

## The Effect of National Education Standards on Academic Quality of Graduates Vocational High School in Solok City and Regency

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### Abstract

This study determined the effect of national education standards on academic quality of graduate vocational high school in Solok city and regency. The population was 47 skills competencies in vocational high schools. The sample consisting of 40 skills competencies was selected using purposive sampling technique. Data in this study used national examination scores, accreditation scores, amount of graduate vocational high school who are accepted to work in the business/ industry and amount of graduates vocational high school who are accepted to continue them education in the college. Analyzed and presented using multiple regression analysis with SPSS software. The results showed: (1) content standards and financing standards with positive and significant effect on the national examinations scores, (2) educators and education personnel standards with positive and significant effect on the amount of graduates vocational high school who are accepted to work in business/ industry, (3) process standards with negative and significant effect on amount of graduates vocational high school who are accepted to continue them education in the college (4) graduates competence standards, facilities standards, management standards and assessment standards doesn't have significant effect on academic quality of graduates vocational high school. It means that there was other factors influence academic quality of graduate vocational high school such as interests, motivation, and parents' background.

**Keywords:** national education standards, academic quality of graduates, vocational high schools

### Introduction

The implementation of Asian Economic Community demanding labour competition. One effort to improve the labor competence can be produced through education institution such as vocational high schools (SMK). Government Regulation No. 74 of 2008 Article 1 paragraph 21 describe that SMK is one of the formal education institutions that aims to prepare graduates to enter the workforce. Amount of vocational high schools in Indonesia increase from 2016 to 2017. Vocational school statistic showed SMK grew by 4.56%. In West Sumatra the public interest to attending vocational high schools is also increasing with the grew by 7.98%.

On the other side, Central Bureau of Statistics in 2016 describe that graduates of vocational high schools still contributed to unemployment by 19.20%. Our government responded to this situation with made a change of paradigm to implementation of vocational education through Presidential Instruction No.9 of 2016. It's concern in the revitalization of vocational high schools. Vocational revitalization done through curriculum development and marching with the business/ industry needs, learning that fosters 21st century skills, improvement professional of teachers and education personal's, standardization of infrastructure facilities, updating industrial cooperation programs, managing and structuring institutions and increasing access to competency certification.

As education quality assurance, the government through Government Regulation No. 19 of 2005 about national education standards. National education standards is minimum criteria concerning the education system in Indonesia. The standard consists of (1) content standards (2) process standards, (3) graduates competency standards, (4) educators and education personnel standards, (5) facilities and infrastructure standards, (6) management standards, (7) financing standards and (8) assessment standards. The process of assessing the national education standards is accreditation. Graduates are the output of the education system. Qualified graduates can be seen from the academic quality. Academic quality of graduates according to Suhardan (2012: 74-76) is outcome the process of human education, tools, curriculum and facilities that are reflected in the quality of teaching educators, the quality of teaching materials and the quality of learning outcomes and finally make any abilities. While, according to Cerya (2014: 23) academic quality is the end result of a combination of quality education input factors (raw, instrumental, and environmental input) and quality of the education process that is reflected in the teaching quality of educators, the quality of teaching materials and the quality of learning outcomes recognized by the related parties both quantitatively and qualitatively.

Quantitative academic quality can be seen from the learning outcomes achievement, the amount of graduates who continue their education in the college and who are accepted to work in the business/ industry (Suhardan, 2012: 75). Based on the results of average national examination scores, showed vocational high schools in Solok city got 51,67 that is in the eleventh rank. vocational high schools in Solok regency got 51,55 that is in the twelfth rank. Next, in the minimum service standard of vocational high schools declare that minimum 20% graduates of vocational high school must be accepted to work in the business/ industry and minimum 20% must continue their education in the college. This data showed that graduates academic quality in Solok city and regency is still have a problem.

Many factors influence the academic quality of graduates such as curriculum, educators, students, learning process, infrastructure, tools and materials, school management, school environment, student work training field, guidance and counseling services, special job exchange services, and so on (Yolanda: 2017; Iswanti: 2015; Jamaludin: 2014).

Based on the description and the problems, it is suspected that the academic quality of graduates vocational high school in Solok city and regency is still low and amount of graduates is not reached from minimum standards of vocational education, other part of standards in national education standards have low score. Therefore, the purpose of this study is to determine effect of national education standards of academic quality on graduates vocational high school in Solok city and regency with indicators endogenous variables namely the national examinations score, amount of graduates vocational high school who are accepted to work in business/ industry, amount of graduates vocational high school who are accepted to continue their education in the college.

