

The Influence of Learning Facilities and Motivation On Student's Achievement

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Abstract – Achieving development goals through improving the quality of education is an effort to produce quality and professional human resources. The school is a place where the teaching and learning process runs between teachers and students by maximizing the use of facilities to explore their potential and achievements. In the learning process motivation also plays an important role in the achievement of student learning activities. The learning process must also be supported by appropriate management, both internal and external. Lack of attention to this important component has an impact on the low effectiveness of learning. SMA PGRI 2 Palembang is a private school that is not free from problems, so it is considered necessary to do research related to improving the quality of education through learning facilities and student motivation in obtaining achievement. Based on the partial calculation, it was found that there was a significant influence of learning facilities and motivation on student achievement. It is necessary to pay attention to learning facilities and motivation to trigger student's achievement.

Keywords – Learning Facilities, Motivation, Student Achievement.

I. INTRODUCTION

Improving the quality of human resources is an absolute prerequisite for achieving development goals. One effort to improve the quality of human resources is through education. In Law Number 20 Year 2003 Concerning National Education System Article 3 states that national education functions to develop capabilities and shape the character and civilization of a dignified nation in the context of educating the life of the nation, as well as to develop the potential of students to become human beings who believe and fear God. SWT, noble, healthy, knowledgeable, capable, creative, independent, and become citizens of a democratic and responsible (Kristiawan, 2015; Kristiawan et al, 2019; Fitria et al, 2019; Kristiawan and Tobari, 2017; Sayer et al, 2018).

According to Irmayani (2018); Fathurrochman et al (2019), learning facilities are learning facilities and infrastructure. These infrastructures include school buildings, study rooms, sports fields, worship rooms, art spaces and sports equipment. Learning facilities include textbooks, reading books, tools and school laboratory facilities and various other learning media. In general, student's achievement influences the quality of learning, including inappropriate teaching methods with applicable curricula resulting in low effectiveness of the teaching and learning process, inadequate facilities and infrastructure, uneven distribution of teachers, and the role of student parents, and the government is not optimal in building quality education (Tobari et al, 2018; Irmayani et al, 2018; Wandasari et al, 2019).

SMA PGRI 2 Palembang is a private school owned by the Indonesian Teachers Association (PGRI) foundations in

the city of Palembang. The high school has two majors, namely Natural Sciences and Social Sciences, related to the problems that occur in our education world that SMA PGRI 2 Palembang is also not immune from this. Both of the learning facilities are still inadequate so that the learning process is less effective.

The purpose of this study was to determine the effect of students' motivation and learning facilities on student achievement in grades X, XI and XII at SMA PGRI 2 Palembang. Knowing the best comparison and level of efficiency between facilities and motivation on student's achievement to add insight into science, as well as observations from a survey information system to design policies to improve the quality and quality of education (Irmayani et al, 2018).

II. THEORY

According to Matin & Nurhattati (2019: 1) facilities and infrastructure (facilities) are one of the important resources in supporting the learning process in schools. According to Barnawi & Arifin (2013: 49) facilities are things that are useful or useful, which serve to facilitate an activity. School facilities are identical to educational facilities and infrastructure. Educational facilities are all devices, equipment, materials, and furniture that are directly used in the education process in schools and educational infrastructure are all basic completeness devices that indirectly support the implementation of the educational process in schools.

Learning facilities have several functions according to Sardiman (2009: 20) 1) clarify the testing of the message so that it is not too verbal; 2) overcoming the limitations of space, time and cost; 3) using the media or educational facilities appropriately and varied can be overcome by the passivity of students; 4) overcoming the difficulties experienced by the teacher in the process of teaching and learning activities (Lian et al, 2018).

Learning facilities have several types namely as revealed by Hamalik (2010: 126); Kristiawan (2019) there are three things that need our attention, namely the media or learning aids, learning equipment, and learning spaces. These three components are interrelated and influence. Overall, these three components contribute, both individually and jointly to learning activities and success (Apriana et al, 2019; Maseleno et al, 2019; Maryanti et al, 2020; Fitria, et al, 2017).

Motivation is a condition or energy that moves employees to be directed or directed to achieve the goals of the organization of the company. The mental attitude of employees who are pro and positive towards work situations is what strengthens their work motivation to achieve maximum performance (Andriani et al, 2018; Salwa et al, 2019; Renata et al, 2018). According to Purwanto (2017: 73) motivation is a complex force, impulses, needs, statements of tension (tension states), or other mechanisms that start and maintain activities that are desirable towards the achievement of personal goals.

