

The Influence of Teachers' Leadership and Motivation on Social Science Learning Outcomes MA Yahisha Cihampelas Bandung (Pengaruh Motivasi dan Kepemimpinan Guru terhadap Hasil Belajar Ilmu Pengetahuan Sosial di MA Yahisha Cihameplas Bandung)

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Abstract

The aim of this study was to know the influence of teachers' leadership and motivation, to know the learning outcomes on learning social science. This research was quantitative with regression linear. The researchers taken 30 students from class XI IPS (social science) 1 Year 2020/2021 at MA Yahisha Cihampelas Bandung. The result show that the hypothesis in this study can be accepted, namely there is an influence of Teachers' Leadership and Motivation on the Social Science Learning Outcomes of Class XI IPS 1 Students 2020/2021 at MA Yahisha Cihampelas Bandung. With a high level of significance. In other words, Teachers' Leadership and motivation can be used as a method to improve student learning outcomes, in this case, Social Science lessons in the teaching and learning process.

Keywords: Teachers' Leadership, Social Science Learning Outcome, Motivation

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INTRODUCTION

Motivation is a psychic process that encourages people to do something; motivation can come from within or outside a person. Motivating yourself let alone motivating other people or students is not something easy, but it must take a long time. Motivation is the desire that exists in an individual who stimulates him to take actions or something that becomes the basis or reason for someone to behave (Riswanto, & Aryani, 2017; Puspitarini, & Hanif, 2019). Teachers also have a very important role in the teaching and learning process. In many developed countries electronic media as a teaching tool has been used and its ability to deliver teaching materials to students has been proven (Harandi, 2015; Khan, et al., 2019). However, its existence still cannot completely replace the position of a teacher, as an educational staff. On the other hand, teacher leadership in learning is a fundamental factor, because it acts as a facilitator that influences interactions in the relationship between teachers as leaders and students as being led (Wenner, & Campbell, 2017). leadership, the teacher moves students to have a positive learning behavior in achieving learning objectives (Alexandrou, & Swaffield, 2016). Leadership teachers have a big influence on student learning behavior through the guidance and modeling process terms with positive values (Lai, & Cheung, 2015). Teacher leadership is

also linked closely related to management skills class. It is due to one of the success factor of a learning is the result of implementation classroom management performed by teachers optimally.

Learning outcomes are achievements that show the results after students take certain lessons. In the learning process, efforts are needed to develop and maintain learning achievement. These efforts are said to be motivation to cause changes *cognitive, effective and psychomotorin* students. To get good learning outcomes in the form of change must go through several factors, while the factors that affect the learning process and outcomes can be classified into four, namely: "(a) Material or material being studied, (b) Environment, (c) Instrumental factors ; and (d) The condition of students, these factors either separately or collectively make a certain contribution to the learning outcomes of students.

Some of the problems encountered at MA Yahisha Cihampelas Bandung include student learning outcomes that have not been optimal, lack of motivation and performance of existing teachers, teacher achievement is still low, lack of motivating students, low input of students, and so on. . Various efforts and efforts have been made to increase teacher motivation and performance, including through various training and improvement of teacher competence, work shops, seminars, procurement of books and learning tools, improvement of educational facilities and infrastructure, and improving the quality of teacher performance through the MGMP program in both subjects. PPKN, religious education and general subjects.

Several studies related to teachers' leadership and motivation have been described by several previous experts such as Lin, M. H., & Chen, H. G. (2017) that investigating of the effects of digital learning on learning motivation and learning outcome. The study show that students agree with the assistance of digital learning in the subject learning. Particularly, the increasing learning time for students with digital learning relatively enhances the learning performance. Other found the result Firdaus, R. A., Purnamasari, D., & Akuba, S. F. (2019), Leadership can also influence commitment through mediating perceived workload. Base on the results, the conclusion are, to increase teacher's commitment, we need to see the leadership style of the principles of the school (as direct supervisor), gave a good insight for their perceived workload. Wardani et al, (2020) said motivation has a very important role and benefits in the continuity and success of learning carried out by each individual. This means that the higher the learning motivation of the individual, the higher the achievement and learning outcomes to be achieved. While, the aim of this study was to know the influence of teachers' leadership and motivation, to know the learning outcomes on learning social science.

