The Effect of Image Media on Learning Outcomes of Class V MIS Students in Siboruangin Village in Information Communication Technology (ICT) Subjects

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Abstract

Student learning outcomes in the control class with conventional learning on the subject of Information and Communication Technology (ICT) material for class V MIS Siboruangin Village got an average pretest score of 41.2 with a standard deviation of 18.102 and a variance of 327.67, while the average post-test score was 67. ,6 with a standard deviation of 12.6754 and a variance of 160.667 from a total of 25 students. Student learning outcomes in the experimental class using image media in Information and Communication Technology subjects for class V MIS Siboruangin Village got an average posttest score of 42.4 with a standard deviation of 13.316656 and a variance of 177.33333 while the average post-test score was 76 with a standard deviation of 12.24744871 and a variance of 150 from a total of 25 students.

Keywords: Picture Media, Learning Outcomes, Hardware Materials

1. Introduction

Education is a very important thing for every individual in order to achieve an ideal and desire. Education is a conscious effort made by educators to create quality and character students so that they have a broader view to achieve the expected goals. Learning is the modification or strengthening of behavior through experience (learning is defined as the modification or strengthening of behavior through experiencing).

According to this understanding, learning is a process, an activity and not a result and goal. Learning is not only remembering but broader than that, namely experiencing. Learning outcomes are not a mastery of the results of the exercise but a change in behavior. Learning is an absolute requirement to be good at all things, both in terms of science and in terms of skills and abilities. A baby for example, he must learn various skills, especially motor skills such as; Learn to lie on your stomach, sit, crawl, stand or walk.

Learning is the stage of changing individual behavior starting from knowledge, namely learning from the ignorant to knowing, from the unusual to the ordinary, to becoming a permanent attitude. According to Abdurrahman learning outcomes are: "the abilities that children get after going through learning activities. Learning itself is a process of someone trying to obtain a form of behavior change that is relatively permanent. In learning activities or instructional activities, the teacher usually sets learning objectives.

In the teaching and learning process, five very important components are objectives, materials, methods, media, and learning evaluation. These five aspects influence each other. The choice of one particular teaching method will have an impact on the type of appropriate learning media, without forgetting three other important aspects, namely objectives, materials, and learning evaluation. In this case, it can be said that one of the main functions of learning media is as a teaching aid that also influences, motivates, conditions, and the learning environment (Hamalik, Oemar. 1990).

The use of learning media in the teaching and learning process can generate new interests and desires, generate motivation and stimulation for learning activities, and even bring psychological effects on students. The use of learning media at the teaching orientation stage will

greatly help the effectiveness of the learning process and delivery of messages and lesson content at that time (Wiratmojo, P and Sasonohardjo, 2002).

1.1. The Nature of Learning Media
1.1.1. Understanding Learning Media

The term media comes from Latin which is the plural form of "medium" which literally means intermediary or introduction. The general meaning is anything that can channel information from the source of information to the recipient of the information. The term media is very popular in the field of communication. The teaching and learning process is basically also a communication process, so the media used in learning is called learning media. Many experts provide limitations on learning media. AECT, for example, says that learning media are everything that people use to convey messages.

Gagne defines media as a type of component in the learner's environment that can stimulate them to learn. In line with that, Briggs defines media as a tool to provide stimulation for students so that the learning process occurs. How is the relationship between learning media and educational media?

Educational media, of course the media used in the process and to achieve educational goals. In essence, educational media is also a communication medium, because the educational process is also a communication process. When we compare it with learning media, educational media are more general in nature, as is the meaning of education itself. While learning media are more specific in nature, meaning educational media that are specifically used to achieve certain learning objectives that have been specifically formulated. Not all educational media are learning media, but every learning media must include educational media.

1.2. Benefits of Media in Learning

In general, the benefits of media in the learning process are to facilitate interaction between students and students so that learning activities will be more effective and efficient. But more specifically there are some more detailed media benefits. Kemp and Dayton (1985) for example, identify several benefits of media in learning, namely:

1.2.1. Submission of subject matter can be uniformed.

Each learner may have a different interpretation of a particular subject matter concept. With the help of the media, these various interpretations can be avoided so that they can be conveyed to students uniformly. Every student who sees or hears a description of a subject matter through the same media, will receive exactly the same information as received by other students. Thus, the media can also reduce the occurrence of information gaps among students wherever they are.