## **Methods**

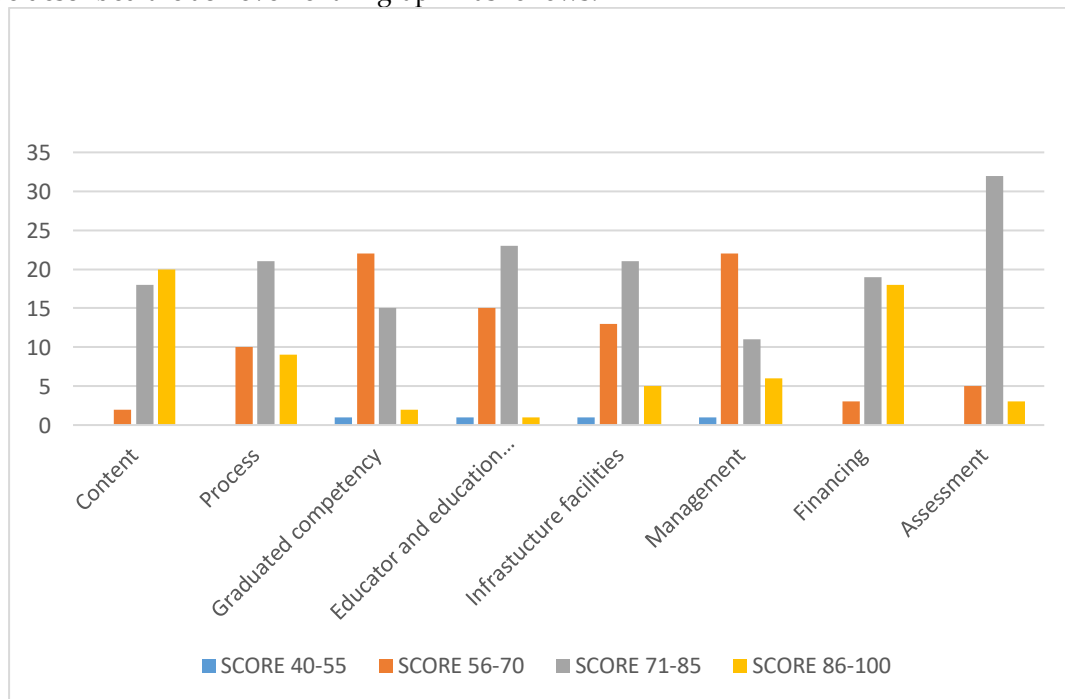
This study used a quantitative descriptive correlation approach, to determine the effect of national education standards on academic quality of graduates vocational high schools in Solok city and regency. The population was 47 skills competencies in vocational high schools. The sample consisting of 40 skills competencies was selected using purposive sampling technique. Data in this study used national examination scores, accreditation scores, amount of graduates vocational high school who are accepted to work in the business/ industry and amount of graduates vocational high school who are accepted to continue their education in the college. Analyzed and presented using multiple regression analysis with SPSS software.

The data in this study used secondary data, consisting of the accreditation score obtained from West Sumatra Education Department, the national examination scores obtained from each school curriculum document, amount of graduates vocational high school who are accepted to work in business/ industry and who are accepted to continue their education in

the college obtained from the work meeting of the principals on vocational high schools in Solok city and regency at 2017/2018 academic year. The variables used in this study were 1) the academic quality of graduates as endogenous variables as measured by national examinations score, amount of graduates vocational high school who are accepted to work in the business/ industry, and who are accepted to continue them education in the college; 2) National education standards as exogenous variables are: content standards, process standards, graduates competency standards, educators and education personnel’s standards, facilities and infrastructure standard, management standards, financing standards, and assessment standards obtained from the accreditation scores of each skills competencies. The method of analysis in this study used 1) descriptive analysis, 2) inductive analysis, precondition tests (normality, heterocedasticity and multicollinearity, 3) multiple regression analysis, and 4) hypothesis testing with t test and F test.

**Results and Discussion**

The results and discussion refers to the research objectives and hypotheses forward in this study, it’s determined effect of national education standards on academic quality of graduates vocational high school in Solok city and regency. Based on the results of a descriptive analysis that obtained by vocational high schools in the Solok city and regency , it can be described the achievement in graph 1 as follows:



**Figure 1 National education standards of vocational high school in Solok City and Regency.**

From the figure 1 above, obtained information that there are still low-value standards in national education standards of vocational high school in Solok City and Regency. There are graduates competency standards, educators and education personals standards, infrastructure standards and management standards.

The results of the statistical analysis showed that as simultaneously, (1) national education standards can explain the national examination scores with sig. scores 0.00. The results of this study are support Andriansyah (2013) which concludes there is an effect of national education standards on the national examinations scores; (2) national education standard can’t explain amount of graduates vocational high school who are accepted to work in the business/ industry with the sig scores. 0.205. The results of this study not support Andriansyah (2013) research that there is an effect of national education standards on employment opportunities and (3) national education standards also can’t explain amount of

graduates vocational high school who are accepted to continue their education in the college with sig score 0.60.