METHODS

Pendekatan yang digunakan dalam penelitian ini adalah quantitative dengan regresi linear. Koefisien a dan b dapat dihitung berdasarkan hasil pengamatan terhadap X dan Y. Artinya dengan memasangkan data of Teachers' Leadership and Motivation (X) dengan data atau on Social Science Learning Outcomes. The sample of this study was 30 students class XI IPS (social science) 1 Year 2020/2021 at MA Yahisha Cihampelas Bandung, in collecting the data the researcher used test, observation, and documentation.

RESULTS AND DISCUSSION

Simple linear estimate one dependent variable based on one independent variable, the dependent variable is given Y notation and the independent variable is given notation X, so that the form of influence that is looking for is Y regression on X. In this case the regression on Social Science Learning Outcomes on the influence of Teachers' Leadership and Motivation. on Social Science Learning Outcomes is Y, of Teachers' Leadership and Motivation is X. The mathematical equation for this example is $Y = a + b(X)$. The

coefficients a and b can be calculated based on observations of X and Y. This means that by pairing the data of Teachers' Leadership and Motivation (X) with data or on Social Science Learning Outcomes.

The formula for calculating the coefficients a and b is as follows:

Formula I

$$a = \frac{(\sum Y)(\sum x^2) - (\sum X)(\sum XY)}{n \cdot \sum X^2 - (\sum X)^2}$$

$$b = \frac{(\sum Y)(\sum x^2) - (\sum X)(\sum XY)}{n \cdot \sum X^2 - (\sum X)^2}$$

Research that tries to involve two or more variables can be aimed at estimating one variable over the other as long as the variable is related according to common sense (Nana Sudjana and Ibrahim, 2010). After data about the influence of Teachers' Leadership and Motivation Social Science Learning Outcomes have been collected through questionnaires, tests, observation, interviews / interviews and documentation, the next step is to process the data through data analysis activities to determine the effect of Teachers' Leadership and Motivation Social Science Learning Outcomes which later can be used as a step to prove the hypothesis in this study.

To determine the effect of Teachers' Leadership and Motivation Social Science Learning Outcomes for Class XI IPS 1 Year 2020/2021 at MA Yahisha Cihampelas Bandung, analysis technique would be used *simple linear regression*.

Simple linear regression predicts one dependent variable based on one independent variable, the dependent variable is given Y notation and the independent variable is given X notation, so that the form of influence sought is Y regression on X. In this case the Teachers' Leadership and Motivation on Social Science Learning Outcomes regression. The Social Science Learning Outcomes are Y, Teachers' Leadership and Motivation is X. The mathematical equation for this example is $Y = a + b(X)$.

The a and b coefficients can be calculated based on the results of observations of X and Y. This means that by pairing Teachers' Leadership and Motivation (X) with data or Social Science Learning Outcomes (Y), consider the following table:

Table 1
Teachers' Leadership and Motivation results (X) and Social Science Learning Outcomes (Y).

No Sample	Sequence Teachers' Leadership and Motivation (X)	Social Science Learning Outcomes (Y)	X ²	XY	Y ²
1	26	80	676	2080	6400
2	27	80	729	2160	6400
3	19	60	361	1140	3600
4	25	80	625	2000	6400
5	23	70	529	1610	4900
6	29	80	841	2320	6400
7	22	70	484	1540	4900
8	25	80	625	2000	6400

9	26	80	676	2080	6400
10	29	80	841	2320	6400
11	20	70	400	1400	4900
12	26	80	676	2080	6400
13	28	80	784	2240	6400
14	25	80	625	2000	6400
15	23	80	529	1840	6400
16	26	80	676	2080	6400
17	27	80	729	2160	6400
18	22	70	484	1540	4900
19	30	80	900	2400	6400
20	24	70	576	1680	4900
21	25	80	625	2000	6400
22	26	80	676	2080	6400
23	30	80	900	2400	6400
24	25	80	625	2000	6400
Total	608	1850	15 592	47 150	143 300

The formula for calculating the coefficients a and b are as follows:

formula I

$$X = \frac{608}{24} = 25.33$$

$$Y = \frac{18\,508}{24} = 77,08$$

Formula II

$$a = \frac{(\sum Y)(\sum x^2) - (\sum X)(\sum XY)}{n \cdot \sum X^2 - (\sum X)^2}$$

$$b = \frac{(\sum Y)(\sum x^2) - (\sum X)(\sum XY)}{n \cdot \sum X^2 - (\sum X)^2}$$

