

Comprehensive Study Enhancing Quality Of Education In Indonesia: Leadership, Work Environment, Motivation Among Vocational School Teachers

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Abstract.

The Covid-19 pandemic's end led to rapid adaptation in the education sector with a shift to online learning for approximately 2 years. This prolonged duration resulted in a decline in education quality evident in online learning. Post-pandemic research aims to analyze the impact of leadership, work environment, and work motivation on vocational teachers in Indonesia. Regression analysis demonstrates that these factors collectively influence education quality. However, partial analysis reveals insignificant effects of leadership, while the work environment significantly impacts education quality. Motivation and teacher performance show no significant contributions to education quality. Further research recommendation includes using longitudinal analysis over an extended period to assess variable-related changes.

Keywords: Leadership, Work Environment, Work Motivation, and Quality of Education

I. INTRODUCTION

Vocational High Schools are always developing, always wanting to improve the quality of education. These phenomena are influenced by the phenomenon of global education which is experiencing rapid development [1]. In the context of SMK, the quality of education can actually be developed with reference to global economic growth and technological developments. So that the preparation of SMK graduates is aligned with market needs. When referring to academic quality according to Ministerial Regulation number 63 of 2009, the level of intelligence in the life of a nation can be achieved from the implementation of the National Education System (Sisdiknas) which can be monitored based on the percentage of passing the national exam and the average UN (national exam) score. (Law number 14 of 2003, concerning Teachers and Lecturers.) The success of teachers in carrying out educational tasks must be in accordance with the responsibilities and authority of teachers based on performance standards. This is in line with research Luksova & Hudakova [2] which shows that when teachers are assessed using a feedback system application, it brings more teacher satisfaction. The assessment is more objective, reflecting an increase in motivation and quality of education. The teacher's success in carrying out educational tasks must be in accordance with the teacher's responsibilities and authority based on performance standards (Law number 14 of 2003, concerning Teachers and Lecturers.). Abdul [3] states that teacher performance standards to fulfill work achievements will have an impact on academic quality/quality including the process of implementing selection for new students (input), implementation of the learning and teaching process (process) and competent graduate students (output). Based on statement Abdul [3], a line of thought is built on the effect of teacher performance on academic quality. The quality of education is the intelligence level of a nation's life obtained from the implementation of the National Education System.

In this study, the academic quality of students was seen from the percentage of passing the National Examination (UN), as well as the average UN score which includes input, process and output [4]. According to Mubarak [5] the quality of education is the superiority of work results in terms of input, process, output and educational outcomes. Educational input is material that is available because it is needed for the process to take place. The process is called high-quality or quality if the process through coordination, alignment, and integration of school input (teachers, students, curriculum, money, equipment, and so on) takes place harmoniously, so that it succeeds in creating a pleasant learning situation, and can increase motivation and interest in learning, and is truly able to empower students. Meanwhile, educational output is likened to

school performance which can be observed from various aspects of quality, effectiveness, productivity, efficiency, innovation, quality of work life, and work morale. Effectiveness is a measure that can distinguish the extent to which targets (quantity, quality, time) have been achieved, while quality outcomes are declared when graduates are immediately absorbed in the world of work. According to Asmani [6] quality improvement management must have several principles, namely; First, quality improvement must be carried out in schools. Second, quality improvement can be implemented with good leadership. Third, quality improvement must be based on data and facts, both qualitative and quantitative. Fourth, quality improvement must empower and involve all elements in the school. Fifth, quality improvement has the goal that schools can provide satisfaction to students, parents/guardians, and the community. This management is a challenge for school principals to empower all elements of the school to be able to improve quality optimally.

II. METHODS

2.1 Research Design

This research is a quantitative study involving independent and dependent variables. The independent variables consist of leadership, work environment, and work motivation of Vocational High School Teachers. While the dependent variable is the quality of Vocational High School education. The following is the research design of this study.

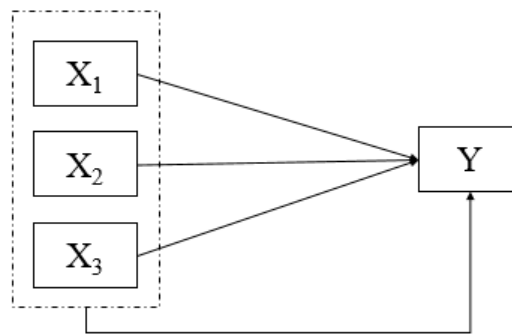


Fig 1. Research Design

Information:

X₁ : Leadership

X₂ : Work environment

X₃ : Work motivation

Y : Education Quality

2.2 Population and Research Sample

The population in this study were teachers who had worked ≥ 15 years. Teachers who have taught for more than 15 years were selected as the study population. Because the teacher has experience working as a teacher with a long tenure, the teacher will have experience being led by several different principals. Also has experience working to improve the quality of schools with various new government policies. The research population is 276 teachers. By using the Slovin formula, a sample of 164 teachers was obtained.

