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The Effect of Distance Learning (PJJ) and Motivation Towards Penjas Learning Outcomes In YPKPM Ambon Christian High School Students

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Abstract

This study aims to analyze: (1) multiple linear regression equations (2) the effect of distance learning (PJJ) on physical education learning outcomes, (3)) the influence of motivation on learning outcomes of Physical Education, and (4) the effect of distance learning (PJJ) and motivation on learning outcomes of Physical Education. This experimental research uses *a simple* and *regression designmultiple linear regression design.* The subjects in this study were students of class XI MIA2 SMA Kristen YPKPM Ambon. The data analysis technique uses multiple linear regression analysis. Based on hypothesis testing, the results of this study are: (1) the multiple regression equation Y on X1and X2is $Y = b_0 + b_1X_1 + b_2X$, (2) there is an influence between distance learning (PJJ) on the learning outcomes of Physical Education. With the $t_{calculation_{hit}}$ of 2.23 (3) there is an effect of PJJ on learning outcomes of Physical Education, the calculation of $t_{hit\ is}$ 2.4 (3) there is an effect of motivation on learning outcomes ofwith the calculation of flearning outcomes.$_{hit}$ Physical Education,4,714, (4) there is an effect of distance learning andmotivation towards learning outcomes of Physical Education with multiple correlation significant test. Conclusions: (1) the multiple regression equation obtained from this study $Y = b_0 + b_1X_1 + b_2X_2 = 1.749 + 0.540\ X_1 + 0.449\ X_2$ (2) the coefficient of determination is 29.10%, (3) the F-test hypothesis is together / stimulant can be explained that distance learning variables and motivation together have an effect on the learning outcomes of class XI MIA 2 SMA YPKPM Ambon. This is indicated by the results of the F-count 4.717.

Keywords: Distance Learning, Motivation, Learning Outcomes

INTRODUCTION

Education plays an important role in life because education is a vehicle or a place to improve and develop the quality of human resources (HR) starting from aspects of knowledge, aspects of skills, and aspects of attitude.

In the National Education System Law No. 20 of 2003 Chapter II Article 3 explains that: National Education functions to develop abilities and shape the character and civilization of a nation with dignity in the framework of educating the nation's life, aiming at developing the potential of students to become human beings who believe and have devotion to God Almighty, with noble character , healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens.

The learning process is a process in which there are interaction activities between teacher-students and reciprocal communication that take place in educational situations to achieve learning goals (Rustaman, 2001). In carrying out the learning process in this era of globalization, it is often done and has become a trend is the blended learning process. Aldalah OH & Gasaymeh, AM (2014), which defines blended learning as a mixture of e-learning and multimedia technologies, such as video streaming, virtual classes, online text animation combined with traditional forms of classroom training. According to Graham (2006), mentions blended learning more simply as online learning or distance learning with face-to-face (face-to-face learning).

In its history, virtual learning is better known as distance learning. According to (Ibrahim, 2005) distance learning and has long been known to humans since the 1870s. Distance education (PJJ) is teaching learners to learn separately from educators and learning using internet and online learning resources according to information and communication technology and with the help of sophisticated media. This is in accordance with the contents of Law number 20 of 2003 article 1 paragraph 15 which states "Distance education is education in which students are separated from educators and learning uses various learning resources through communication technology, information and other media.

During the covid pandemic, almost the entire world, even Indonesia and Maluku province, especially Ambon city, carried out a distance learning process using various media in accordance with school rules and recommendations. This is also evident in the YPKPM Ambon Christian High School which also carries out the distance learning process and this is the first time the YPKPM Ambon Christian High School has conducted distance learning so that students are less motivated in the distance learning process because this is something new and they are do not meet directly with other friends and also teachers, for that the teacher also has to make the learning process more creative so that students are more motivated to learn.

Motivation is a driving factor or impetus that can trigger a sense of enthusiasm and is also able to change human or individual behavior to lead to things that are better for themselves. Sardiman (2011) explains that learning motivation is the overall driving force within students that causes learning activities, which ensures the continuity of learning activities and which provides direction for learning activities so that the goals desired by the learning subject can be achieved. Many students do not develop in learning because of a lack of motivation which can encourage students' enthusiasm for learning. Martinis (2007) also argues that learning motivation is the psychological driving force within a person to be able to carry out learning activities and increase skills and experiences. When students have the motivation to learn online (distance learning) then the students get good results too.

