

VOCATIONAL REVITALIZATION: AN EVALUATION AND CORRELATION APPROACH

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Abstract:

Vocational education still plays an important role in modern life because the demand for vocational graduates is still high. Vocational education has a real role in current technological developments. However, some vocational learning implementations are less relevant to technological advances. Apart from that, the vocational education revitalization program is still ongoing to improve the quality of vocational education in Indonesia. This research aims to assess vocational school readiness by evaluating teachers based on eleven indicators of vocational school readiness. This survey research was conducted in 5 schools in West Sumatra province, Indonesia. The research results reveal that vocational schools in West Sumatra have almost the same level of readiness for all indicators assessed (good category). However, these results still need improvement on three indicators such as student competency tests, online learning, and increasing the implementation of internships in industry for teachers. These findings contribute to improving the quality of vocational high schools by supporting vocational high school revitalization programs, stakeholders, and curriculum development. This research only assesses school readiness in implementing the vocational school revitalization program and has not assessed other variables.

Keywords: Vocational, Revitalization, Education, Correlation.

INTRODUCTION

In recent days, technological developments pose challenges and threats to humanity. However, there are further opportunities that can be developed to improve the quality of life [1][2][3]. Therefore, the perspectives on these matters become a strategic issue for intellectuals [4].

This is a new situation that affects almost all aspects of Indonesian society, from the economic, social, cultural, political, and educational aspects. From an educational perspective, this challenge is considered complicated [5][3].

Education plays a central role in improving the quality of the nation, so every problem that occurs in the nation cannot be separated from the contribution of education. Therefore, it is necessary to explore and analyze the factors related to education [6][7].

In recent years, almost all aspects of life have changed, particularly with the emergence of the fourth industrial revolution and the COVID-19 pandemic. These changes have had a significant impact on education [8][9]. Education is a significant asset that cannot be neglected in life, therefore the development of policies for online learning has become an integral part, especially in vocational education [10][11].

Teachers are the ones who take responsibility for the education curriculum implementation. Therefore, teachers are required to have competencies that comply with professional teacher standards to carry out their tasks and functions professionally [12].

Professional teachers nowadays must be adaptable to technological developments, especially with various learning models that are suitable for their needs, and recommended learning forms by the government such as project-based learning [13], and teaching factories [14]. Especially in vocational education, the implementation of learning faces significant challenges.

Based on studies conducted in the last three years, there are eleven main indicators of vocational education learning implementation for the revitalization process [15][16]. Therefore, research needs to be conducted to reveal the current conditions of vocational education readiness.

The benefit is obtaining valid data on the real condition of vocational education readiness (a case study in Sumatra Barat Province, Indonesia), which can be used as material for consideration in determining new vocational education policies.

The results of this study contribute to the implementation of future vocational education in accordance with technological developments, especially in the vocational revitalization section.

METHOD

Type and Procedure

This research uses a survey method with a pick-up and drop-off approach to participant schools [17][18][19]. Using quantitative (dominant) and qualitative data, this research prioritizes data based on questionnaires to vocational teachers. Data is collected alternately from one school to another.

Partisipant

The participants in this research were teachers from five vocational schools in West Sumatra province, from different cities. This school was chosen because it has the same character and is a superior school. These schools are Vocational School 1 Batipuh, Vocational School 1 Bukittinggi, Vocational School 1 Lintau, Vocational School 1 Pariaman, and Vocational School 2 Payakumbuh.

The teachers involved are study program leaders and vocational teachers appointed by the school. Participant data is only explained in this section, but is kept confidential in the research results section because it respects privacy.

Instrument

The instrument used a likert scale with 11 important indicators as SMK revitalization indicators. These eleven indicators were used to develop questionnaire statements. The instrument was validated by seven experts and obtained valid results (see Table 1). This instrument can be used to assess vocational schools or vocational revitalization processes.

