competency tests are organized to measure the competencies that the students have learned. In addition, the competency tests in the VHS consist of four models, namely model with an institutional partner, a model of a first-level professional certification institution, a model of a second-level professional certification institution, and model of a third-level professional certification institution [6]. Currently, the competency test development is only in the models of institutional partner model, professional

certification institution level 1, and the combination of both. The Government of Indonesia gives freedom to the VHS in implementing the competency tests. The VHS has a right to select at least one model mentioned previously. Each model has different implementations and assessment systems. This distinction also led to the standardization of different competencies.

Recapitulation of the number of unemployment from 2016 to 2017 increased by 10 thousand people. The unemployment data increased to 5.5% of the total workforce, which amounted to 7.04 million people. The highest number of unemployment in the education sector is at VHS level or 11.41% [7]. This number also increased starting from 2016 which showed 11.14%. This unemployment rate is likely caused by the gap between VHS graduates' competence documents and actual capabilities. The number of labor force keeps growing, but does not meet the requirement of the industry [8].

The student competencies play a very vital role in achieving the goals of vocational education [9]. At this time, there is a big difference between the students' real ability and the capabilities provided in the certificate or other learning documents. The competency quality of VHS graduates written on the skills and competency certificates have not proved the actual competence of the students [10]. The graduates of vocational education have not fulfilled the requirements of the industry due to some reasons such as lack of knowledge, limited skills, and insufficient soft skills [11]. At this time, there is no link and match between the VHS and the industry; consequently, the VHS graduates have not been accepted maximally [12]. The alignment between the VHS and the industrial world in the dimensions of quantity, quality, site, and time has not been well organized [13]. Some industries want the VHS graduates to have two core competencies: hard skill and soft skill. Both of them are the main demands that the VHS should prepare. In this case, each VHS has a different policy in meeting these demands. In fact, stakeholder trust in the VHS graduates' soft skills and hard skills is still low. This causes the low level of industry satisfaction with the VHS graduates.

Researches in the VHS field were mostly done on related variables, such as variables of graduate competencies [12], [14-15]or the development of competency test model [16], [10] and [17]. Meanwhile, there is no research that discusses the competency test, graduate competencies, and its impact on industry demands. Hence, this article aims to analyze these three variables as an effort of educational development in the VHS field. Competence in vocational education and training contains three main traditions i.e the behaviorist, the generic, and the cognitive [18]. The level of vocational competencies should influences positively the chance of graduates of being matched to an occupation inside one's own educational domain, where these graduates have a comparative advantage [19].

II. DISCUSSION

Competency test, implementation of industry demands, and graduates competence have a special relationship. Competency test and implementation of industry demands are predicted to affect graduates' competence. The relationship between these three variables can be seen in Table 1.

Table 1. The Relationship of the Three Variables

Independent Variable	Causal	Dependent Variable
X_1	towards	Y
X_2		

X1 is a variable of competency test, X2 is a variable of implementation of industry demands, and Y is a variable of graduates' competence. The competency test or X1 is related to the graduates' competence because the graduates' competence can be shown from the results of the competency test. The role of the industry in the competency test is very vital including the development of exam questions and the authority in providing certificates [20]. The competency test is analysed based on the implementation, not from the result of the competency test. The implementation of the competency test consists of implementation the model of the competency test, duplication and delivery, verification of the competency test, assessor, implementing the competency test, assessing and scoring the competency test.

Furthermore, the implementation of industry demands or X2 is associated with graduates' competence. The implementation of industry demands consists of two things, namely soft skill and hard skill [12].The implementation of industry demands related to the graduates' competence because the industry is an important part involved, either directly or indirectly. Graduates' competence of VHS in Indonesia has not fulfilled the demands of the industry [21]. The graduates' competence is the result of all forms of assessment or competence that has been achieved by the students. Graduate competencies consist of attitude, knowledge, and skill. Behavioural competence is related to the recapitulation of the students' attitudes during the learning process in the VHS. Knowledge competence is related to the score of the theory of the national test held by the government and the local test by the school, while the skill competence is related to the competency test.

The industry as the main party in the absorption of the VHS graduates requires readiness and ability in soft skill and hard skill. Generally, soft skills consist of psychological, social, and communication skills [22] and [23]. The soft skill indicators consist of communication, courtesy, flexibility, integrity, interpersonal skills, positive attitude, professionalism, responsibility, teamwork, and ethical work [24]. The hard skill components are related to the achievement of competency test results in accordance with the standard of expertise of each competency. The indicators are the suitability with the standards of skill competency and the competency test. All soft skill and hard skill indicators are analysed in terms of preparation or the VHS policy not from the achievement of the graduates' competence.

Variables X1, X2, and Y were determined from literature analysis and interview. The literature analysis consisted of analysing the articles related to each variable. The interview was conducted to gather relevant evidence factually in the VHS. The data collection are proposed using purposive and probability sampling techniques. The purposive sampling technique is implemented on the determination of VHS criteria to be the samples of the study. The VHS criteria include different levels of the VHS accreditations, i.e A, B, and C accreditation levels. Furthermore, the probability technique is performed to obtain the sample amount from each accreditation level.

III. CONCLUSION

Analysis of each variable is very important to improve the quality of vocational education, especially Vocational High School in Indonesia. Hence, in-depth analysis of competency test, implementation of industry demands, and graduates' competence are needed. Educational developments should discuss how to get a good score of the competency test in accordance with the students' ability and the impact on the industry demands. Therefore, to make betterment feedback of the VHS in Indonesia, it is highly needed to conduct research related to the implementation of the competency test, implementation of industry demands, and the state of graduates' competence.

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