According to Tuus (2018: 75) achievement is the result achieved by someone when doing certain tasks or activities. According to Djamarah (2018: 19) achievement is the result of an activity that has been done, created both individually and in groups. According to Risdianto et al (2020) achievement is the result that has been achieved (done, done, and so on). According to Fathurrahman & Sulistyorini (2012: 118) achievement can be interpreted as the results obtained because of the learning activities that have been carried out.

According to Nawawi (1998: 100) learning achievement is the level of success in studying school subject matter expressed in the form of scores obtained from test results. Learning achievements are often called learning outcomes, which means what has been achieved by a student after learning activities that include cognitive, affective and psychomotor aspects (Tobirin, 2005: 151).

III. RESEARCH METHOD

The study was conducted at Palembang's PGRI 2 High School in November 2019- December 2019. The method used is a quantitative research method. Variables in quantitative research here consist of: Facilities (X_1) on student achievement (Y), Learning Motivation (X_2) on student achievement, while testing hypotheses together namely Facilities (X_1) and Learning Motivation (X_2) on Achievement Student Learning (Y). Then to test the hypothesis that has been formulated then all the data obtained will be processed and processed with quantitative analysis.

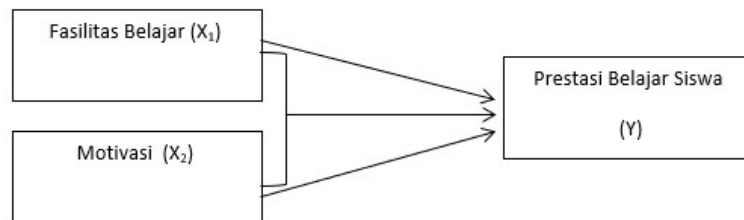


Figure 1. Research conceptual framework

The population used in this study were students of class X, XI and XII SMA PGRI Palembang with the following recapitulation.

Table 1. Total Population of Class X, XI, XII Students of SMA PGRI 2

No	Class IX	Amount
1	X	252
2	XI	288
3	XII	283
	Amount	823

To find out the number of samples to be used, researchers used a formula with an error rate of 10% due to a population of > 200 respondents, namely:

$$n = \frac{N}{1 + N(e)^2}$$

The results of calculating the number of samples are as follows:

$$n = \frac{N}{1 + N(e)^2} = \frac{823}{1 + 823(0,10)^2} = \frac{823}{9,23} = 89,16 = 90$$

Then it is known that the number of samples as many as 90 students used instruments in the form of questionnaires or questionnaires to measure school facilities, motivation and student achievement.

Table 2. Number of Samples of Palembang PGRI 2 High School Students

No	Class IX	Amount
1	X	30
2	XI	30
3	XII	30
	Amount	90

IV. RESULTS AND DISCUSSION

Facilities variable in this study consists of 4 (four) dimensions of indicators, namely teaching tools, learning media, study rooms, libraries. To test descriptive analysis of data on facility variables can be done by using the SPSS version 22 program. The results of the analysis show that the facilities included in the category are very lacking. The results of categorizing the facility variables are as follows:

Table 3. Facilities Variable Categories

No	Norms Range	Frequency	%	Category
1	≥ 69	35	38,8%	Very Good
2	$65 \leq d < 69$	0	0%	Good
3	$61 \leq d < 65$	5	5,6%	Sufficient
4	$58 \leq d < 61$	4	4,4%	Less
5	< 58	50	55,5%	Very Poor

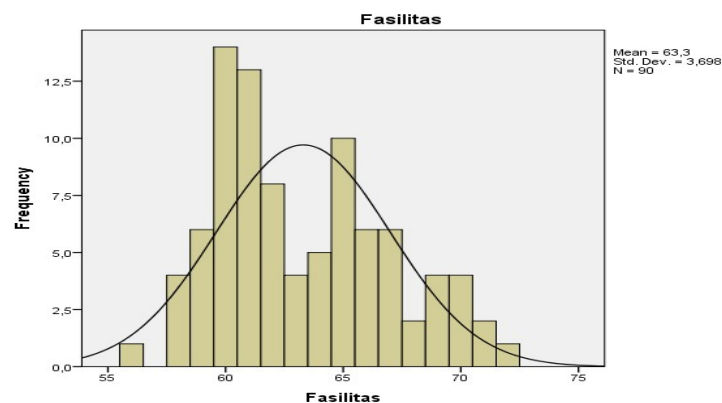


Figure 2. Histogram Score Effect of Facilities Against Student Learning Achievement

From the picture above, it can be seen that the data is normally distributed because the curve is symmetrical. This

identified that the facilities in the category were very lacking. This can be seen from the distribution in the middle of the histogram there is a less significant effect of the facility variable on student achievement.