Tabel 1: Indicators of Revitalization

Indicators	Make a lesson plan	Teaching materials	Learning media	Learning Strategies	Practical Learning	Assessment & evaluation	Independent-campus program	Industrial cooperation	Student test competency	Teacher Apprentice in industry	Online learning
Validity Value	92	92	93	92	93	92	90	92	92	93	93

Data Analysis

The quantitative data were analyzed using anova analysis. The research hypothesis is that there is a difference in readiness between vocational schools in Sumatra Barat. Simple analysis was carried out at the initial stage of data tabulation, after that a homogeneity test was carried out, and continued with the ANOVA test. In the final stage, the Post Hoc- Multiple Comparisons - Tukey HSD test was carried out to reveal the significance of the differences.

RESULT

It was found that there were a total of 84 respondents who were teachers from five vocational high schools in Sumatra Barat, for eleven assessed indicators (see Table 2 and Figure 1). In Table 2, you can see the differences and similarities in the results of 11 indicators from the five vocational schools assessed. These results are the first consideration for looking at the implementation of vocational revitalization in general. However, these results cannot yet be the main reference.

Table 2: Indicator Average

		Ave										
	N	Make a lesson plan	Teaching materials	Learning media	Learning Strategies	Practical Learning	Assessment & evaluation	Independent campus program	Industrial cooperation	Student test competency	Teacher Apprentice in industry	Online learning
(X1)	17	4.58	4.38	3.61	3.82	3.33	4.01	3.25	3.54	3.35	2.40	2.88
(X2)	18	4.50	4.49	3.78	3.87	3.50	4.08	3.53	3.68	3.51	2.61	3.03
(X3)	16	4.48	4.39	3.49	3.76	3.33	4.08	3.39	3.33	2.58	2.32	2.99
(X4)	18	4.44	4.38	3.78	3.60	3.40	4.18	3.60	3.58	3.02	2.30	2.96
(X5)	15	4.63	4.39	3.84	3.77	3.45	4.01	3.91	3.53	3.44	2.73	2.86
Total	84	4.52	4.41	3.70	3.76	3.40	4.07	3.53	3.53	3.18	2.47	2.95

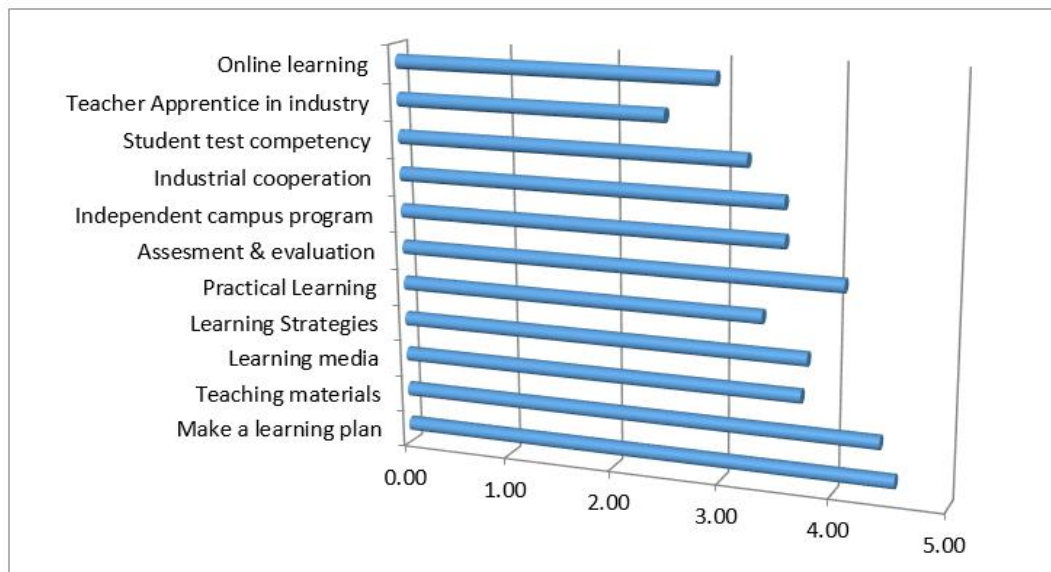


Figure 1: Results of measuring vocational revitalization indicators

Table 3: Homogeneity Test

Test of Homogeneity of Variances											
	Make a lesson plan	Teaching materials	Learning media	Learning Strategies	Practical Learning	Assesment & evaluation	Independent campus program	Industrial cooperation	Student test competency	Teacher Apprentice in industry	Online learning
Sig.	0.343	0.362	0.138	0.36	0.003	0.224	0.839	0.336	0.132	0.034	0.192

