

# The Influence of Principal Management and Teacher Learning Media on Student Achievement at Elementary School Gugus 01 Muara Telang District

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## ABSTRACT

This study aims to find out: 1) the influence of the principal management competencies on student achievement, 2) the influence of using the learning media by teachers on student achievement, and 3) the influence of the principal management competencies and the use of learning media by teachers on student achievement. This research used quantitative methods. Questionnaires and documentation were the instrument in this research. The data were analyzed descriptively by using SPSS version 25 for windows. The findings proved that: 1) there was an influence of the principal's managerial competencies on student achievement, 2) there was an influence of the use of learning media by teachers on student achievement, and 3) there was significant influence between principal's managerial competencies and the use of learning media by teachers on student learning achievement. The implication of this study was: 1) the headmaster as leader of the school who has responsibility for education quality and also the progress of the school he leads. He was a figure who must be a role model for everyone in the school; and 2) the facilities of education must be used in the learning process to students so that the learning process is more fun, exciting, increases motivation and stimulation of learning activities, and even affects psychologically to students.

**Keywords:** Principal Management, Learning Media, Students Achievement.

## 1. INTRODUCTION

Education is long life needs. People need an education. To improve the quality of education and human resources, schools should be managed by a leader who has the basics and requirements of leadership. Discussing about education, of course, will not be separated from the role of a school principal as a manager who must be able to manage all activities in school and also the role of teachers as educators in achieving the quality of national education goals. The concept of education is the whole process of a person developing abilities, attitudes, and various other forms of behavior that can shape certain behaviors under certain conditions [1]. As the opinion of our educational father "Ki Hajar Dewantoro" as follows: *Ing Ngarso Sung Tuladha, Ing Madya Mangun Karso, Tut Wuri Handayani*". When a leader is at the front, he/she will set an example to his subordinates; if he/she is in the middle, he/she must be able to arouse and encourage

those around him; and if he is behind, the leader must be able to direct, encourage/motivate his subordinates to be more advanced.

A leader must be able to exemplify, protect and motivate his/her subordinates so that everyone wants to work optimally following the job descriptions that have been given and carry out sincerely with full responsibility to improve the student's learning achievement. Without education, humans will find it difficult to develop and even be underdeveloped. Thus education must be truly directed to produce quality and competitive humans, also to having high character and good morals [2]. Efforts that were immediately made to meet the demands of education were "educational reform in a planned, directed and sustainable manner" [3].

Nuwardin explains that principal management can affect the teacher's performance in schools [4]. Furthermore, the role of the family and society is

independent of educational practices [5]. The function of education is to develop abilities and form a dignified national character and civilization in the nation's life. This is stated in article 3 of Law number 20 of 2003 concerning the National Education System. This law explain about the purpose of education where the generation must be educated well. In other words, they must have good intelligent, attitude, and be a religious person. It will affect their character. This character will be beneficial for them in growing up their life in future. It will be reflected in leadership behavior that is carried out when directing and influencing the people they lead [6]

Nurkolis asked that why a leader figure is needed? First, the need of people in the society on a leader. Second, a leader represent his group. Third, a leader responsible for the risks. The last, a leader as a power [7]. In certain cases, authoritarian leadership is used more quickly in making decisions [8]. One of the education components is a principal. The principal is that have an important role in improving the quality of education. Lisnawati in her research which aims to determine how the level of principal management functions, teacher motivation, and teacher performance on student achievement [9]. The data collection techniques using questionnaires and documentation. Similarly, Caksana researched to determine the direct and indirect influence of the principal's leadership style on teacher performance at SMAN 1 Tulungagung [10]. In his research, motivation is an intervening variable. The data collection method was also using a questionnaire that is distributed to teachers.