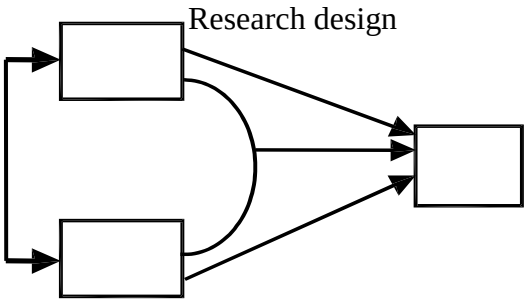
Learning outcomes are the most important part of learning, understanding student learning outcomes is essentially a change in behavior as a result of learning in a broader sense covering the cognitive, affective, and psychomotor fields according to Sudjana (2009).

Learning outcomes are patterns of actions, values, understandings, attitudes, appreciation and skills. Samino, and Saring Marsudi (2011) Learning outcomes are the results of a student's efforts in carrying out learning activities received after learning, while the results can be in the form of numbers, letters, and actions and their concrete forms can be in the form of report cards, transcripts of values, certificates, certificates, certificates or other forms.

RESEARCH METHOD

This research is a type of quantitative research casual form correlation. This study is to seek information through numbers about the causal relationship of a phenomenon or the influence between variables. Sugiyono (2016) states that in looking at the causal relationship, quantitative research is causal, so that in his research there are dependent variables (free) and independent variables (bound). In this study the dependent variable is distance learning and motivation, while the independent is student learning outcomes.

Figure 3.1



(Source: Riduwan, 2012)

This research was conducted at SMA Kristen YPPKM Ambon in class XI MIA 1 with a total of 26 students. Instrument According to Sugiyono (2010) describes research instruments as a tool used to measure observed natural or social phenomena. In this study, the instruments used to collect data through daily tests were. the dependent variable instrument (Y) of learning outcomes, the independent variable instrument X1 (distance learning) in this variable the data were taken through observations of each learning process and the independent variable X2 (motivation) in this variable the data were taken using a questionnaire with a Likert scale. In accordance with the research design, hypothesis testing was carried out using simple regression and multiple linear regression, Kadir, (2015).

RESULTS AND DISCUSSION

Data Description

Research subjects were 26 students of class XI MIA 1 at SMA Kristen YPKPM Ambon. In this study the data in question is data obtained using quantitative description methods with data collection techniques using observation and assessment. The data in this study consisted of; (1) Distance learning (PJJ) as measured using a questionnaire (2) Motivation as measured by a questionnaire, and (3) Physical Education learning outcomes measured using a test in the form of daily tests. This study aims to determine whether there is an effect of distance learning (PJJ) and motivation on learning outcomes of Physical Education in class XI MIA 1 SMA Kristen YPKPM Ambon. The results of the research data summary are as follows.

Table 1. Summary of Research Results

No	X1	X2	Y	$X1^2$	$X2^2$	Y^2	X1X2	X1Y	X2Y
1	64	68	65	4096	4624	4225	4352	4160	4420
2	62	63	69	3844	3969	4761	3906	4278	4347
3	64	65	63	4096	4225	3969	4160	4032	4095
4	60	62	60	3600	3844	3600	3720	3600	3720
5	64	69	67	4096	4761	4489	4416	4288	4623
6	62	63	64	3844	3969	4096	3906	3968	4032
7	65	64	60	4225	4096	3600	4160	3900	3840
8	64	58	64	4096	3364	4096	3712	4096	3712
9	66	68	68	4356	4624	4624	4488	4488	4624
10	67	65	70	4489	4225	4900	4355	4690	4550
11	65	65	67	4225	4225	4489	4225	4355	4355
12	62	65	65	3844	4225	4225	4030	4030	4225
13	64	68	70	4096	4624	4900	4352	4480	4760
14	63	65	68	3969	4225	4624	4095	4284	4420
15	63	66	68	3969	4356	4624	4158	4284	4488
16	61	64	64	3721	4096	4096	3904	3904	4096
17	63	64	64	3969	4096	4096	4032	4032	4096
18	65	66	68	4225	4356	4624	4290	4420	4488
19	64	65	65	4096	4225	4225	4160	4160	4225
20	66	64	63	4356	4096	3969	4224	4158	4032
21	65	66	66	4225	4356	4356	4290	4290	4356
22	64	66	64	4096	4356	4096	4224	4096	4224
23	67	66	69	4489	4356	4761	4422	4623	4554
24	62	66	65	3844	4356	4225	4092	4030	4290
25	62	68	63	3844	4624	3969	4216	3906	4284
26	63	62	60	3969	3844	3600	3906	3780	3720
Σ	**1657**	**1691**	**1699**	**105679**	**110117**	**111239**	**107795**	**108332**	**110576**
Rata'	**63,73**	**65,04**	**65,35**	**4064,58**	**4235,27**	**4278,42**	**4145,96**	**4166,62**	**4252,92**

