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Learning motivation and class management contribution to learning outcomes of vocational education student

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Abstract

This study aims to analyze the magnitude of the influence of learning motivation and classroom management of the learning outcomes of vocational education students in Padang City. This type of research is descriptive correlational research. In this study the researchers distributed questionnaires to the sample class. The sampling technique is simple random sampling, which is taking samples from all members of the population randomly by collecting the test scores of class X II students of Computer and Network Engineering (TKJ), the Vocational Middle School (SMK) in Padang City then performing a normality test there were 33 people in the XII TKJ SMK Muhammadiyah 1 Padang, homogeneity and similarity in average. Learning outcomes data obtained from the learning outcomes test is the value of the test questions that have been tested in other SMKs, this data is a reflection of the learning outcomes of students in Productive subjects. While the data on learning motivation and classroom management were collected through questionnaires using the Likert scale which had been tested for validity and reliability. Then the data were analyzed using statistical methods with the help of SPSS version 17 for analysis of correlation and regression. The results of data analysis show: (1) Motivation to learn contributes to learning outcomes by 67.24%, (2) Management of classes contributes to learning outcomes of 3.496% and (3) Motivation for learning and classroom management contribute together to the learning outcomes of 0.61%. Based on the results of the study, it can be concluded that learning motivation and classroom management contribute to student learning outcomes.

Keywords: Learning Motivation; Classroom Management; Learning Outcomes and Correlational Research.

1. Introduction

Motivation is the strength of a person in dealing with an activity so that it can cause a strong willingness to do it, both the will that comes from within the individual itself (intellectual motivation), as well as the will that comes from outside the individual (extrinsic motivation) [5]. Students as learners in schools should already have a high willingness to receive instruction in the classroom, because the existing student intrinsic motivation to be able to receive content the lesson well. When the motivation of students is strong then it determines the quality of the display of behavior, both in the context of learning, work and in life.

The results of other studies show that activating student learning with online learning, both using the web and with educational games is higher than the learning motivation of students with traditional learning [2], [9]. But this is inversely proportional to the actual conditions in vocational education students in the city of Padang. In the era of industrial revolution 4.0 is currently a student particularly enjoyed the various facilities that can get in through the Internet, but most were students only use the internet as a place of entertainment and social media alone, so the motivation to learn to be low. This has an impact on student learning outcomes in productive subjects tends to decline. In addition, the low student learning outcomes alleged that the teacher is not good at managing the class.

Each class has its first day, but many teachers cannot use the first day to improve classroom management. They just give syllabus to students and many do not achieve learning, in other words just preparing course content. The importance of planning the first day aims to fulfill the content connection, more important is maintaining interpersonal relationships, knowing the needs of students, providing motivation, hopes to be achieved, modeling optimal attitudes and behaviors for the class [8]. Although there is evidence that what happened on the first day or the first week of the lecture was used only to read the syllabus to convey goals and policies. This is better than simply sharing the syllabus and then ignoring the class [3]. Problems that can be caused from the lack of classroom management by teachers includes rules and routines, lack of motivation, inappropriate time management and a less conducive classroom environment [4].

2. Materials and methods

2.1. Types of research

This type of research is descriptive correlational research. According to [1] "Descriptive correlational is a study of different variables in a population which aims to determine how much influence the variable (X) has on the variable (Y) and the form of the relationship that occurs". This study aims to describe how much contribution to the learning habits of Padang class

information and communication technology (Y) and how much contribution between the two independent variables (X₁ and X₂) to the dependent variable (Y).

The population of this study is the Muhammadiyah 1 Vocational High School (SMK) students in Padang

While the sample is Class XII Computer and Network Engineering students as many as 33 people

2.2. Research instrument

The research instrument used was questionnaire and test of learning outcomes. The questionnaire drop indicator is like table 1.

Table 1: Research Variables

No.	Variable	Indicator
1	Motivation Learn	1. The desire and desire succeed
		2. There is encouragement and need for learning
		3. There are hopes and aspirations for the future
		4. There is appreciation in learning
		5. There are interesting activities in learning
		6. The existence of a conducive learning environment, allowing one student to learn well
2	Management Class	1. Warm and enthusiastic
		2. Challenge
		3. Varies
		4. Flexibility
		5. Emphasis on positive things
		6. Planting in Siplin

2.3. Data analysis technique

There are several tests conducted in seeing how much influence between learning motivation and classroom management. All tests were carried out using the help of the SPSS version 17 application.

1) Regression compatibility test (linearity)
 "Linear regression is a linear relationship between the dependent variable and the independent variable used to predict or predict a value of the dependent variable based on 2 independent variables namely X₁ and X₂ forming a linear line against variable Y".
 The equation of multiple linear regression according to [7];

$$Y = a_0 + a_1 X_1 + a_2 X_2$$

Information:

Y : Dependent variables, namely learning outcomes

X₁ : Independent variable, namely attitude

X₂ : Independent variable, namely learning style

a₀ : Constant Value

a₁ : Free variable regression coefficient (X₁), i.e. Attitude

a₂ : The independent variable regression coefficient (X₂), namely the learning style

2) Correlation Test

Correlation coefficient values range from 0 to 1 or 0 to -1. "If the value gets closer to 1 or -1, the relationship gets tighter, conversely if it approaches 0, the relationship gets weaker" [7]. Interpretation of Correlation Correlation can be seen in table 2.

Table 2: Interpretation of the Correlation Coefficient

Coefficient Interval	Level of relationship
0,00 - 0,199	Very low
0,20 - 0,399	Low
0,40 - 0,599	Is being
0,60 - 0,799	Strong
0,80 - 1,000	Very strong

Source: [6].