The data variance of this study is > 0.05 which means the data is homogeneous, except for the indicator of teacher apprentice in the industry with a significance value of 0.034 and the indicator of practical learning with a significance value of 0.003 (Table 3). However, it is not a problem because the data is normally distributed. Therefore, an ANOVA test can be performed.

Table 4: Anova test

ANOVA											
	Make a lesson plan	Teaching materials	Learning media	Learning Strategies	Practical Learning	Assesment & evaluation	Independent campus program	Industrial cooperation	Student test competency	Teacher Apprentice in industry	Online learning
F	.347	.195	.988	.833	.41	.235	2.045	.329	2.42	2.21	.233
Sig.	.846	.94	.419	.508	.886	.918	.114	.858	.055	.075	.919

Table 5: Post Hoc- Multiple Comparisons - Tukey HSD

Depen-dent Variable	Indicators																			
	Make a lesson plan																			
(I) School	(X1)				(X2)				(X3)				(X4)				(X5)			
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	.99	.98	.94	1	.99	1	1	.96	.98	1	1	.92	.94	1	1	.85	1	.96	.92	.85
Teaching materials																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	.95	1	1	1	.95	.97	.95	.97	1	.97	1	1	1	.95	1	1	1	.97	1	1
Learning media																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	.92	.97	.92	.81	.92	.61	1	1	.97	.61	.61	.46	.92	1	.61	1	.81	1	.46	1
Learning strategies																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	1	1	.63	1	1	.97	.44	.98	1	.97	.85	1	.63	.44	.85	.83	1	.98	1	.83
Practical learning																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	.91	1	1	.98	.91	.91	.99	1	1	.91	1	.97	1	.99	1	1	.98	1	.97	1
Assesment & evaluation																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	1	1	.92	1	1	1	.99	1	1	1	.99	1	.92	.99	.99	.93	1	1	1	.93
Independent campus program																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	.76	.98	.59	.08	.76	.98	1	.57	.98	.98	.91	.26	.59	1	.91	.73	.08	.57	.26	.73
Industrial cooperation																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	.99	.96	1	1	.99	.8	1	.99	.96	.8	.93	.97	1	1	.93	1	1	.99	.97	1
Student test compenency																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	.99	.18	.87	1	.99	.06	.59	1	.18	.06	.7	.13	.87	.59	.7	.76	1	1	.13	.76
Teacher apprenctice in industry																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	.74	.99	.98	.36	.74	.49	.37	.96	.99	.49	1	.19	.98	.37	1	.12	.36	.96	.19	.12
Online Learning																				
(J) School	X2	X3	X4	X5	X1	X3	X4	X5	X1	X2	X4	X5	X1	X2	X3	X5	X1	X2	X3	X4
Sig.	.95	.99	1	1	.95	1	1	.93	.99	1	1	.98	1	1	1	.99	1	.93	.98	.99

All significance values in the ANOVA test are above 0.05 (Table 4), which means all indicators have the same or not significantly different mean values. Further testing is conducted to reveal the similarity of these mean values whether they are significant or not through Post Hoc tests (see Table 5). This research is in line with previous studies that vocational high school teachers have prepared themselves for teaching and are starting to move towards efforts made in the revitalization program for vocational high schools [20]. This research is also in line with previous studies stating that vocational high school teachers in Sumatra Barat have innovations to improve education quality through various learning models, methods, and approaches [21].