Facilities variables in this study consist of 5 (five) indicator dimensions, namely duration of activity, frequency of activities, persistence, responsibilities, material. The results of the analysis show that motivation is included in the very poor category. The results of categorizing the facility variables are as follows:

Table 4. Categories of Motivational Variables

No	Norms Range	Frequency	%	Category
1	≥ 62	40	44,5%	Very Good
2	$58 \text{ s/d} < 62$	0	0%	Good
3	$55 \text{ s/d} > 58$	7	57,8%	Sufficient
4	$51 \text{ s/d} < 55$	0	0%	Less
5	< 51	43	47,8%	Very Poor

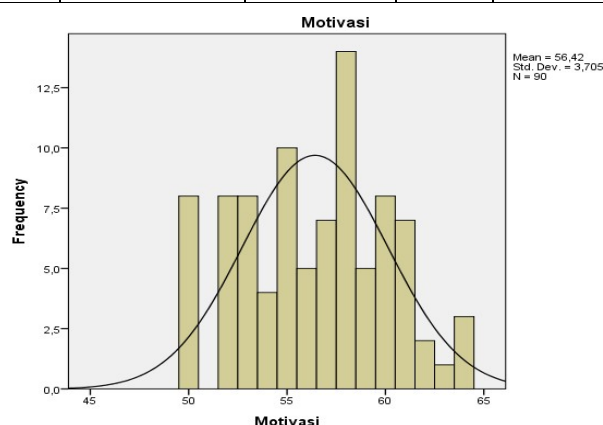


Figure 3. Histogram Score Effect of Motivation
Against Student Learning Achievement

From the picture above, it can be seen that the data is normally distributed because the curve is symmetrical. This identified that motivation was categorized as lacking. This can be seen from the distribution in the middle of the histogram there is a less significant influence of motivation variables on student achievement.

The learning achievement variable in this study consists of 3 (three) dimensions of the indicator namely the level of knowledge, the level of comprehension, the level of

application. To test the descriptive analysis of data on learning achievement variables can be done by using the SPSS version 22 program. The results of the analysis show that learning achievement is included in the category of very less. The results of categorizing learning achievement variables are as follows:

Table 5. Facilities Variable Categories

No	Norms Range	Frequency	%	Category
1	≥ 48	52	57,7%	Very Good
2	$48 \text{ s/d} < 48$	0	0%	Good
3	$42 \text{ s/d} > 45$	5	5,6%	Sufficient
4	$39 \text{ s/d} < 42$	14	15,6%	Less
5	$39 < 58$	33	36,7%	Very Poor

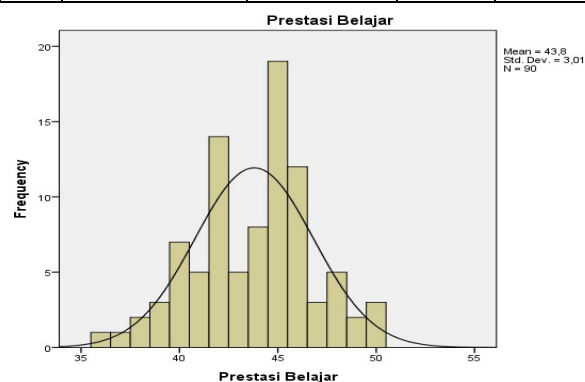


Figure 4. Histogram Score Effect of Facilities
Against Student Learning Achievement

From the picture above, it can be seen that the data is normally distributed because the curve is symmetrical. This identified that the facilities in the category were very lacking. This can be seen from the distribution in the middle of the histogram there is a less significant effect of the facility variable on student achievement.