2.3 Research Instrument

The instrument in this study was a questionnaire with an assessment using a Likert scale. The results of the development of these instruments have been validated by two expert validators, so that this research instrument is in the category of quite good and complete and can be used as a basis for carrying out data collection in the field.

2.3 Research Data Analysis

The data that has been obtained from this study is then processed and analyzed in order to answer the problem formulation and research hypotheses. Data analysis was divided into two, namely hypothesis analysis using the regression test. Before carrying out the regression test, the data is first tested with prerequisite analysis. The classic assumption test used is the normality test, linearity test, and multicollinearity test.

III. RESULT AND DISCUSSION

3.1 Prerequisite Analysis Test

3.1.1 Normality test

The following shows the results of the normality test using SPSS.

Table 1. Normality Test

Variable	Test Results	Sig. Criteria	Conclusion
Leadership	0,101	>0,05	Normal
Work environment	0,058	>0,05	Normal
Work motivation	0,174	>0,05	Normal
Education Quality	0,177	>0,05	Normal

The test criteria are concluded if the test results show Sig > 0.05, it is concluded that the data is normally distributed. Based on the data from Table 1, it shows that the variables of leadership, work environment, motivation, and quality of education have a significance score of > 0.05, so it can be concluded that the data is normally distributed.

3.1.2 Linierity Test

The following shows the results of the linierity test using SPSS.

Table 2. Linierity Test

Relationship	Linearity	Sig. Criteria	Conclusion
X1 to Z	0,000	Sig.<0,05	Linier
X2 to Z	0,000	Sig.<0,05	Linier
X3 to Z	0,000	Sig.<0,05	Linier

The decision-making criteria can be determined based on the significance number, if the linearity is <0.05, it indicates that the relationship between variables is linear. Based on Table 4.12 it shows that the relationship between the independent variables on the dependent variable shows a significance <0.05, so it is stated to have a linear relationship

3.1.3 Multicollinearity Test

Table 3. The following shows the results of the normality test using SPSS. Multicolinerity Test

Variable	Tolerance	VIF	Conclusion
Leadership	0,574	1,742	There is no multicollinearity
Work environment	0,340	2,937	There is no multicollinearity
Work motivation	0,497	2,014	There is no multicollinearity

The decision making criterion is if the VIF score < 10 then it indicates that there are no symptoms of multicollinearity among the independent variables. Based on Tables 4.13 and 4.14 it is known that all Tolerance values are greater than 0.10 and all VIF values are less than 10. So it can be concluded that there are no symptoms of multicollinearity among the independent variables.

3.2 Regression Test

Regression analysis was carried out simultaneously and partially. The results of the regression analysis are as follows.

Table 4. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.595 ^a	.354	.338	2.92598

a. Predictors: (Constant), Y, X1, X2, X3

Table 5. Anova

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	746.138	4	186.534	21.788	.000 ^b
	Residual	1361.253	159	8.561		
	Total	2107.390	163			

a. Dependent Variable: Z
b. Predictors: (Constant), Y, X1, X2, X3

From Table 3 it is known that the results of the analysis obtained an F of 21.788 ($p < 0.05$) so that it can be concluded that leadership, work environment, motivation, and teacher performance simultaneously affect the quality of education / school quality. Therefore H_0 is rejected while H_a is accepted. Taken together the three variables are able to explain the variable quality of education / school quality by 35.4% (R square).

Table 6. Regression Results

Model	Unstandardized Coefficients		Standardized Coefficient	t	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-.830	2.832		-.293	.770		
	X1	.024	.067	.030	.351	.726	.403	.028
	X2	.248	.078	.345	3.163	.002	.570	.243
	X3	.098	.078	.114	1.257	.211	.472	.099
	Y	.180	.096	.178	1.881	.062	.512	.148

Based on Table 4 it can be seen that X_1 obtained a t of 0.351 ($p > 0.05$), X_2 obtained a t of 3.163 ($p < 0.05$), X_3 obtained a t of 1.257 ($p > 0.05$), and in Y obtained a t of 1.881 ($p > 0.05$).