Regression of learning outcomes Score of Teachers' Leadership and Motivation (X) and Social Science Learning Outcomes (Y), which can be calculated as follows:

$$a = \frac{(1850)(15592) - (608)(47150)}{(24)(15592) - (608)^2}$$

$$= \frac{28845200 - 369664}{374208 - 369664}$$

$$= \frac{28475536}{4544}$$

$$= 6266.62$$

$$b = \frac{24(47150) - (608)(1850)}{(24)(15592) - (608)^2}$$

$$= \frac{1131600 - 1124800}{374208 - 369664} = \frac{6800}{4544}$$

$$= 1.496$$

Thus the equation *linear regression* simple above is: $Y = 1.496 + 6266,623 X$.

It is known that Y Social Science Learning Outcomes (Y), and X stands for Teachers' Leadership and Motivation. From this equation, the change in Y can be predicted or predicted if X is known. For example, if the value of X is 3, then the possible score (Social Science Learning Outcomes Y) is $6266.62 + (1.496)(3) = 6271.108$. This

means that every one-unit increase in the X variable would be followed by an increase in the Y variable by 1.496 units at a price: a, constant.

The prediction above only applies if it meets the linear regression requirements, namely (1) the linearity and significance of the regression equation, and (2) the normality and homogeneity of the data, for both of these it is necessary to carry out tests.

Linearity test and regression significance.

The hypothesis that is tested is

1. null hypothesis (H_0): The regression direction coefficient does not mean against the significant regression coefficient.

2. Null hypothesis (H_0): Linear regression versus nonlinear regression

To be able to test the hypothesis over the independent variable data X is repeated into several groups of the same data and after that calculate the quantities of JK (G), JK (T), JK (a), JK (b / a), JK (s), JK (TC) to then look for the F statistics formed by the comparison of the two RJK grouping X values, namely:

Table. 2.
Score of Teachers' Leadership and Motivation (X) and Social Science Learning Outcomes (Y).

X	Group	N ₁	Y
19	1	1	80
20	2	1	80
22	2	2	60
22			80
23	3	2	70
23			80
24	4	1	70
25	5	5	80
25			80
25			80
25			70
25			80
26	6	5	80
26			80
26			80
26			80
26			80
27	7	2	70
27			80
28	8	1	70
29	9	2	80
29			80
30			80
30	10	2	80
	10	24	1850

$$JK (T) = \sum Y^2 = 1850 \text{ (calculated)}$$

$$JK (G) = \sum X \left\{ \sum Y^2 = \frac{(\sum Y)^2}{ni} \right\}$$

$$JK (a) = \frac{(\sum Y)^2}{n}$$

$$JK (b / a) = b = \left(\sum XY - \frac{(\sum X)(\sum Y)}{n} \right)$$

$$JK (S) = JK (T) - JK (a) - JK (b / a)$$

$$JK (TC) = JK (S) - JK (G).$$

$$JK (G) = \{80^2 - \frac{80}{1}\} + \{80^2 - \frac{80}{2}\} + \{60^2 + 80^2 - \frac{60^2 + 80^2}{2}\} +$$

$$112$$

$$\{70^2 + 80^2 - \frac{70^2 + 80^2}{2}\} + \{70^2 - \frac{70}{1}\} +$$

$$\{80^2 + 80^2 + 80^2 + 80^2 + 80^2 - \frac{80^2 + 80^2 + 80^2 + 80^2 + 80^2}{5}\} +$$

$$5$$

$$\{80^2 + 80^2 + 80^2 + 80^2 + 80^2 - \frac{80^2 + 80^2 + 80^2 + 80^2 + 80^2}{5}\} +$$

$$\{70^2 - \frac{70}{1}\} + \{80^2 + 80^2 - \frac{80^2 + 80^2}{2}\} + \{80^2 + 80^2 - \frac{80^2 + 80^2}{2}\}$$