The normality of data testing is intended to test the assumption that the average sample is close to the normality of the population. From the results of the normality test calculation in the above table, it is known that the variable learning facilities and motivation towards learning achievement can be concluded a) facility data (X_1) has a significance value of $0.067 > 0.05$, so the data is declared normally distributed; b) motivational data (X_2) has a significance value of $0.093 > 0.05$, so the data are declared

normally distributed; and c) learning achievement data (Y) has a significance value of $0.090 > 0.05$, so the data are declared normally distributed.

Homogeneity test data in this study using the test of homogeneity of variances with SPSS version 22 with the following assumptions: a) if the probability or value is significant ≥ 0.05 , then the sample variance is declared homogeneous; b) if the probability or significance value is ≤ 0.05 , then the variance of the sample is declared not homogeneous (Basrowi, et al, 2008: 98). The results of data analysis can be seen in the following table.

Table 6. Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Facility	,738	12	75	0,710

Motivation	1,781	12	75	0,067
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From the results of data analysis using SPSS version 22, it can be stated that the significance value is greater than the probability value for the facility variable $0.710 > 0.005$ and the motivational variable $0.067 > 0.05$, thus the data is declared homogeneous.

Data testing is stated as fulfilling the requirements to be tested, then hypothesis testing is performed on the variables to be tested.

First Hypothesis Testing (H_1)

Table 7. Results of Analysis of the Variable T-Test (X_1) Against Y

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	20,518	5,616		3,654	,000
	Facility	,308	,088	,378	3,495	,001

a. Dependent Variable: Learning Achievement

Based on the coefficients table above, the significance value obtained for the effect of X_1 on Y is $0.001 < 0.005$ and the value of t-arithmetic $3.495 > t$ -table

1.991, so it can be concluded that H_{a1} is accepted which means that there is an influence of X_1 on Y.

Second Hypothesis Testing (H_2)

Table 8. Results of Analysis of the Variable T-Test (X_2) on Y

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	142,903	2	71,451	9,369	,000b
	Residual	663,497	87	7,626		
	Total	806,400	89			

a. Dependent Variable: Learning Achievement

b. Predictors: (Constant), Motivation, Facilities

Based on the above values, it is known that the significance value for the influence of X_1 and X_2 simultaneously or together on Y is $0,000 < 0.005$ and the calculated F value is $9,369 > F$ table 3.10, so it can be concluded that H_3 is accepted which means that there is an influence of X_1 and X_2 together with Y .

Based on the results of the regression analysis states that there is a significant effect between learning facilities on student achievement by obtaining a value of t -arithmetic $3.495 > t$ -table with a probability of 0.05 of 1.991 where the price of t -arithmetic $> t$ -table then H_a is accepted. So there is a significant influence between learning facilities on student achievement in SMA PGRI 2 Palembang. Based on the discussion and analysis above it is proven that student achievement can increase in the implementation of learning facilities.

For the second hypothesis testing, using regression analysis using SPSS version 22 program calculations. Based on the results of the regression analysis that there is a significant influence between learning facilities on student achievement with the value of t -count $0.756 < t$ -table with a probability of 0.05 of 1.991 where prices t -arithmetic $> t$ -table then H_0 is rejected. So that there is no significant effect between motivation on the ability (achievement) of students studying at PGRI 2 Palembang High School. Based on the results of the analysis and the description of the discussion above it is evident that student achievement cannot yet improve on the implementation of motivation.

To test the third hypothesis using multiple regression analysis using SPSS version 22 program calculations. Based on the ANOVA test results, the calculated f -value of 9.3369 $> f$ -table 3.10 was obtained by looking at the critical value of the distribution f by using the formula f -table $df_1 = k - 1 = 3 - 1 = 2$ and $df_2 = n - k = 90 - 2 = 88$ where f -count $> f$ -table ($9,369 > 3.10$) then H_0 is rejected and H_a is accepted. So expect the influence of learning facilities and motivation on student achievement in SMA PGRI 2 Palembang. Based on the results of the analysis and the description of the discussion above it is evident that the increase in student achievement is influenced by the implementation of learning facilities and motivation together.

V. CONCLUSION

From the results of the research that has been done, it can be concluded that student's achievement in SMA PGRI 2 Palembang is significantly influenced by learning facilities based on the results of the t test analysis which has answered the first hypothesis; student's achievement in SMA PGRI 2 Palembang is significantly influenced by

motivation based on the results of the t test analysis which has answered the second hypothesis; student's achievement in SMA PGRI 2 Palembang is significantly influenced by learning facilities and motivation based on the results of the f test analysis has answered the third hypothesis.

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