1.2.2. The learning process becomes clearer and more interesting.

With its various potentials, media can display information through sound, image, movement and color, both naturally and manipulated. The subject matter packaged through media programs will be clearer, more complete, and attract the interest of students. With the media, the presentation material can arouse the curiosity of students and stimulate students to react both physically and emotionally. In short, learning media can help students to create a more lively learning atmosphere, not monotonous, and not boring.

1.2.3. The learning process becomes more interactive.

If selected and designed properly, media can help learners and learners engage in active two-way communication during the learning process. Without the media, a learner may tend to talk one way to the learner. However, with the media, learners can organize the class so that not only the learners themselves are active but also the learners.

1.2.4. Efficiency in time and energy.

The complaint that we often hear from students is that there is always a lack of time to achieve curriculum targets. It often happens that learners spend a lot of time explaining a subject

matter. This actually does not have to happen if students can make maximum use of the media. For example, without the media, a learner of course will spend a lot of time explaining the human circulatory system or the process of a solar eclipse. In fact, with the help of visual media, this topic is quickly and easily explained to children. Let the media present subject matter that is difficult for learners to present verbally. With the media, learning objectives will be more easily achieved maximally with minimal time and effort. with media,

1.2.5. Improve the quality of student learning outcomes.

The use of media not only makes the learning process more efficient, but also helps students absorb the subject matter more deeply and completely. If only by listening to verbal information from students, students may not understand the lesson well. But if it is enriched with activities of seeing, touching, feeling, or experiencing it yourself through the media, the students' understanding will definitely be better.

1.2.6. Media allows the learning process to be carried out anywhere and anytime.

Learning media can be designed in such a way that students can carry out learning activities more freely, whenever and wherever, without depending on the presence of a learner. Audio-visual learning programs, including learning programs using computers, allow students to carry out learning activities independently, without being bound by time and place. The use of media will make students aware of how many learning resources they can use in learning. We need to realize that the allocation of learning time in schools is very limited, most of the time is spent by students outside the school environment.

1.2.7. The media can foster a positive attitude of learners towards the material and the learning process.

With the media, the learning process becomes more interesting so as to encourage students to love science and like to find their own sources of knowledge. The ability of students to learn from these various sources will be able to instill attitudes in students to always take the initiative to find various learning resources needed.

1.2.8. Change the role of the learner in a more positive and productive direction.

By utilizing the media properly, a learner is no longer the only source of learning for students. A learner does not need to explain all the subject matter, because he can share roles with the media. Thus, learners will have more time to pay attention to other educational aspects, such as helping students with learning difficulties, personality formation, motivating learning, and others.

1.2.9. Media can make abstract subject matter more concrete.

Identifying market forms in community economic activities, for example, can be explained through the media of market images from traditional to modern markets, as well as complex subject matter can be presented more simply with the help of the media. For example, material that discusses the centers of the Islamic kingdoms in the archipelago can be delivered using a map or atlas, so that students can easily understand the lesson.

1.2.10. Media can also overcome the constraints of space and time constraints

Something that happens outside the classroom, even in outer space can be presented in the classroom through the help of the media. Likewise, some events that have occurred in the past, we can present in front of students at any time. With the media, an important event that is happening on another continent can be presented instantly in the classroom.

1.2.11. Media can help overcome the limitations of human senses

Objects that are too small, too big or too far, we can learn through the help of the media. Likewise, objects in the form of very fast or very slow processes/events, we can see clearly through the media, by slowing down or accelerating events. For example, the process of fetal development in the womb for nine months, can be accelerated and witnessed through the media in just a few minutes (Yamin, Martinis. 2006).

1.3.   Kinds of Learning Media

There are so many learning media that we have studied, but only very few media are used quite often in the classroom. Media that are often used in the classroom, including Overhead Projectors, pictures, models, whiteboards, books. While other media such as videos, films, audio cassettes, or frame films are relatively rarely used, although these objects are familiar to most teachers, we often find other examples in media schools such as: torso, globe, maps, used as a display, or a toy, or to decorate a room, even the media was accepted from the start to be displayed on a cupboard or in a warehouse, and was never used. Bretz, divides media into three types, namely sound, visual media, and motion media. Visual media can be divided into three, namely visual images, lines (graphics),

1.4.   Learning Media Source Constraints

Some research results conclude that the availability of learning resources greatly affects student learning outcomes. Related to the application of learning strategies that each learning strategy is used for certain learning materials/contents, and also requires certain learning media/resources. Delivery of learning in large classes requires the use of different types of media. different from small classes. Without adequate learning resources, it is very difficult for a teacher to carry out the learning process. Given the importance of the existence of learning resources, every teacher should have the ability to develop learning resources/learning media.