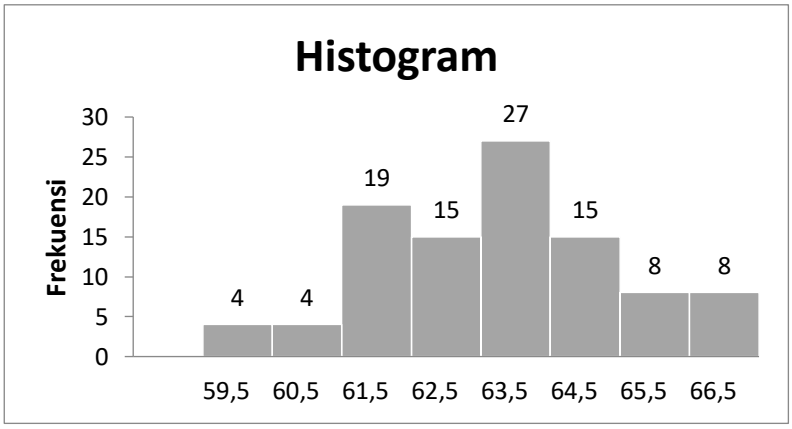
. Distance Learning (PJJ)

The results of calculating the distance learning data (PJJ) of class XI MIA 1 SMA Kristen YPKPM Ambon produced a mean of 63.73 and a standard deviation of 1.76.The smallest value was 60 and the largest was 67. Distance learning data distribution table (PJJ) are as follows:

Table 5.2. Distribution of Distance Learning Frequency (PJJ)

Class Interval	Absolute	Frequency Relative Frequency
60	1	4
61	1	4
62	5	19
63	4	15
64	7	27
65	4	15
66	2	8
67	2	8
Σ	26	100

Based on the table above, it can be seen that most of the learning long distance (PJJ) students of class XI MIA 1 SMA Kristen YPKPM Ambon are at 64 intervals with a percentage of 27% If displayed in the form of a histogram, the distance learning data (PJJ) is shown in the following:



figureFigure 5.1 Histogram of distance learning (PJJ)

2. Motivation

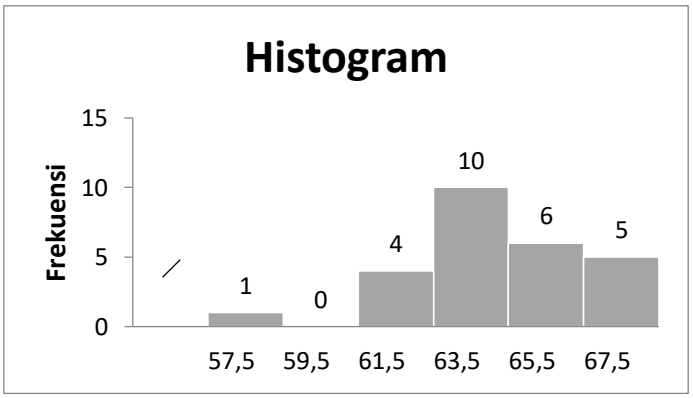
The results of calculating the motivation data of class XI MIA 1 SMA Kristen YPKPM Ambon resulted in a mean of 65.04 and a standard deviation of 2.34 The smallest value was 58 and the largest was 69. The motivation data distribution table is as follows:

Table 5.3 . Motivation Frequency Distribution

Class Interval	Absolute	Frequency Relative Frequency
58-59	1	4
60-61	0	0

62-63	4	15
64-65	10	38
66-67	6	23
68-69	5	19
Σ	26	100

Based on the table above, it can be seen that most of the motivation of the students of class XI MIA 1 SMA Kristen YPKPM Ambon is at intervals of 64-65 with a percentage of 38%. When displayed in the form of a histogram, the motivation data is shown in the following:



