Research Paper

The Effect of Learning Motivation and Visual Aids on Student Learning Achievement

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ABSTRACT

Quality education can produce quality and productive human resources. This encourages a country to become a developed and rapid country in the development of science and technology. High learning motivation will affect student achievement, especially supported by the use of visual aids when receiving lecture material. In the learning process, it is very much needed motivation to learn both from within or from outside a student himself in order to get a good learning achievement, as well as the use of visual aids that are in accordance with the goals, materials, and abilities of students. This can affect the way students learn. Students who have high motivation to learn and use visual aids will get higher learning achievement compared to students who do not have high motivation and do not use visual aids. This study uses a quantitative approach with the help of SPSS software with the North Sumatra Indonesian academy analysis unit. The results obtained are the effect of learning with visual aids is greater (54.6%) than learning without visual aids (19.1%) on student achievement.

Keywords: *Motivation, Achievement, Visual Aid*

INTRODUCTION

The success of a person in pursuing education is influenced by several interrelated factors through internal and external factors. Internal factors, for example the level of emotional intelligence, psychological state, motivation and interest in learning. In connection with the process of teaching and learning interaction there are several factors that need to be considered, among others, are learning motivation and learning methods. In learning motivation contained the ideals or aspirations of students, students are expected to get motivation to learn so that they understand what is the goal of learning. Besides that, a good student's condition in learning will cause the student to be enthusiastic in learning and be able to complete the task well, as opposed to a student who has an unhealthy state, he has no passion in learning (Mudjiono, 2006). Motivation is not only important because it is a factor that causes learning, but also facilitates learning and learning outcomes (Catharina, 2005). Usually, material presenters always know when students need to be motivated during the learning process, so that learning activities take place more fun, communication flows more smoothly, reducing student anxiety, increasing creativity and learning activities.

Learning motivation that is owned by students in each learning activity is very instrumental to improve student learning outcomes in certain subjects. The student will understand what is learned and mastered and remember it for a long time. Students appreciate what has been learned to feel its usefulness in daily life in the midst of society. Students who are highly motivated in learning will enable them to obtain high learning achievements, meaning that the higher the motivation, the greater the intensity of the effort and effort made, the better the achievement of the learning outcomes obtained. Students make various efforts or efforts to increase success in learning so as to achieve success that is quite satisfying as expected. In addition, motivation also sustains efforts and keeps

student learning processes going, which makes students persistent in learning.

Motivation plays an important role in providing passion, enthusiasm, and a sense of pleasure in learning so that those who have high motivation have a lot of energy to carry out learning activities. Very few students have high motivation left behind in their learning. The strength of one's learning motivation also influences learning success. Therefore, learning motivation needs to be endeavored, especially those that originate from within (intrinsic motivation) by always thinking about a challenging future and must achieve goals. Always put on a determined and always optimistic that goals can be achieved by learning. While external factors, for example the environment, both family environment, community environment and the school environment where a person is in studying, educational infrastructure, both infrastructure at home or at school. Facilities and infrastructure within the education environment can be in the form of learning media used. The use of learning media that is not in accordance with the wishes of students can result in students less interested in learning, so that students cannot be active in learning. Achievement of learning achievement is very much influenced by the existence of adequate instructional learning media and the existence of student activity in teaching and learning activities. For physiotherapy academy students teaching and learning activities especially for learning subjects are also inseparable from the use of instructional media such as visual aids can be in the form of images and torso (body sculptures) of humans.

Visual aids is one of the determining components of learning effectiveness. Props transform abstract teaching materials into concrete and realistic. Provision of visual aids is part of meeting the needs of student learning, according to the type of student learning. The lesson is not just dreaming on the realm of abstraction, but as a concrete empirical process that is realistic and

becomes a part of life that is not easily forgotten. The purpose of using visual aids is to demonstrate abstract concepts into visual forms (Lestari, 2013).

Study Literature

As with other studies, this research is not the first time. Various relevant studies have been carried out before, so as to show the interrelation of the influence of learning motivation and the use of visual aids on learning achievement, some research findings might be presented, namely:

Sudasmaningsih research results. 2006. The Effect of VCD and OHP Media on Learning Achievement in Chemistry Courses in Terms of Student Learning Motivation. Surakarta: UNS. The results of the research showed that the use of OHP media obtained better or higher learning achievement than the use of VCD media. The difference in learning outcomes occurs in groups of students with high motivation and in groups of students of low learning motivation. This shows that the use of OHP media has a better influence on chemistry learning achievement than the use of VCD.

