

The Relationship between Teacher Leadership and Learning Quality in Indonesia

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Abstract: *The purpose of this study was to examine the the relationship between teacher leadership on the learning quality of the Public Junior High Schools in Bandar Lampung City, Lampung province, Indonesia This research was a quantitative study with an asosiative method. Data collection was conducted using a questionnaire with 204 teacher samples at 100% response rate. The hypotheses were tested using simple linear regression analysis through the t test to determine the relationship of the independent variable on the dependent variable at a confidence level of 95% ($\alpha = 0.05$). The result showed that there was a significant influence of teacher leadership on the learning quality.*

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I. Introduction

Learning quality is a special concept of learning and education in general and thus, the principles of learning and education in general has to be well applied (Stracke, 2017). Learning quality is highly required due the increasing speed of globalization and changes worldwide (Stracke, 2013). Quality is the core concept of school education (Lee, 2010). Learning quality is important for learning processes and school success (Stracke, 2012). The quality of learning reflects the success of schools in achieving learning goals (Darling-Hammond, 2010). Quality development is crucial and needs a long process to be established and integrated (Stracke, 2010). Learning quality is essential and despite it's importance, many people find quality as an interesting concept (Sallis, 2014). The enhancement of Learning quality depends on the quality classroom management (Norton, 2016). A better quality of learning makes a result in greater academic achievement (Solberg, Howard, Gresham, and Carter, 2012). The quality of learning is influenced by several factors, such as teacher leadership (Deming, 2018).

In the past decades, there have been many studies that link high-quality leadership such as instructional leadership with positive school outcomes (Horng, 2010). Teacher leadership improves education quality and student learning (Masino and Niño-Zarazúa, 2016). The improvement of teacher leadership is in line with the quality of learning (Moller and Pankake, 2013). Teacher leadership is not a new concept and many research has been done on teacher leadership (Galland, 2008). Researchers have obtained results that teacher leadership is a very important factor in improving the quality of learning (Harris, 2013). Leadership is an important aspect to the school success (Hariri, 2011). Instructional leadership greatly influences the quality of school achievements (Hallinger, 2003). Instructional leadership is indispensable for teachers to achieve goals in the learning process (Gonzales and Lambert, 2014). The correlational

between leadership and quality learning enhanced student learning

This study is in three parts. First, it describes the methods, sample, instruments, data collection procedure. Second it presents the results and findings. Third it explains the conclusion and implication. The aim of this research is to answer the research question, "What is the relationship between the quality of learning and teacher leadership?"

II. Material And Method

This quantitative study was held in eight public junior high schools in Bandar Lampung city, Lampung province, Indonesia. The total of 204 teachers were randomly selected among the eight representative public junior high schools.

Study Design: Quantitative study

Study Location: Eight public junior high schools in Bandar Lampung city, Lampung province, Indonesia.

Study Duration: December 2018 to February 2019

Sample size: 204 teachers.

Sample size calculation: The population of teachers of public junior high school teachers in the public schools in Bandar Lampung city, Lampung province were 1811. We used the confidence level of 95%. The sampling technique in this study used a random sampling technique that was taken from the population in a random and proportional way that were spread out. The sampling had two steps which were based on the location and the schools. The first step was based on the location. There was a total of sixteen sub districts in Bandar Lampung city and randomly were taken eight sub districts, which were Rajabasa, Labuhan Ratu, Kemiling, Enggal, Tanjung Karang Pusat, Tanjung Karang Barat, Teluk Betung Selatan and Teluk Betung Utara. The second step was based on the schools in Bandar Lampung city. There were 37 public junior secondary schools in Bandar Lampung city. There was a school that was taken as a representative in every sub districts chosen. Finally, a sample of 204 teachers, out of 416 teachers, were chosen from the selected schools.