In the context of regional autonomy and decentralization of education, the process of developing human resources must touch various areas of life that must be reflected in the personal of leaders, including educational leaders, such as school principals. Therefore, improving the quality of human resources, especially the principal as the education leader in schools is a demand to improve the quality of education [8]. The teacher as a subject of compulsory learning materials must pay attention to individual aspects of students as subjects who will receive learning material. The teachers must be able to choose learning methods and media that are following the conditions of students' abilities in the classroom. Of course, the techniques used must be oriented towards the student's average ability level. The impact of using this technique is for students who are classified as slow students in terms of their ability to understand the material, they may experience difficulty in absorbing material from the teacher or will have difficulty receiving lessons.

The learning process is a communication process, so it can stimulate students' attention, interest, thoughts, and feelings in learning activities to achieve learning goals [11]. Without media, the communication will not

occur, then the learning process as a communication process will also not be able to take place optimally. Learning media is an integral component of the learning system. In the learning process, the media has a function as a carrier of information from teachers to students. Research conducted by Erwandi aims to determine the effect of principal leadership on teacher performance and motivation [12]. The research method was the quantitative approach with the associative method. The data analysis technique used to test the hypothesis is simple and multiple linear regression analysis. The research proposed that it is needed to assist the students in receiving and processing information to achieve learning objectives.

According to Rohiat, education output includes school performance [13]. School performance is the student's achievement that results from school processes. School performance can be measured by output of the school. Nurkolis states that schools must have the expected output [7]. The school output is student achievement which is produced by the learning and management process in schools. In general, the output can be classified into two categories, namely output in the form of academic achievement and output in the form of non-academic achievement. For example, the output of academic achievement is NEM (pure evaluation value), critical, creative/divergent, rational, inductive, deductive, and scientific ways of thinking. Non-academic output, for example, high curiosity, self-esteem, honesty, good cooperation, high affection for others, high solidarity, tolerance, discipline, diligence, sports achievements, arts, and scouting.

The efforts that have been carried out by teachers and school principals at the Gugus 01 Muara Telang Public Elementary School are already good. This is due to several things, including the management of the school principal that is quite good, but lack of the spirit of change in terms of improving learning by the principal and teachers. Then, sufficiently complete facilities and infrastructure, good enough lesson planning, learning methods that are following student's abilities. However, there is still a lack of teacher awareness that teaching is a noble task.

Besides, it appears that learning resources in schools create the behavior of students. Therefore, the education actors need to make fundamental changes both in the process and output of education. To achieve good goals, there must be guided by a good curriculum, adaptive, and able to produce output that is ready to face the internal and external challenges of globalization.

## **2. METHODS**

This is quantitative research that is based on the philosophy of positivism, where reality is seen as something concrete, can be observed with the five senses, can be categorized based on type, shape, color,

and behavior does not change, can be measured and verified. In quantitative research, researchers can determine only a few variables from the object and make instruments to measure them [14]. The target to be studied is the influence of principal management and teacher learning media on student achievement in Elementary School Gugus 01 Muara Telang District. Meanwhile, the data analysis used was analytical descriptive research, with the main objective of creating a statistical picture of a situation.

In this study, the population studies were all teachers and principals in Elementary School Gugus 01 Muara Telang District. Based on existing data, the number of teachers and principals of Elementary School Gugus 01 Muara Telang District were 51 people.

**Table 1. The population of Teachers and Principal of Elementary School Gugus 01 Muara Telang District**

No	School	Principals and Teachers
1.	SDN 2 Muara Telang	10
2.	SDN 9 Muara Telang	10
3.	SDN 16 Muara Telang	10
4.	SDN 17 Muara Telang	10
5.	SDN 18 Muara Telang	11
Total		51

*Source: Muara Telang District Office (2015)*

The members of the population are homogeneous. It means that they are still in one cluster. So, the population is also as a sample of this study that is all of principals and teachers who teach at the State Elementary School Gugus 01 of Muara Telang District.

**Table 2. Sample of Teachers and Principal of Elementary School Gugus 01 Muara Telang District**

School Interval	F	%	Cumulative	
			F	%
59 – 64	10	13.73	7	13.73
65 – 70	10	35.29	25	49.02
71 – 76	10	29.41	40	78.43
77 – 82	10	17.65	49	96.08
83 – 88	11	3.92	51	100.00
Total	51	100.00		

*Source: Muara Telang District Office (2015)*

This study used a questionnaire and documentation. The questions were made in simple language and short sentences with clear intentions. Questionnaires are written questions through a list of questions that have been prepared in advance and must be filled in by [14].