Trisnanto research results. 2009. The Effect of Media on Learning Achievement Learning Learning From Student Learning Motivation. Surakarta: UNS. The results showed that the use of VCD media obtained better or higher learning achievement than the use of OHP media. The difference in learning outcomes occurs in groups of students with high learning motivation and low learning motivation. This shows that the use of VCD media has a better influence on learning achievement than the use of OHP.

Yuniati Research Results. 2012. The Effect of Contuctiveist Learning Strategies and Creativity on Learning Outcomes of Askeb Nifas Akbid Darmo. Medan: UMA. The results of this study indicate the use of constructive learning strategies to obtain postpartum ASKEB learning outcomes higher than students taught by using conventional learning strategies. The difference in learning outcomes occurs in the group of high creativity students and in the group of low creativity students. This

shows that the use of constructive learning media has a better influence on postpartum ASKEB learning outcomes than the use of conventional learning.

Definition of Visual Aid

Understanding educational visual aids is a tool that can be absorbed by the eyes and ears with the aim of helping the teacher so that students' teaching and learning processes are more effective and efficient. Faizal (2010) defines educational visual aids as audio and visual instruments used to help the learning process become more interesting and arouse students' interest in exploring a material. Whereas Wijaya and Rusyan (1994) referred to as educational visual aids are educational media acting as stimulants of learning and can foster motivation to learn so that students do not become bored in achieving learning goals.

Visual aids is one of the educational media and is a tool to assist teaching and learning processes so that the communication process can be successful well and effectively, Amir Hamzah (1981) argues that educational aids are tools that can be seen and heard to make ways of communicating be effective. While what is meant by visual aids according to Nasution (1985) is a tool in teaching more effectively.

So the conclusion is that the understanding of the use of visual aids for education is everything that can be used to channel messages and can stimulate the thoughts, feelings, concerns and wishes of students so that it can encourage the learning process in students and visual aids can help the teaching and learning process so as to improve achievement study.

Advantages of Visual Aid

Sudjana (1991) formulates the function of visual aids as follows:

1. Props are aimed at making the learning process more effective by increasing student enthusiasm for learning.
2. As one of the elements that must be developed by educators

3. Visual aids have benefits so that learning is faster understood and more attractive to students.
4. The visual aid allows the learning process to be more systematic and orderly.
5. As a source of questions and student learning stimulation.

From the description above the purpose and benefits of using visual aids is to facilitate students to understand a course material clearly and concretely.

Aspects that Support Successful Learning Through Visual aids

The success of achieving competency in a subject depends on several aspects. One aspect that is very influential is how a lecturer presents his lecture material. The tendency of presenting the material is currently centered on one direction only, where the lecturers present the material without actively involving students, as a result the level of student understanding of lecture material is low. In addition, there are still many lecturers who do not use the right visual aids when presenting lecture material, so students find it difficult to understand the material, and are not serious, which also results in low learning outcomes.

Presenting material does not only transfer knowledge, but is an activity to guide or facilitate students to find knowledge and learning experiences. In delivering the material sometimes the message delivered does not develop the potential of diverse students and makes students as recipients or passive users (consumers) of the knowledge the lecturer has.

From the description above it is concluded that one of the aspects that supports the success of learning is to use visual aids, so that PAIKEM learning (active, innovative, creative, effective and fun learning) is created.

MATERIALS & METHODS

Research methods

This research was conducted in one of Academy in Sumatera Utara Indonesia. This

research is an experimental study with One Group Pre and Post Test Design. In this design, the experimental unit is subject to treatment with two measurements. The first measurement is done before the treatment is given, and the second measurement is done after the treatment is carried out.

Data analysis technique

Data analysis technique used in this study is to use analysis techniques with the Multiple Regression Model. Researchers are interested in discussing this because researchers want to know the many benefits of a comprehensive designed training curriculum.

RESULTS

Analysis of the data in this study was explained based on the significance level and the level of confidence that was designed in SPSS. The results of the correlation and regression along with the classical assumption test which explains the significant influence between the motivation and learning variables on student achievement will be discussed based on the results of data processed by SPSS version 17.0.

HYPOTHESIS TESTING

H0: There is no influence of motivation and learning with visual aids on student achievement.

Ha: there is an influence of motivation and learning with visual aids on student achievement.