1.5.   The Nature of Image Media

1.5.1.   Image Media

Picture media is a form of cartoon that expresses the character of one or several characters played in a story and implicitly contains concepts or lessons in Information and Communication Technology. Picture media is a motivator for student learning to find answers to the problems they face.

Among educational media, pictures/photos are the most commonly used media. It is a common language, which can be understood and enjoyed everywhere. Therefore, the Chinese saying that a picture speaks more than a thousand words. In addition, the use of image media can reduce the teacher's role as a teacher because in its preparation questions can be included that accompany students in their findings.

1.6.   The Nature of Learning Results

1.6.1.   Understanding Learning

Learning is an absolute requirement to be good at all things, both in terms of science and in terms of skills and abilities. A baby for example, he must learn various skills, especially motor skills such as; Learn to lie on your stomach, sit, crawl, stand or walk.

According to Slameto, learning is a business process carried out by individuals to obtain a new behavior change as a whole, as a result of the individual's own experience in interaction with his environment. Learning is done intentionally or unintentionally with a teacher or without a teacher, with the help of others, or without being assisted by anyone. According to Mustaqin, learning is also defined as an attempt to form a relationship between stimuli or reactions. Learning is done by everyone, both children, teenagers, adults and parents.

Learning lasts a lifetime, as long as life is conceived by the body. Learning is the modification or strengthening of behavior through experience (learning is defined as the modification or strengthening of behavior through experiencing). According to this understanding, learning is a process, an activity and not a result and goal. Learning is not just remembering, but broader than that, namely experiencing. Learning outcomes are not a mastery of the results of the exercise but a change in behavior.

1.7. Technology Nature

According to Paul Saetiles (1968). Technology in addition to leading to machinery, technology includes processes, systems, management and control mechanisms of humans and non-humans. The definition of educational technology in the twentieth century includes the first lantern, slide projector, then radio and then live pictures. While the 19th century down to the fifteenth technology is more defined as blackboards and books.

According to Prof. Sutomo and Drs. Sugito, M.Pd Educational technology is a complex, integrated process for analyzing and solving human/educational learning problems. According to "Mackenzie, et al" (1976) Educational Technology is an attempt to develop tools to achieve or find solutions to problems. So technology is everything to solve problems in the world of education, especially as a solution to improve the quality of learning in the classroom.

1.8. Information and Communication Technology Lesson Objectives

In general, it can be said that students, teachers, school principals, as well as community leaders/local officials also gave positive responses to the pioneering efforts to use ICT for learning in schools in 3T areas. It is even believed that through the use of ICT for learning, 3T regions will be able to pursue progress so that they are not inferior to other regions that are not classified as 3T regions. Learning activities carried out by teachers through the use of ICT in a planned, integrated and regular manner have provided several benefits, including: (1) providing learning facilities for students who have a variety of learning styles and abilities as well as those who are less fortunate socially, mentally, physically. , as well as those in remote areas, and (2) make learning activities more effective because some of the students' senses are activated during learning activities (UNESCO, 2005). Furthermore, Rahmi Rivalina and Sudirman Siahaan stated that the use of ICT in learning activities has made the atmosphere or learning conditions more interesting, fun, efficient, and varied. It was further stated that students became more motivated to study at school every day because they were happy with the learning model that used ICT by the teacher. The feeling of pleasure of students to come regularly to study at school has an impact on increasing the repertoire of knowledge of students from time to time (Rahmi and Siahaan, 2013).

2. Method

According to Margono, quoted from the book Drs. Salim, M.Pd research is all natural search, investigation and experiment activities in a particular field to obtain new facts or principles with the aim of creating new understanding and raising the level of science and technology. This study uses a quantitative research approach with experimental methods in the form of quasi-experiments (quasi-experiments). The quasi-experimental method is an experimental method that does not allow researchers to fully control all relevant variables. Control is only carried out on one variable, namely the most dominant variable.

So the designs used in this study are pre-test and post-test. This design involves two classes, namely the experimental class and the control class. Before being given treatment, both classes were given a pre-test, which was to determine the students' initial abilities. Furthermore, the experimental class was given treatment using image media, while the control class used conventional learning. After being given treatment, both classes were given a post-test to determine the final ability of the students.