Instruments

The instrument in this study used a questionnaire. The questionnaires consisted of twenty statements about the quality of learning and twenty statements about teacher leadership. The quality of learning included five factors, which were suitability, attractiveness, effectiveness, efficiency and productivity of learning. Teacher leadership included six factors, which were curriculum coordination, student progress monitor, instructional time maintenance, attendance maintenance, assessment provision to students and teacher professionalism development. The questionnaire was valued with the Likert scale that ranged from 1 to 5. The scale had a variety of meaning of every range, 1 = strongly disagree, 2 = disagree, 3 = doubtful, 4 = agree, and 5 = strongly agree. The questionnaire also had high results in validity and reliability. The results of validities for the quality of learning and teacher leadership ranged from 0.44 to 0.82. The reliability for the quality of learning was 0,867 and teacher leadership was 0,925.

Data collection procedure

The questionnaires were given to the principals during a monthly event for all principals of the public junior high school in Bandar Lampung city. The principals were advised to deliver it directly to their teachers. The teachers were advocated to answer the questionnaire according to their own opinion and real condition in their school so the results could be consistent. The questionnaires were completed by 204 teachers (100% response rate) in eight schools in eight sub-districts of Bandar Lampung city, Lampung Province, Indonesia. Statistical Package for the Social Sciences (SPSS) version 22 was used to analyze the data.

III. Result and Discussion

Description of variables

Table 1 reported the lowest score, the highest score, mean, median, modus, standard deviation and variances.

Table 1. Descriptive statistics for variables.

Components	The quality of learning	Teacher leadership
N	204	204
Lowest score	41	40
Highest score	100	100
Mean	74,36	70,28
Median	75	70
Modus	70	70
Standard deviation	12,94	13,95
Variances	167,552	194,606

The lowest scores were 41 for the quality of learning and 40 for teacher leadership. The highest scores for both quality of learning and teacher leadership were 100. The mean for the quality of learning was 74,36 and 70,28 for teacher leadership. The median for the quality of learning was 75 and 70 for teacher leadership. The modus for both quality of learning and teacher leadership was 70. The standard deviation for the quality of learning was 12,94 and 13,95 for teacher leadership. The variances for the quality of learning was 167,552 and 194,606 for teacher leadership.

These findings suggest: first, according to teachers' perceptions, the quality of learning in public junior secondary schools in Lampung Province were higher than the teacher leadership. Second, the teachers' perceptions of teacher leadership in public junior secondary schools in Lampung Province were also quite high. Finally, the teachers, in general, agree that there was a significant relationship between the quality of learning and teacher leadership in public junior secondary schools in Bandar Lampung city.

Analysis pre requisite tests can be divided into several types, namely normality test, heteroscedasticity test, multicollinearity test and linearity test (Sugiyono, 2010).

Table 2 reported the normality of the data using Statistical Package for the Social Sciences (SPSS) version 22.