Classical Assumption Test (the effect of motivation and learning with visual aids on student achievement)

1. Normality Test

The use of regression models for prediction will produce an error (residue), which is the difference between the actual data and forecasting data. Existing residues should be normally distributed. Normality test aims to test whether the regression model of independent and dependent variables have a normal distribution or not. The histogram facility and the normal

probability plot will find out the residual normality from the regression model.
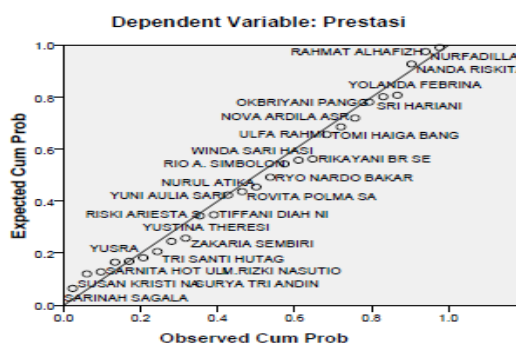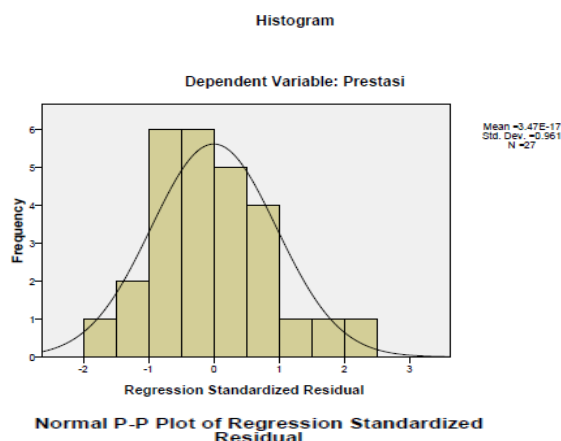
On the histogram, the residual value distribution data (error) shows the normal distribution (bell-shaped picture). Test the residual normality by using a graph that is by looking at the spread of data on the diagonal source on the Normal P-P plot. Plot of regression standardized residual. As a basis for decision making, if the points spread around a line and follow a diagonal line, the residual value is normally distributed. Because these points spread around the line, the assumption of normality towards the residual distribution is fulfilled.

2. Multicollinearity Test

Multicollinearity test aims to test whether the regression model found a correlation between independent variables (independent). Multicollinearity can be seen from the tolerance value and the opposite variance inflation factor (VIF), if the tolerance value is greater than 0.1 and VIF is less than 10, it can be concluded that there is no multi-colinearity. Multicollinearity test results can be seen in the following table:

Table 1.

| Model		Collinearity Statistics	
		Tolerance	VIF
1	Motivasi	.985	1.016
	Anatomi	.985	1.016

a. Dependent Variable: Prestasi

Table 1 shows that the tolerance value is smaller than 1, namely 0.985, and the VIF value is less than 10 at 1.016. Thus it can be concluded that this study shows that there is no multicollinearity between the independent variables of motivation and learning with visual aids. This identifies that there is an influence between the two variables on student achievement.

3. Homoscedasticity Test
Existing residues should have a constant variance (homoscedasticity). If the variance of the residue increases or decreases with a certain pattern, it is called heterokedastisitas. This test uses the Scatterplot as follows:

Scatterplot
Dependent Variable: Prestasi
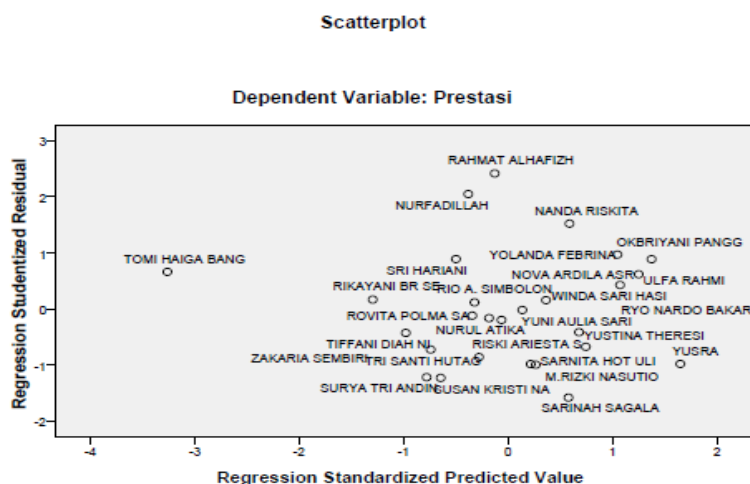
The data scatter above does not appear to show a particular pattern, for example a pattern ascending to the top right, or descending to the top left, or certain other patterns. This shows a regression model free from heteroscedasticity.