The independent variable's contribution to the dependent variable is (1) National education standards contributes to national examination score by R square ( $R^2$ ) = 0.512 or contributes 51.20%, while the remaining 48.80% is effect by other variables, (2) National education standards contributes to the amount of graduates vocational high school who are accepted to work in the business/ industry by R square ( $R^2$ ) = 0.165 or contributes 16.50%, while the remaining 83.50% is effect by other variables. (3) National education standards contribute to the amount of graduates vocational high school who are accepted to continue their education in the college by adjusted R square ( $R^2$ ) = 0.089 or contribute 8.90%, while the remaining 91.20% is effect by other variables, It's means that national education standards will be able to improve the academic quality of graduates on vocational high schools in the Solok city and regency. Meanwhile, graduates academic quality can not only be measured quantitatively such as the national examination scores, Nasyirwan (2015) argues that the quality of graduates can also be seen from the maturity of personality and social attitudes, mastery of knowledge, and skills possessed into life skills for students to be able fight for it's survival in the future.

However, if seen partially, each component of national education standards contributes differently which can be explained as follows:

#### **Effect of content standards on graduates academic quality**

The results of the hypothesis partially showed that (1) the content standards have a positive and significant effect on the national examination scores by sig. score 0.03 so it can be interpreted that the increased of content standards will be able to increased the national examination scores, (2) content standards doesn't have a significant effect on amount of graduates vocational high school who are accepted to work in the business/ industry with sig scores. 0.329. (3) content standards doesn't have a significant effect on the amount of graduates vocational high school who are accepted to continue their education in the college with sig scores. 0.894.

The curriculum is an educational guide that will be implemented at certain levels of education. Curriculum development for each skill competency needs to be designed as well as possible to produce higher quality education output. According to Koudahl (2010) vocational education based on the principle of dual education, it's combine education system and business and enterprises, and development in curriculum it's the answer. If measured by the national examination score, this study support the research of Iswanti (2014) and Yolanda (2017) which concludes that the curriculum is a factor that influence the quality of graduates. But this is different if it's related to amount of graduates vocational high school who are accepted to work in the business/ industry and amount of graduates vocational high school who are accepted to continue their education in the college.

#### **Effect of process standards on graduates academic quality**

The results of testing the hypothesis partially showed (1) the process standards does not have a significant effect on the national examination score, (2) process standards does not have a significant effect on the amount of graduates vocational high school who are accepted to work in the business/ industry with sig scores. 0.329. (3) the process standards have a negative and significant effect on the amount of graduates vocational high school who are accepted to continue their education in the college with sig. 0,010. It's mean that increase of process standards will be decrease the amount of graduates vocational high school who are accepted to continue their education in the college. The results support the research of Raharjo (2014), Norayikin (2015) that partially the process standard does not significantly effect on the national examination score. However, on the other side, it does not support the research of Suharto (2012), Cerya (2014) and Santoso (2014) that the implementation of

education or the learning process have a significant effect on the academic quality of general high school education in the city of West Sumatra.

#### **Effect of graduate competency standards on graduates academic quality**

The results of the partial hypothesis testing showed (1) Graduates competence standards does not have a significant effect on the national examination scores with sig scores. 0,150, (2) Graduates competency standards does not have a significant effect on the amount of graduates vocational high school who are accepted to work in the business/ industry with sig scores. 0.124. (3) Graduates competence standards does not have a significant effect on the amount of graduates vocational high school who are accepted to continue them education in the college with sig score 0.136.

The standard of graduate competency is the qualification of graduate skills which includes, attitudes, knowledge, skills. The results of this study support the research of Raharjo (2014) that partially the graduates competency standards does not significantly effect on the national examinations scores.

#### **Effect of educators and education personals standards on the academic quality of graduates**

The results of testing the hypothesis partially showed (1) educators and education personals standards does not have a significant effect on the national examination scores with sig scores. 0.210. (2) educators and education personals standards have a positive and significant effect on the amount of graduates vocational high school who are accepted to work in the business/ industry with sig scores. 0.039, it's can be interpreted that an increase in educators and education personals standard will be able to increase the amount of graduates vocational high school who are accepted to work in the business/ industry. (3) educators and education personals standard does not have a significant effect on the amount of graduates vocational high school who are accepted to continue them education in the college with sig score. 0.154.

One of the elements of this standard is teacher competence. Teacher competence greatly effects the smooth implementation of learning as Knaus (2014) stated that "the successful implementation of the relies curriculum framework is not simply on the policy or regulatory practice but also on educators, their interpretation, knowledge and understanding of the framework and ability to apply it to their pedagogical practice. The results of this study support the research of Bakar (2018), Raharjo (2014), Iswanti (2014), Surachim (2013), Philipp (2008) that partially educators have a significant effect on the national examinations scores.