figureFigure 5.2 Motivation Histogram

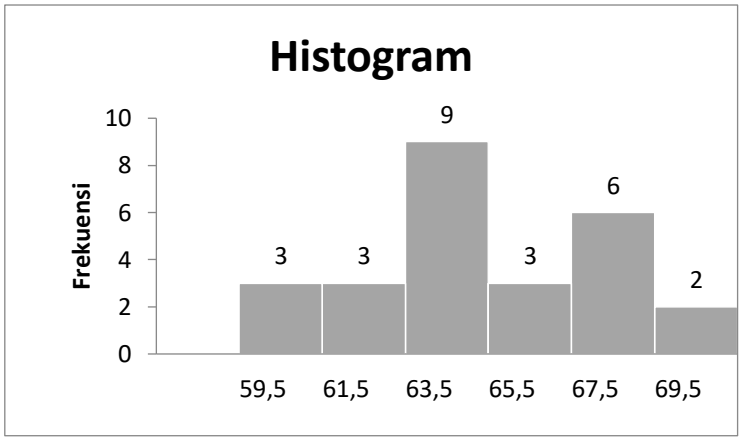
3. Learning

Outcomesresults of calculating the learning outcomes of class XI MIA 1 Christian Senior High School YPKPM Ambon resulted in a mean of 65.35 and a standard deviation of 2.94.The smallest value was 60 and the largest was 70. The learning outcome data distribution table is as follows:

Table 5.4. Frequency Distribution of Learning Outcomes

Class Interval	Absolute	Frequency Relative Frequency
60-61	3	12
62-63	3	12
64-65	9	35
66-67	3	12
68-69	6	23
70-71	2	8
Σ	26	100

Based on the table above, it can be seen that most of the motivation of the students of class XI MIA 1 SMA Kristen YPKPM Ambon is at intervals of 64-65 with a percentage of 35%. When displayed in the form of a histogram, the learning outcome data is shown in the following:



figureFigure 5.3 Histogram of Learning Outcomes

Hypothesis Testing

To obtain the results of hypothesis testing, the following steps are required:

a. Correlation Coefficients and Significant Test Correlation Coefficients X_1 and Y

$$r_{x_1y} = \frac{\Sigma x_1 y}{\sqrt{(\Sigma x_1^2)(\Sigma y^2)}}$$

$$= \frac{53,42}{129,03}$$

$$= 0,414$$

So the correlation coefficient X_1 and Y is 0.414

2.Significant test of the correlation coefficient X_1 and Y

$$t_{hitung} = \frac{}{\sqrt{1 - r^2 x_1 y}}$$

$$= \frac{2,03}{0,91}$$

$$= 2,23$$

When compared with t_{table} for $\alpha = 0.05$ and db = n - 2 then db = 24, obtained $t_{tab} = 1.71$, so $t_{hit} > t_{tab}$ or Ho is rejected. This means that the correlation between X_1 and Y is significant or PJJ and learning outcomes have an influence, so the hypothesis is accepted.

3. Coefficient of determination

The coefficient of determination is a coefficient that shows the amount of variation caused by the independent variables. The termination coefficient is defined as the square of the correlation coefficient times the determination defined as the square of the correlation coefficient at 100%. So for the results of the above analysis, the coefficient of determination is ($r^2_{xy\,x}$ 100%) = 0.1714 x 100% = 17.14%.

b. Correlation Coefficients and Significant Test Correlation Coefficients X_2 and Y

1. Correlation coefficient between X2 and Y

$$r_{x2y} = \frac{\Sigma x_2 y}{\sqrt{(\Sigma x_2^2)\,(\Sigma y^2)}}$$

$$= \frac{75{,}65}{171{,}95}$$

$$= 0{,}44$$

So the correlation coefficient X_2 and Y is 0.44

2. Significant test of the correlation coefficient X_2 and Y

$$t_{hitung} = \frac{}{\sqrt{1 - r^2 x_2 y}}$$

$$= \frac{2{,}2}{0{,}9}$$

$$= 2{,}4$$

When compared with t_{table} for $\alpha = 0.05$ and db = n - 2 then db = 24, obtained $t_{tab} = 1.71$, so $t_{hit} > t_{tab}$ or Ho is rejected. This means that the correlation between X_2 and Y is significant or motivation and learning outcomes have an influence, so the hypothesis is accepted.