DISCUSSION

This research measured eleven indicators of learning implementation in vocational high schools (SMK) that have been developed by referring to educational regulations and SMK teacher competencies [22][20] [21]. The first indicator, "make a learning plan," had the highest average score from X5, and the lowest score was held by X4. However, after conducting an Anova test, it was found that the values were greater than 0.05, indicating that the average indicator values from the five schools did not differ significantly (after conducting a post hoc test). These results indicate that vocational schools have been managed properly, and are in line with previous research [23][24]. The second indicator, "teaching materials," had the highest average score from X2, and the lowest score was held by X1. However, after conducting an Anova test, it was found that the values were greater than 0.05, indicating that the average indicator values from the five schools did not differ significantly. The research results on this indicator are also in line with previous research that there are no problems with teaching materials [25][26].

Indicator three, learning media, has the highest average score from X5 and the lowest score from X3. However, after conducting an Anova test, it was found that the significance value is above 0.05, which means that the average indicator values among the five schools are not significantly different. These results prove that learning media has been implemented well in vocational education [27][28]. Indicator four, Learning Strategies, has the highest average score from X2 and the lowest score from X4. However, after conducting an Anova test, it was found that the significance value is above 0.05, which means that the average indicator values among the five schools are not significantly different. This proves that learning strategies have been implemented well in vocational education [16][29].

Indicator five, Practical Learning, has the highest average score from X2 and the lowest score from X3. However, after conducting an Anova test, it was found that the significance value is above 0.05, which means that the average indicator values among the five schools are not significantly different. These results prove that vocational education has implemented practical learning well [16][27].

Indicator six, assessment & evaluation, has the highest average value from X4 and the lowest value from X1. However, after performing an Anova test, it was found that the value is greater than 0.05, which means that the average values of the indicator among the five schools are not significantly different. These results are in line with previous research [16]. Indicator seven, independent campus program, has the highest average value from X5 and the lowest value from X1. However, after performing an Anova test, it was found that the value is greater than 0.05, which means

that the average values of the indicator among the five schools are not significantly different. Indicator eight, Industrial Cooperation, has the highest average value from X2 and the lowest value from X3. However, after performing an Anova test, it was found that the value is greater than 0.05, which means that the average values of the indicator among the five schools are not significantly different.

Indicator nine, Student Test Competency, has the highest average value from X2 and the lowest value from X3. However, after conducting an Anova test, it was found that the value is greater than 0.05, which means that the average value of the indicator from the five schools is not significantly different. Indicator ten, Teacher Apprentice in Industry, has the highest average value from X5 and the lowest value from X4. However, after conducting an Anova test, it was found that the value is greater than 0.05, which means that the average value of the indicator from the five schools is not significantly different. Indicator eleven, Online Learning, has the highest average value from X2 and the lowest value from X5. However, after conducting an Anova test, it was found that the value is greater than 0.05, which means that the average value of the indicator from the five schools is not significantly different.

In general, there is variation in the average values for each indicator, but the difference in values between schools is not significant, indicating that the five schools studied have nearly the same implementation of learning for the eleven evaluated indicators. The differences are also not significant, meaning that the vocational schools in Sumatra Barat represented by the five sampled schools show uniformity in the implementation of learning as measured by the eleven indicators. This study supports previous research that vocational schools have prepared themselves for learning [3][24] and are beginning to focus on efforts made in the revitalization program for vocational schools [20][30] and have innovations to improve the quality of education through various learning models, methods, and approaches [20][21]. Therefore, vocational education must continue to be developed to be better.

CONCLUSION

The vocational high schools in Sumatra Barat, represented by five technology vocational high schools, have similar readiness measured by eleven indicators for the implementation of vocational education revitalization programs. There is variation in the average percentage, but it is not significant, indicating that all the schools studied have moved in unison to carry out learning and are ready for the implementation of vocational education revitalization programs measured by the eleven indicators. This study contributes to vocational high schools in improving their quality through the SMK revitalization program, stakeholders, and curriculum development. The study is limited to assessing the readiness of vocational high schools in implementing the SMK revitalization program, but not assessing other variables.

Conflict Of Interest

There is no conflict of interest in this article

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