The questionnaire was in the form of a 5-range Likert scale, with a score range of 1 to 5 for each indicator. The questionnaire developed consisted of the principal of management and learning media. All questionnaires were given to a previously determined sample. The data generated from this questionnaire is in the form of quantitative data which will then be analyzed using a parametric test.

The data analysis technique is an analysis process for scientific research that is carried out by using certain techniques. The research process is not enough to be completed in a short time. It takes a long time. In the process, some procedures and stages must be considered.

Data analysis is a process of arranging the order of data, organizing it into a pattern, category, basic description. Data analysis is a series of activities to study, group systematic, interpretation and verification of data so that a phenomenon has social, academic, and scientific value. The data analysis technique is an activity of thinking to describe something as a whole to be made into components so that we can get to know the signs of the components of the relationship between one another and also the functions of each in an integrated whole. Furthermore, Sugiyono argues that the research process is very difficult to be done because it requires hard work, creative thinking, and high knowledge skills. Finally, Moleong proposed that activities in research are carried out by examining all available data from research instruments consisting of notes, records, documents, tests, and so on [15].

The analysis is proposed based on hypothesis through data presentation from the instrument. So, the researchers used quantitative data analysis technique. The quantitative data analysis technique is an activity after data from all respondents or other data sources have been collected. In this case, the using of statistical analysis is very helpful.

### 3. RESULTS AND DISCUSSION

The data description obtained from this field is intended to provide an overview of the data distribution or a central symptom, location, and frequency distribution. The figures presented describe the mean, mode, median standard deviation, variance, and frequency distribution along with graphs. Based on the number of variables and referring to research problems, the data can be grouped into three, namely: Principal management ( $X_1$ ), learning media ( $X_2$ ), and student learning achievement ( $Y$ ).

Data analysis to test the research hypothesis was carried out by using SPSS parametric statistical analysis, namely normality, linearity, and regression significance. If these assumptions are not met, the test will use non-parametric analysis.

**1. Principal Management ( $X_1$ )**

Based on the results, the normality test with Lilliefors by looking at the probability value in the Shapiro-Wilk column is 0.130. The data is said to be normal if it has a probability value greater than 0.05 ( $> 0.05$ ). Based on these results then compared with the calculated probability value =  $0.130 > 0.05$ . Because of the value of  $0.130 > 0.05$ , the data for the principal management variable is normally distributed.

Statistical calculations on the principal management score showed that the lowest score was 54 and the highest was 75 with a score range of 3. The total score was obtained from 20 statements. The total possible minimum and maximum theoretical scores are 20 and 100. The calculation of the distribution of these scores results are (a) the average value or the number of scores divided by the number of respondents is 63.76; (b) the mode or score that has the maximum frequency in data distribution, namely 60; (c) the median or score that divides a data distribution into two equal parts, namely 63.0; (d) population variance or variation in individual data values in the data set, namely 24,824; (e) the standard deviation is 4.982. For more details, see the attachment to the description of data on school principal management.

**2. Teacher Learning Media ( $X_2$ )**

Based on the results of the calculation of the normality test with Lilliefors by looking at the probability value in the Shapiro-Wilk column is 0.911. The data is said to be normal if it has a probability value greater than 0.05 ( $> 0.05$ ). Based on these results then compared with the calculated probability value =  $0.911 > 0.05$ . Because of the value of  $0.911 > 0.05$ , the data for the learning media variables are normally distributed.

Based on the results of statistical calculations on the scores of teacher learning media, the lowest score was 53 and the highest score was 80 with a score range of 3. The total score was obtained from 20 statements. The total possible minimum and maximum theoretical scores are 20 and 100. The calculation of the distribution of these scores results is: (a) the average value or the number of scores divided by the number of respondents is 65.57; (b) mode or score that has the maximum frequency in data distribution, namely 65; (c) the median or score that divides a data distribution into two equal parts, namely 65.0; (d) population variance or variation in individual data values in the data set, namely 35.25; (e) the standard deviation is 5,937. For more details, see the attached data description about teacher learning media.