3. Coefficient of determination

The coefficient of determination is a coefficient that shows the amount of variation caused by the independent variables. The termination coefficient is defined as the square of the correlation coefficient times the determination defined as the square of the correlation coefficient at 100%. So that for the results of the above analysis, the coefficient of determination is ($r^2_{xy\,x}$ 100%) = 0.194 x 100% = 19.40%.

c. Calculation of Two Predictor Multiple Regression Analysis The calculation is with the following steps:

1. Multiple Linear Regression Equation Y on X_1 and X_2

$$b_1 = \frac{\begin{vmatrix} \Sigma x_1 y & \Sigma x_1 x_2 \\ \Sigma x_2 y & \Sigma x_2^2 \end{vmatrix}}{\begin{vmatrix} \Sigma x_1^2 & \Sigma x_1 x_2 \\ \Sigma x_1 x_2 & \Sigma x_2^2 \end{vmatrix}} = \frac{\begin{vmatrix} 53.42 & 26.27 \\ 75.65 & 136.96 \end{vmatrix}}{\begin{vmatrix} 77,12 & 26.27 \\ 26.27 & 136.96 \end{vmatrix}} = 0.540$$

$$b_2 = \frac{\begin{vmatrix} \Sigma x_1^2 & \Sigma x_1 y \\ \Sigma x_1 x_2 & \Sigma x_2 y \end{vmatrix}}{\begin{vmatrix} \Sigma x_1^2 & \Sigma x_1 x_2 \\ \Sigma x_1 x_2 & \Sigma x_2^2 \end{vmatrix}} = \frac{\begin{vmatrix} 77.12 & 53.42 \\ 75.650.449 & \end{vmatrix}}{\begin{vmatrix} 77.12 & 26.27 \\ 26.27 & 136.96 \end{vmatrix}} = 26.27$$

$b_0 = \bar{Y} - b_1\ddot{X}_1 - b_2\ddot{X}_2 = 1,749$

$\dot{Y} = b_0 + b_1X_1 + b_2X_2$

$= 1,749 + 0.540\ X_1 + 0.449\ X_2$

2. Significance Test of the Multiple Regression Equation Y on X_1 and X_2.

Table 5.5 ANOVA Regression: ($\dot{Y} = 1.749 + 0.540\ X_1 + 0.449\ X_2$)

Variance Source	JK	Db	RJK	Fhitung	Ftabel
					$\alpha = 0.05$

Regression	62.80	2	31.40	4.717	3.369
remainder (residue)	153.09	23	6.66		
Total Reduced	215.88	25			

Information:
Db: Degree of Freedom
JK: Sum of Squares
RJK: Average Number of Squares
F_{hit} : F-Count
F_{tab} : F-Table

From the analysis results in the table above, it is obtained F-Count> F-Table. Thus distance learning and motivation together have an effect on learning outcome variables.

3. Significant Test of Multiple Regression Coefficient Y on X_1 and X_2
a) Multiple Correlation coefficient

$$R^2_{y.12} = \frac{JK\ (Reg)}{JK\ (T)} = \frac{JK\ (Reg)}{\Sigma y^2} = \frac{62.80}{215.88} = 0.291$$

$$R_{y.\ 12} = 0.539$$

b) Significance test of Multiple Correlation Coefficient

$$Fhit = \frac{R^2\ (n - k - 1)}{k\ (1 - R^2)} = 4.717$$

So that F-count> F-table or$_{Ho\ is}$ rejected. This means that the multiple correlation coefficient between X_1 and X_2 with Y is significant or the level of closeness of the relationship between PJJ and motivation with learning outcomes is significant.

c) Coefficient of Determination.

The coefficient of determination is defined as the square of the correlation coefficient so that the coefficient of determination between X_1 and X_2 and Y is 29.10%.

CONCLUSION

1. Distance learning variables have a positive effect on Physical Education learning outcomes as evidenced by the value of T-Count> T-Table (2.23> 1.71). This proves that distance learning affects the learning outcomes of students in class XI MIA 1 SMA Kristen YPKPM Ambon.
2. Distance learning variables have a positive effect on Physical Education learning outcomes as evidenced by the value of T-Count> T-Table (2.4> 1.71). This proves that motivation affects

the learning outcomes of Physical Education students in class XI MIA 1 SMA Kristen YPKPM Ambon.

3. Multiple linear regression equation $Y = b_0 + b_1X_1 + b_2X_2 = 1.749 + 0.540\ X_1 + 0.449\ X_{2.4}$ Based on multiple regression analysis, it can be seen that the coefficient of determination is 29.10%.
4. And on the F-test hypothesis testing together / stimulant it can be explained that the distance learning variables and motivation together have an effect on the learning outcomes of class XI MIA 1 students at SMA YPKPM Ambon. This is indicated by the results of F-count 4,717.

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