Table 1. Research Design

Class	Pre-test	Treatment (Treatment)	Post-test
Experiment	O1	X1 (Image Media)	O2
Control	O1	X2 (Conventional)	O2

3. Results

Pre-action (pre-test) in this study was conducted to determine the ability of students before learning is determined. Experimental and control class students were given a pre-test in the form of written multiple-choice questions. This initial test is given to find out how students understand the material. The results of the pre-action test (initial test) obtained will be used to see the difference between the pre-action (initial test) and the final test in both the experimental class and the control class.

In this study using class Va, as a validator to validate the test that will be used on the student learning outcomes test of Information and Communication Technology. From the results of the calculation of the validation of the Appendix 5 test, using the Product Moment Correlation formula, it turns out that from the 20 multiple-choice questions tested, 15 questions are valid and 5 questions are invalid. From the results of the calculation of the reliability of the attachment, as for the reliability of the question or r11 = 0.757 reliable test in the high category. So the 10 questions were used for the initial test and learning outcomes test in the experimental class and control class.

Learning outcomes are obtained through research instruments in the form of tests. Before applying ICT learning using picture media (experimental group) and ICT learning using conventional methods (control group), both groups were each given a pretest. This pretest aims to measure students' prior knowledge about the concept of Information and Communication Technology. After each group carried out the teaching and learning process with different treatments, after that in each group a post-test was carried out which aims to measure the extent to which student learning outcomes have increased. Based on the objectives that have been formulated above, the data that has been collected includes data on pretest scores and posttest scores of 25 students from the experimental group and 25 students from the control class group. The results are as follows:

Table 2. Learning Outcomes of Control Class

No	Pre-test scores	Frequency	Posttest score	Frequency
1	50	6	80	6
2	40	5	70	7
3	60	6	90	5
4	70	1	60	4
5	20	4	40	1
6	10	3	50	2

Table 2. shows that the learning outcomes of the control class have increased, namely 1 student who gets a value of 40, a score of 50 has 2 students, a score of 60 has 4 students, a score of 70 has 7 students, and a score of 80 has 6 students, and a score of 90 has 5 student.

Table 3. Student learning outcomes in the experimental class

No	Pre-test scores	Frequency	Posttest score	Frequency
1	20	3	50	2
2	30	4	60	3
3	40	3	70	4
4	50	7	80	7
5	60	8	90	5
6			100	4

Table 3. shows that the experimental class learning outcomes have increased, namely 2 students who get a value of 50, a score of 60 there are 3 students, a score of 70 there are 4 students, a score of 80 there are 7 students, and a value of 90 there are 5 students, and a value of 100 there are 4 student.

The research conducted was a quasi-experimental study, which involved two classes that were given different treatments, namely class Va with 25 students as the experimental class taught using picture media and class Vb with 25 students as the control class being taught using conventional learning. Pre-test (pretest) to each class first before being given different learning with the number of questions 10 items in the form of multiple choice tests in both sample classes to determine the initial ability of students on the subject matter of announcements before being given learning treatment, where in the control class is taught by researchers with conventional learning and experimental classes taught by researchers using image media.

The average result of the pretest score of the class students who were selected as the experimental class was 45.2. Meanwhile, for the group of students who were selected as the control class, the average pretest was 38. At the end of the study students were given a posttest to find out how the learning outcomes of the two groups were. The average posttest value for the experimental class is 76 while the average posttest value for the control class is 69.6. From the results of the t-test, there is a significant difference in the average posttest value with tcount = 2.527 and ttable = 1.708 for = 0.05 because tcount > t table, so it can be concluded that there is an effect of using image media on student learning outcomes on technology material at MIS Siboruangin Village.

Although image media has made learning outcomes higher than conventional learning, there are several obstacles in conducting research, namely 1) researchers are not good at conditioning students during the learning process, 2) lack of student readiness when answering the questions that researchers give. The reason is because before starting learning students do not study the material first then the third obstacle. The discussion above can be concluded that there are differences in student learning outcomes due to the influence of image media on student learning outcomes on hardware subject matter in class V MIS Siboruangin Village.

4. Conclusion

Student learning outcomes in the control class with conventional learning on Information and Communication Technology (ICT) hardware material for class V MIS Siboruangin Village, got an average pretest score of 41.2 with a standard deviation of 18.102 and a variance of 327.67 while the average post-test score 67.6 with a standard deviation of 12.6754 and a variance of 160.667 from a total of 25 students. There is a significant effect of image media on student learning outcomes in Information and Communication Technology subjects based on the results of the hypothesis that has been carried out, the data obtained for tcount is 2,780 while ttable is 1,708, the comparison shows that tcount > ttable (2,780 > 1,

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