#### **Effect of standard facilities and infrastructure on the academic quality of graduates**

The results of testing the hypothesis partially showed (1) the facilities and infrastructure standards does not have a significant effect on the national examination scores with sig scores. 0,526, (2) facilities and infrastructure standards doesn't have significant effect on the amount of graduates vocational high school who are accepted to work in the business/ industry with sig scores. 0.759, (3) facilities and infrastructure standards have no significant effect amount of graduates vocational high school who are accepted to continue them education in the college with sig. scores 0.483.

Infrastructure means the completeness of learning that must be possessed by schools that can facilitate and expedite the implementation of learning, so that with complete facilities it is expected that the learning process and quality of graduates can become more quality but this doesn't have significant effect in this study. The results of this study support the research of Raharjo (2014) that partially the standard of infrastructure facilities does not significantly effect the national examinations scores.

#### **Effect of management standards on graduates academic quality**

The results of testing the hypothesis partially showed (1) management standards doesn't have a significant effect on the national examination scores with sig scores. 0.799. (2)

management standards doesn't have significant effect on the amount of graduates vocational high school who are accepted to continue them education in the college with sig score 0.811. (3) management standards do not have a significant effect on the amount of graduates vocational high school who are accepted to work in the business/ industry with sig scores. 0,310.

Management standards are "national standards of education relating to the planning, implementation and supervision of educational activities at the level of education, regency/ city, provincial, or national units to achieve efficiency and effectiveness in the delivery of education. The results of this study support the research of Raharjo (2014) which states that partially the management standard does not significantly effect the national examination scores.

#### **Effect of financing standards on graduates academic quality**

The results of testing the hypothesis partially showed (1) financing standards have a positive and significant effect on the national examination scores with sig scores. 0.021 so, it can be interpreted that an increase in financing standards will be able to increase the national examination scores, (2) financing standards does not have a significant effect on the amount of graduates vocational high school who are accepted to work in the business/ industry with sig. 0.274. (3) financing standards does not have a significant effect on the amount of graduates vocational high school who are accepted to continue them education in the college with a sig. 0.959.

In government regulation No. 48 of 2008 concerning education funding, stated that the cost of education consists of education unit costs, the costs of administering education and the personal costs of students. In terms of tuition fees, the costs incurred for the purposes of organizing the learning process both issued by the government, parents and students themselves are called direct costs. Then the direct costs are divided by social costs and individual costs. The results of this study are not support Raharjo's research (2014) in partially the financing competency standards doesn't have significant effect on national examination scores. Meanwhile, these results support the research of Cerya (2014) and Sudarmanto (2009) that education costs have a significant effect on academic quality.

#### **Effect of assessment standards on graduates academic quality**

The results of testing the hypothesis partially showed (1) the assessment standard does not have a significant effect on the national examination scores with sig scores. 0.635 (2) assessment standards does not have a significant effect on the amount of graduates vocational high school who are accepted to work in the business/ industry with sig 0.191. the assessment standard does not have a significant effect on the amount of graduates vocational high school who are accepted to continue them education in the college with sig 0.070. Assessment of learning outcomes in schools consists of assessment by the teacher, assessment by the institution and national assessment. The results of this study support the research of Raharjo (2014) that partially the assessment standard does not significantly effect the national examinations scores.

### **Conclusions**

The conclusions can be obtained from this study are: (1) content standards and financing standards have a positive and significant effect on the national examinations score on vocational high school in Solok city and regency, (2) process standards have a negative and significant effect on the amount of graduates vocational high school who are accepted to continue them education in the college, this illustrated that learning process for vocational high schools basically preparing students to enter workforce, although it is possible to continue education (3) educators and education personnel standards have a positive and significant effect on the amount of graduates vocational high school who are accepted to work in the business/ industry, it's mean that teachers have important role in preparing students being a skilled workforce (4) graduates competence standards, infrastructure

standards, management standard and assessment standards doesn't have a significant effect on the national examinations scores, the amount of graduates vocational high school who are accepted to work in the business/ industry, amount of graduates vocational high school who are accepted to continue their education in the college, It's means four standards above have not significantly effect to the academic quality of graduates vocational high school in Solok city and regency.

Based on the discussions and conclusions, the following recommendations are suggested: 1) schools should evaluating all activities in content standard as curriculum development and adjusted curriculum with business/ industry needs, 2) schools should evaluating all activities in process standard as supervision and follow up in learning activity, 3) schools should evaluating all activities in educator and education personals standard as increase teachers ability with training and certification, 4) schools should evaluating all activities in financing standard as planning and reporting about schools financing, 5) further researchers to be able to conduct research for other variables that effect the academic quality of graduates.

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