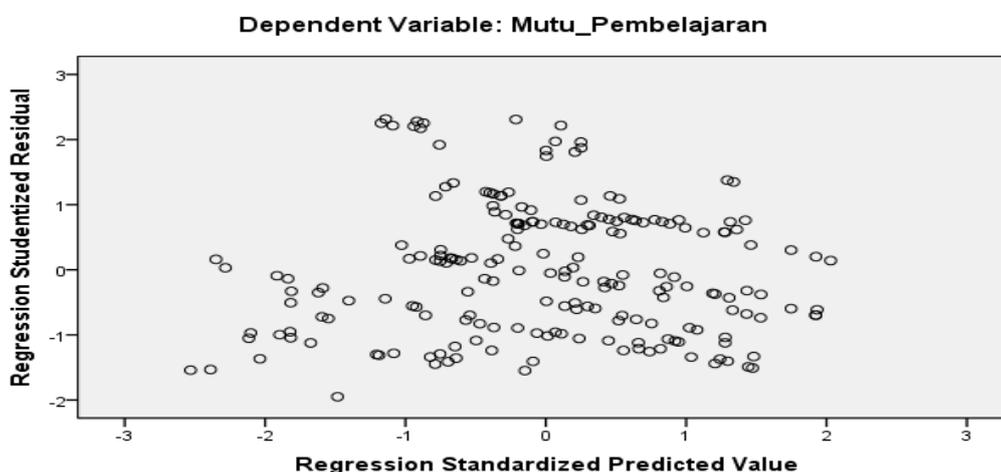
Table 2.Normal Distribution Result

	The quality of learning	Teacher Leadership
N	204	204
Normal Parameters ^{a,b} Mean	74.36	70.28
Std. Deviation	12.944	13.950
Most Extreme Differences	Absolute	.061
Positive		.031
Negative		-.061
Test Statistic		.061
Asymp. Sig. (2-tailed)	.065 ^c	.084 ^c

Table 2 showed that the data were normally distributed because the values of the quality of learning and teacher leadership were higher than 0,05.

Heteroscedasticity test aims to test whether in the regression model inequalities occur from residuals, one observation to another observation (Sugiyono, 2010). One way to detect the presence or absence of heteroscedasticity is to look at the scatterplot graph below.

Scatterplot



The result showed through the Scatterplot graph replied that it did not form a pattern, which means that the data was homogeneous.

To test multicollinearity, it can be done by looking at the VIF value of each independent variable. If the VIF value is <10, it can be concluded that data is free from multicollinearity. Table 3 showed the results of the multicollinearity test.

Table 3. Multicollinearity test

Model	Collinearity Statistics	
	Tolerance	VIF
Teacher Leadership	.975	1,025

The multicollinearity result of teacher leadership was 1,025 which is less than ten, menaning that the data is free from multicollinearity.

In the Linearity test, the hypothesis formulation was: Ho: regression model is non linear, Hi: linear regression model, with test criteria: reject Ho if the value of α from deviation from linearity in anova table is <0.05, in other cases Ho is accepted. Table 4 showed the result of the linearity test.

Table 4.Linearity test

		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	12055.353	56	215.274	1.441	.043
	Linearity	1498.608	1	1498.608	10.033	.002
	Deviation from Linearity	10556.745	55	191.941	1.285	.120
Within Groups		21957.804	147	149.373		
Total		34013.157	203			

Significance values in Table 4 showed deviation from linearity 0.120 > 0.05 which meant that H₀ was rejected or that the regression model was linear.

In the Signifancy test, the formulation of the hypothesis was H₀: the regression equation is not significant, H₁: the regression equation is significant, with the test criteria at a significant level of 0.05 is rejecting H₀ if the value of t_{count} > 2, in other cases H₀ is accepted. Table 5 showed the result of the significancy test.

Table 5. Significancy test

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	60.675	4.573		13.268	.000
Teacher Leadership	.195	.064	.210	3.051	.003

Teacher leadership obtained a value of t_{count} of 3.051 > t_{table} (3.202) of 1.972 and the value of α = 0.003 < 0.05, thus Ho is rejected or concluded that the regression equation is significant.

The tendency of the relationship of the quality of learning and teacher leadership can be reflected in the determinant coefficient values. Table 6 showed the determinant coefficient values.

Table 6. Determinant coefficient values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.210 ^a	.044	.039	12.687

From Table 6, it is known that the value of R² = 0.044. This means that the relationship between the quality of learning and teacher leadership was significant.

IV. Conclusion

This paper examined the relationship between the quality of learning and teacher leadership, using survey data from a sample of 204 teachers in eight Bandar Lampung school sub-districts. This research was a quantitative study with an asociative method. Data collection was conducted using a questionnaire with 204 teacher samples at 100% response rate. The hypotheses were tested using simple linear regression analysis through the t test to determine the relationship of the independent variable on the dependent variable at a confidence level of 95% (α = 0.05). The results showed that there was a significant relationship between the teacher leadership and the quality of learning, which implied that the higher of the teacher's leadership, the better quality of learning would be resulted. The lower the teacher's leadership, the worse quality of learning would be. These variables really had a positive and significant relationship.

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