**3. Student Achievement ( $Y$ )**

Lilliefors test for normality showed that the probability value in the Shapiro-Wilk column is 0.874.

The data is said to be normal if it has a probability value greater than 0.05 ( $> 0.05$ ). Based on these results then compared with the calculated probability value =  $0.874 > 0.05$ . Because of the value of  $0.874 > 0.05$ , the data for the student learning achievement variables are normally distributed.

Then, the lowest score was 59 and the highest score was 83 with a score range of 5. The total score was obtained from non-academic learning achievement and academic learning achievement. The calculation of the distribution of these scores results are (a) the average value or the number of academic achievement scores divided by the number of respondents is 71.45; (b) the mode or score that has the maximum frequency in data distribution, namely 70; (c) the median or score that divides a data distribution into two equal parts, namely 71.0; (d) population variance or variation in individual data values in the data set, namely 36.213; (e) the standard deviation is 6,018. For more details, see the attached data description on student achievement.

The distribution of student achievement variable scores ( $Y$ ) in the form of a score frequency distribution table is presented in table 5, while the presentation of the data in the form of a diagram is shown in Figure 3. Graph of the frequency distribution of student achievement variable ( $Y$ ).

Related to the result of each variable, so the hypothesis answer can be seen as follow:

a) Multicollinearity Test

The basis for decision making on the multicollinearity test is to look at the Tolerance and VIF values as follows:

1. Based on Tolerance Value

- a. If the Tolerance value is greater than 0.01 then multicollinearity does not occur in the regression model.
- b. If the Tolerance value is less than 0.01 then multicollinearity occurs in the regression model

2. Based on VIF Value

- a. If the VIF value  $< 10.0$ , there is no multicollinearity in the regression model.
- b. If the VIF value  $> 10.0$  then multicollinearity occurs in the regression model

b) Heteroscedasticity Test

The following table is the result of heteroscedasticity test.

**Table 3. Heteroscedasticity Test**

Variable	Standardized Coefficient Betta	T	Sig
Principal's Management	0,00	0,00	1,00
Teacher's Learning Media	0,00	0,00	1,00

Source: SPSS

Based on Table 1, the value of  $t_{count}$  is  $< t_{table}$  that is  $1,00 > 0,05$ . It can be concluded that those variables are equal and constant.

#### c) Autocorrelation Test

Based on the results of the analysis, it is known that the autocorrelation test results can be shown in the table 2 as follow:

**Table 4. Autocorrelation Test**

R	Rsquare	Adjusted R	Std. Error of the Estimate	Durbin Watson
0,915 <sup>a</sup>	0,838	0,675	3,635	1,444

Source: SPSS

Based on the tests carried out, it is known that the statistical value of Durbin-Watson is at the level of significance of 5% as seen in Table 2 with the number DW = 1.444. It means that the regression model does not have an autocorrelation problem, because the value of DW = 1.444 is between -2 to +2.

The findings of this research is accordance with Nuwardin's opinion that the principal has the main role to reach the goal at school, especially learning achievement of students [4]. The principal can facilitate the teachers for some medias of teaching, motivate them, and give reward to the professional teachers personally. Besides, the principal is also build up the teachers' competences with delegate them to follow some training of education.

Furthermore, if the principal does his/her duty, so he/she he has realized his function as a leader in the school [9]. In this function, the principal can be a row model for teachers in the school. Also, he/she will be able to enrich his/her leadership in future.

## 4. CONCLUSION

The implication of this study was: 1) the headmaster as leader of the school who has responsibility for education quality and also the progress of the school he leads. He was a figure who must be a role model for everyone in the school; and 2) the facilities of education must be used in the learning process to students so that the learning process is more fun, exciting, increases motivation and stimulation of learning activities, and even affects psychologically to students.

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