3) Contributions Coefficients

To find out the amount of contribution given by the independent variable (X) to the dependent variable (Y) determined by using the formula coefficient of determinant proposed by [7], namely:

$$KP = r^2 \times 100\%$$

Information:

KP = Determinant Coefficient Value

r = Correlation Coefficient Value

3. Results

The results of data processing for each test, among others;

3.1. Normality test

The results of the normality test can be seen in table 3

Table 3: Normality Test Tables

	Kolmogorov-Smirnov (a)			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Motivation to learn	,075	33	,200 (*)	,982	33	,833
Class management	,137	33	,119	,956	33	,199
Learning outcomes	,143	33	,086	,960	33	,260

From table 3 it can be seen that the probability score for the variable X₁ is 0.833, X₂ is 0.199 and the variable Y is 0.260. Because the significance of all variables is greater than 0.05, it can be concluded that the data on learning outcomes, learning motivation and classroom management are normally distributed

1) Regression Coefficient Test

To determine the value of the regression equation, the bargain can be seen in table 4 .:

Table 4: T Test Results

Mode	Unstandardized Coefficients		Standardize	t	Sig.
	B	Std. Error	d Coefficients Beta		
1	(Constant)	44,864	14,037	3,196	,003
	Motivation to learn	,096	,212	,102	,453
	Class management	,241	,231	,235	1,045

Based on table 4, the results of the multiple regression equation are obtained:

$$Y = a_0 + a_1 x_1 + a_2 x_2$$

$$Y = 44,864 + 0,96.x_1 + 2,41.x_2$$

After obtaining the value of the regression, it is continued by doing the F test to see if there are any influences for each variable. The results of the F test can be seen in table 5.

Table 5: F Count Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	363,565	2	181,782	1,597	,219 (a)
	Residual	3415,768	30	113,859		
	Total	3779,33	32			

From table 5 it can be seen that the F value is 1.597, so it can be concluded that motivation to learn elajar (X₁) and class management (X₂) have a relationship with learning outcomes (Y).

3.2. Correlation coefficient

To see the magnitude of the correlation coefficient between learning motivation and classroom management on learning outcomes using multiple correlations, it is seen that the correlation coefficient between learning motivation and learning outcomes is 0.82. And the value of the correlation coefficient between class management and learning outcomes (Y) is 0.187. And the results of multiple correlation tests between learning motivation and classroom management of learning outcomes are 0.310.

3.3. Contribution coefficient

The magnitude of the contribution between learning motivation towards student learning outcomes is $r^2 \times 100\%$ which is $(0.82)^2 \times 100\% = 67.24\%$. So learning motivation contributes to student learning outcomes by 67.24%.

The amount of contribution between classroom management on student learning outcomes is $r^2 \times 100\%$, namely $(0.187)^2 \times 100\% = 3.4969\%$. So class management contributes to student learning outcomes of 3.4969%.

The amount of contribution between learning motivation and classroom management together on student learning outcomes is $R^2 \times 100\%$ which is $(0.310)^2 \times 100\% = 0.61$. So motivation to learn and class management together contribute to student learning outcomes of 0.61%. From this statement it can be seen that the contribution of learning motivation and classroom management together to small learning outcomes means that there are other factors that influence it.

4. Discussion

The contribution of learning motivation to student learning outcomes is smaller than classroom management, however learning motivation cannot be ignored because learning motivation has an important role in the learning process because learning motivation determines student learning outcomes

5. Conclusion

The conclusions of this paper are:

- 1) Learning Motivation contributes 67.24%, towards learning outcomes.
- 2) Management contributed 3.4969%, to the results of student training.
- 3) Motivation of student learning and classroom management together contributed 0.61% to learning outcomes.

References

- [1] Arikunto, Suharsimi. 2010. *Research Procedure A Practice Approach*. Jakarta: Rineka Cipta.
- [2] Bahar Isiguzel, Ph.D. The Blended Learning Environment On The Foreign Language Learning Process: A Balance for Motivation and Achievement, Turkish Online Journal of Distance Education-TOJDE July 2014 ISSN 1302-6488 Volume: 15 Number: 3 Article 1 0 <https://doi.org/10.17718/tojde.41051>.
- [3] Hermann, A., Foster, DA, & Hardin, EE (2010). Does the first week of class matter? A quasiexperimental investigation of student satisfaction. *Teaching of Psychology*, 37, 79-84. <https://doi.org/10.1080/00986281003609314>.
- [4] Mehmet Erdoğan, Engin Kurşun, Gülçin Tan Şişman, Fatih Saltan, Ali Gök, İsmail Yıldız, A Qualitative Study on Classroom Management and Classroom Discipline Problems, Reasons and Solutions: A Case of Information Technologies Class, Spring 2010 • 881-891
- [5] Siti Suprihatin, Teacher's Efforts in Increasing Student Learning Motivation ISSN: 2442-9449 Vol.3.No.1 (2015) 73-82
- [6] Sugiyono . 2014. *Metode Penelitian Kuantitatif, Kualitatif Dan R&D*. Bandung: Alfabeta.
- [7] Sudjana. 2005. *Metode Statistika Edisi ke-6*. Bandung: Tarsito

- [8] Stephanie deLuse, First Impressions: Using a Flexible First Day Activity to Enhance Student Learning and Classroom Management. *International Journal of 2018 Teaching and Learning in Higher Education*, Volume 30, Number 2, 308-321, ISSN 1812-9129
- [9] Tung Nhu Nguyen. Motivational Effect of Web-Based Simulation in Teaching Operations Management, *Journal of Education and Training Studies* Vol. 3, No. 2; March 2015 ISSN 2324-805X, E-ISSN 2324-8068 Published by Redfame Publishing URL: <http://jets.redfame.com>. <https://doi.org/10.11114/jets.v3i2.565>.