Partially leadership (X_1) does not have a significant influence on the quality of education / school quality (Z) so that H_a is rejected and H_0 is accepted. The magnitude of X_1 's contribution to Z can be found by the formula for the coefficient of determination (K_d) = $\beta \times$ value of *zero-order* $\times 100\%$ [7]. Value of β (*beta*) on standardized coefficients, and zero-order values on correlations. The following is the calculation of X_1 's contribution to Z.

$$\begin{aligned} X_1 \text{ to } Z &= \text{value of } \beta (X_1) \times \text{zero-order} (X_1) \\ &= 0,030 \times 0,403 \\ &= 0,012 \text{ or } 1,2\% \end{aligned}$$

Based on the calculations that have been done, it is obtained that the value of the contribution of variable X_1 to Z is 1.2%.

The work environment variable (X_2) also has a significant influence on the quality of education/school quality (Z), so that H_0 is rejected and H_a is accepted. The magnitude of X_2 's contribution to Z can be found by the formula for the coefficient of determination (K_d) = $\beta \times$ value of *zero-order* $\times 100\%$ [7]. Value of β (*beta*) on standardized coefficients, and zero-order values on correlations. The following is the calculation of X_2 's contribution to Z.

$$\begin{aligned} X_2 \text{ to } Z &= \text{value of } \beta (X_2) \times \text{zero-order} (X_2) \\ &= 0,345 \times 0,570 \\ &= 0,197 \text{ or } 19,7\% \end{aligned}$$

Based on the calculations that have been done, it is obtained that the value of the contribution of variable X_2 to Z is 19.7%.

The motivational variable (X_3) also has no significant effect on the quality of education/school quality (Z), so that H_0 is accepted and H_a is rejected. The magnitude of the contribution of X_3 to Z can be found by the formula for the coefficient of determination (K_d) = $\beta \times$ nilai *zero-order* $\times 100\%$ [7]. Value of β (*beta*) on standardized coefficients, and zero-order values on correlations. The following is the calculation of X_3 's contribution to Z.

$$\begin{aligned} X_3 \text{ to } Z &= \text{Value of } \beta (X_3) \times \text{zero-order} (X_3) \\ &= 0,114 \times 0,472 \\ &= 0,054 \text{ or } 5,4\% \end{aligned}$$

Based on the calculations that have been done, it is obtained that the value of the contribution of variable X_3 to Z is 5.4%.

3.3 The Influence of Leadership on the Quality of Education

Based on the results of data processing that has been done, it is known that leadership has no influence on the quality of education / school quality. Anjar et al., [8] stated that one of the elements causing the decline in the quality of education lies in leadership. Furthermore, Anjar, et al [8] emphasized that one of the aspects that can be reviewed is the level of innovation. If the level of innovation in a leadership is low, it can result in the quality of education / school quality. Conversely, if the level of innovation from leadership is high, then the quality of education/school quality will increase. According to Sutadji [9] that determines the quality of schools depending on the instruments developed. From his research the School Quality Evaluation Model can be used as an alternative for educational authorities in schools such as school principals, school committees, teaching staff and education staff in evaluating school quality. Its development to be perfect must be decentralized, to the authorities so that it takes a long time just to obtain complete data and information. Quality components and good quality indicators also need to be carried out in discussion forums and FGDs so that more specific quality components and indicators can be obtained. In addition, the success of a school in realizing quality and quality education will not occur if the leaders at the school do not have optimal competence in managing all resources and various facilities and infrastructure. This is supported by [10], [11] explaining that the most effective step taken by a leader is to exercise leadership by developing and building with orientation towards school management. Pramono & Prasajo [12] Quality assurance can rarely be applied in the world of education, this is because education is a service, not like goods which are quality and can be controlled for quality. Quality is a dynamic idea, and rigid definitions won't help at all. Such a broad meaning of quality is a bit confusing to our understanding, but some significant practical consequences will arise from these differences in meaning.