$$= \{0\} + \{0\} + \{10,000 - 1,800\} + \{11,300 - 8,100\} + \{0\} +$$

$$\{30,500 - 6,100\} + \{32,000 - 6,400\} + \{11,300 - 5,650\} + \{0\} +$$

$$\{12,800 - 6,400\} = 39,850$$

$$JK (a) = \frac{3,422,500}{24} = 142,604,167$$

$$JK (b / a) = b \left\{ \frac{47150 - (608)(1850)}{24} \right\} = 283,3333$$

$$JK (S) = 1850 - 142,604,167 - 283,3333 = -141,038.5$$

$$JK (TC) = -141,038.5 - 39,850 = -1,450,235$$

Table. 3.
Anova for linear regression $Y = 6266.62 + 1.496 X$

Source Vasriansi	dk	JK	RJK	F
Total JK(T)	24	1850	-	-
Regression (a)	1	142,604.167	142,604.167	
Regression (b / a)	1283	3333	283,3333	-6,127,5076
Remaining (S)	22	-141,038.5	-6,410,8409	
Tuna Cocol (TC) (k-1)	1	- 1,450,235	- 1,450,235	-764,239271
Calat (G) (nk)	21	39,850	1,897 , 61905	

Note:

F-value -6,127,5076 is 283,3333 divided by -6,410,8409

The F value -764,239271 is - 1,450,235 divided by 1,897,61905

F table value for db 1: 22 with $\alpha = 4, 30$

Values table F for db 1: 21 with $\alpha = 4.32$

thus the first hypothesis does not mean regression coefficient direction against coefficient but they would be rejected because $-6,127.5076 > 4.30$, meaning that the regression coefficients are real (meaning) hypothesis to both linear regression equations against linear markup are accepted because $-764.239271 < 4.32$. With the test results, the regression equation is valid for the necessary conclusions.

Correlation (r) in simple linear regression can be used to calculate the level of contribution X to Y, through the statistical correlation coefficient given the symbol r_{XY} or abbreviated as r. The formula used is:

$$r = \frac{\sum XY - (\sum X)(\sum Y)}{\sqrt{\{n \sum X^2 - (\sum X)^2\} \{n \sum Y^2 - (\sum Y)^2\}}}$$

Or use the JK in the ANOVA table with the formula

$$r^2 = \frac{JK(T) - JK(S)}{JK(T)}$$

With a note that JK (T) in the formula is corrected, namely $JK(T) - JK(a)$.

Calculations with the ANOVA table formula can be seen:

$$JKT = 1850 - 142,604,167 = -140,754,167$$

$$JKS = -141,038,5$$

$$r^2 = \frac{-140,754,167 - (-141,038,5)}{1850} = \frac{284,333}{1850}$$

$$= 153.69$$

$$r = 12.40$$

This value of 12.40 if consulted with the table of F value_{0.05} at the 5% significance level $F_{\text{count}} 12.40$ F_{table} and 4.30 and at the 1% significance level $F_{\text{count}} 12.40$ and $F_{\text{table}} 7.94$, to make it easier to understand it can be written in a way that is $4.30 < 12.40 > 7.94$.

Thus it can be said that the hypothesis in this study can be accepted, namely there is an influence of Teachers' Leadership and Motivation on the Social Science Learning Outcomes of Class XI IPS 1 Students in 2020/2021 at MA Yahisha Cihampelas Bandung. With a high level of significance. In other words, Teachers' Leadership and Motivation are very Social Science Learning Outcomes in the teaching and learning process.

CONCLUSION

The results of the calculation of the value of $r = 12.40$ if consulted with the table F value_{0.05} at the 5% significance level $F_{\text{count}} 12.40$ and $F_{\text{table}} 4.30$ and at the 1% significance level $F_{\text{count}} 12.40$ and $F_{\text{table}} 7.94$, meaning that the value $r = 12.40$ entered in high influence category. to make it easier to understand it can be written in a way that is $4.30 < 12.40 > 7.94$. Thus, the hypothesis in this study can be accepted, namely there is an influence of Teachers' Leadership and Motivation on the Social Science Learning Outcomes of Class XI IPS 1 Students 2020/2021 at MA Yahisha Cihampelas Bandung. With a high level of significance. In other words, Teachers' Leadership and motivation can be used as a method to improve student learning outcomes, in this case, Social Science lessons in the teaching and learning process.

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