Statistical Testing (the effect of motivation and learning with visual aids on student achievement)
1. Multiple linear regression
The analysis model that will be used in this research is multiple linear regression analysis which can be seen from the following table:

Table 2. Multiple Linear Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.043	37.334		.215	.831
	Motivasi	.053	.124	.084	.427	.673
	Anatomi	.546	.415	.260	1.316	.201

a. Dependent Variable: Prestasi

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Motivasi	.985	1.016
	Anatomi	.985	1.016

a. Dependent Variable: Prestasi

Achievement = 8.043 + 0.053 Motivation + 0.546 (visual aids) + e

The equation of the multiple regression model above can be interpreted as follows:

a. If motivation and learning (use of visual aids) are equal to 0, then achievement will be 8,043 units. While other variables are considered unchanged.

b. If motivation is increased by 1 unit, it will be followed by an increase in achievement by 0.053 units.

c. If learning (use of visual aids) is increased by 1 unit, it will be followed by an increase in achievement by 0.546 units.

Thus it can be concluded that the relationship created between motivation, learning with visual aids, and achievement is a positive, unidirectional relationship.

2. Partial Test (T Test)

Partial test is used to determine the effect of each independent variable on the dependent variable. If Sig. Count <0.05, reject H0 accept Ha. The partial test results of this study can be seen in the following table:

Table 3. T Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.043	37.334		.215	.831
	Motivasi	.053	.124	.084	.427	.673
	Anatomi	.546	.415	.260	1.316	.201

a. Dependent Variable: Prestasi

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Motivasi	.985	1.016
	Anatomi	.985	1.016

a. Dependent Variable: Prestasi

Table 3 shows that the significance value of motivation greater than 0.05 of 0.673 means that there is an influence between motivation and achievement. The magnitude of the effect of motivation on achievement by 5.3%. Furthermore, the significance value of learning by 0.201 is greater than 0.050, it can be concluded that there is an influence between learning with visual aids and student achievement. The magnitude of the effect of learning with visual aids on achievement amounted to 54.6%.

3. Test F

This test is conducted to determine the effect of independent variables on the dependent variable simultaneously (simultaneously). If the Sig p value is 0.05, then the alternative hypothesis is accepted, and vice versa.

The results of this F test can be seen in the following table:

Table 4. F Test

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.724	2	2.862	.126	.882[a]
	Residual	546.276	24	22.761		
	Total	552.000	26			

a. Predictors: (Constant), Anatomi, Motivasi

b. Dependent Variable: Prestasi

Based on Table 4 above, the probability value or Sig. is 0.368. Because the value is greater than 0.05, the effect of the two variables simultaneously (simultaneous), namely the effect of motivation and learning with visual aids on achievement is real or meaningful (Ha accepted).

4. Determination Test

This test is conducted to find out how much the percentage of motivation and learning variables with visual aids are able to explain the student achievement variable. The results of this coefficient can be seen in the following table:

Table 5. Determination Test
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.102[d]	.010	-.072	4.771

a. Predictors: (Constant), Anatomi, Motivasi
b. Dependent Variable: Prestasi

Table 5 shows the R-Square value of this study is 0.080 or equal to 8%, meaning that the ability of motivation and learning with visual aids in explaining achievement is 8% while the remaining 92% is explained by other variables not included in this research model.

CONCLUSION

Based on the previous explanation, it can be concluded as follows:
1. The results of the study the influence of motivation and learning with visual aids that is the magnitude of the effect of motivation on achievement by 5.3%. While the effect between learning with visual aids and student achievement was 54.6%.
2. It can be concluded that the effect of learning with visual aids is greater (54.6%) than learning without visual aids (19.1%) on student achievement.

Suggestions

1. Based on the actual data processed in this study, there is a value of the influence between motivation and learning by using visual aids on student achievement. It is expected that these two things should be further improved more conducive based on students' expectations of the learning methods undertaken by the lecturer concerned so as to improve student achievement later.
2. To the next researcher, to be able to examine better by measuring other variables that affect student achievement related to learning courses so that learning subjects are no longer 'terrible' courses as most students consider, not only that subsequent researchers are also expected to be able to measure the variables that exist.

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