Most of the quality improvement work in education is centered on the development of subject development teams. Strategic Quality Management developed by Miller, Dower, and Inniss has made subject development teams an important building block for delivering quality in education. According to Labanauskis & Paliulis [1], educational quality assurance has a role in determining the development of educational institutions. The indicators used to measure the quality of education include; Quality assurance policies and processes, program design and approval, student-centred learning, student admissions, student progress, stakeholder recognition, teacher conditions, learning resources, information management, public information, ongoing supervision, periodic monitoring, external quality assurance. Meanwhile, the reputation of the institution and the development of educational institutions include quality assurance. As with the previous explanation, there is no relationship between learning leadership and teacher performance. Now there is no relationship between learning leadership and the quality of education because the discussion we use on learning leadership focuses on learning in class with students with all their needs. Meanwhile, the quality of education indicators needed are very broad and many must be met besides learning in the classroom. For example, periodic monitoring, program approval, academic professionalism and the level of institutional development are not included in the discussion of learning leadership in the instruments in this research discussion. Discussions conducted on learning leadership variables are too focused on learning in the classroom so that they don't cover much about the teacher's role in learning leadership outside the classroom or other roles outside the classroom.

3.4 The Effect of the Work Environment on the Quality of Education

Based on the results of data processing that has been done, it is known that the work environment has an influence on the quality of education / school quality. This is supported by Susanti [13] which states that the work environment also has a very important role in improving the quality of education/school quality. Sari [14] also added that improving the quality of education is not only focused on the readiness of the human resources involved in it, but the work environment also has an influence on the quality of education / school quality. In public schools, the physical work environment is generally not a problem. Even in general, the work environment that can be observed from the factors of safety and comfort, concern for rules, empowerment of innovation, availability of resources can be said to be in a good category. Especially in state schools with good governance and regulations, it is certain that a good work environment will also be easily formed.

3.5 The Effect of Motivation on the Quality of Education

Based on the results of data processing that has been done, it is known that motivation has no influence on the quality of education / school quality. This is supported by Adirestuty [15] which states that there are teachers who focus on educational practices that focus on the teaching aspect. More clearly, it was found that teachers did not upgrade their knowledge in accordance with their fields. In other words, mastery of knowledge in teachers who are unable to make adjustments to knowledge can have an impact on decreasing the quality of education. Maslow argued that motivation is something that is constant (fixed), never ends, fluctuates and is complex, and it is largely a universal characteristic in every activity of organisms by [16]. Still in Zubaidah [17] that the opinion of experts, regarding the notion of motivation it can be concluded that motivation is an encouragement that comes from within a person to take action in order to achieve goals. Meanwhile, motivation in the work environment is an encouragement within the individual/group to carry out the work for which they are responsible for the goals to be achieved. So it is important that this motivation is related to understanding the things that influence an employee to have good performance. Regardless of the difference in the level of motivation possessed, every teacher has a moral burden and must be held accountable.

The manifestation of teacher motivation can easily be seen from the level of productivity carried out by the teacher concerned. If there are teachers who have high productivity, then these teachers can be categorized as teachers who have good motivation. Conversely, if the responsibility as a teacher is not fulfilled, then the teacher can be categorized as a teacher with low motivation. Motivation is a very important element to be researched and studied. So that teachers can improve or increase their motivation so that the quality of education / school quality can also increase. This is supported by Zubaidah [17] which states that teacher motivation is a factor that greatly influences the quality of school quality. Riyadi [18] also added that to improve the quality of education and the quality of their students, teachers must have great responsibility and motivation. In this study the authors used references from writing Teppo et al., [19], also similar to Duman et al., [20] discussing motivation about enjoying learning, fun learning, and teacher interest in teaching. Then, on another occasion, it was explained that motivation about liking teaching because they feel competent, feel they are performing well in learning, and their efforts to understand learning material are motivations. Still regarding motivation [21]. Regarding motivation, it is discussed that teachers have made changes to students' lives in a positive way and also have an impact on change so that they contribute to society. From this statement it can be concluded that in this research discussion about motivation is still focused on learning and around motivation in the classroom. Meanwhile, the quality of education that is discussed is more about quality assurance policies in the public, the implementation of school principal policies through the formulation of processes and school governance. This is what causes the contribution of motivation to be very small and tends to be insignificant in supporting its relationship with the quality of education.

IV. CONCLUSION

Based on the presentation and discussion that has been submitted, the following conclusions can be drawn.

1. There is no influence of leadership on the quality of vocational education in Malang Raya
2. There is a significant effect of the work environment on the quality of vocational education in Malang Raya
3. There is no effect of motivation on the quality of vocational education in Malang Raya Be brief and state the most important conclusions from your paper. Do not use equations and figures here.
4. There is an influence of leadership, work environment, motivation, and teacher performance on the quality of vocational education in Malang.

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