



Blog as a Learning Media in Increasing Student Understanding

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⁴ Blog as a Learning Media in Increasing Student Understanding

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Abstract. This study aims to determine the effect of blogs as a learning medium on increasing student learning outcomes in the Mathematics Learning Evaluation course. This research was conducted in two classes, each as a control class and an experimental class. The method used is a quasi-experimental design with the Experimental Randomized Control Group. The instruments used to collect data in this research were objective tests and questionnaires. This study concluded that there were differences in learning outcomes between students who were taught using blog media and students who were taught without using blog media. And the response of students to the media blog is good.

Keywords: Blog, learning media, learning outcomes, response.

1. Introduction

Education is very important for every human being. With education, humans can be useful for themselves and for others. This will also greatly affect the development of a nation and state. Developed countries prioritize education. As a developing country, Indonesia must also pay more attention to the field of education. One way to improve the quality level of education is to keep abreast of the times.

This era of technological development or often referred to as ERA 4.0. What is meant by the development of this technology is that everything is now based on technology. All data online. There is no longer a boundary between space and time. All humans in any hemisphere can communicate thanks to the development of this technology quickly. Factories have been able to streamline their performance with the help of sophisticated machines. Likewise, with education, it should be able to follow or adjust in various aspects with the development of these technologies. This is important for the advancement of education in Indonesia. And improve the quality of education in Indonesia.

Higher education is one of the spearhead of the creation of highly competent Indonesian people. Because college is the closest distance between students and employers, so that all college graduates can compete and get the best place in their field of work, all those in higher education must have maximized performance. Many aspects of supporting this, for example, lecturers, curriculum, or infrastructure. All aspects must work together to achieve this. In addition, these aspects must be able to explain themselves with changes in current technological progress.

Universitas Negeri Medan currently has facilities and infrastructure that are sufficient to meet the needs according to the times. All faculties have hotspots that can be used by anyone, including students in learning. Therefore this infrastructure is very helpful in the learning process to be more



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optimal. With the fulfillment of these needs, lecturers must be able to grasp opportunities for better learning processes. Lecturers can take advantage of this in their learning. One way is to use Internet-based media in learning.

Many Internet-based learning media, one of which is a blog. The blog can contain many aspects of learning, including materials, assignments, books, journals, and so on. Lecturers and students can also communicate through blogs. The purpose of the media itself is to create more effective and efficient learning and attract learners' interests. Therefore, the use of media is highly recommended.

2. Research Methods

The method used in this study was quasi-experimental method. Learning approach applied in the experimental group, was a learning that using a Blog, while the learning approach applied in the control group was a normal learning without using a blog. The research design used was as follows.

Table 1. Research design

Group	(Pretest)	Perlakuan	(Posttest)
Experiment	T ₀	X	T ₁
Control	T ₀	-	T ₁

Information :

T₀ = Pretest

T₁ = Posttest

X = Learning by using a blog

- = Learning without using a blog

The population of this research was the third semester (3) students who take the Mathematics Learning Evaluation course. With the simple random sampling method, the class selected as a sample is the Mathematics Education class C and Mathematics Education class D. Mathematics Education class C as an experimental class with a total of 30 students and Mathematics Education class D as a control class with 31 students. Data collection techniques in this study were objective tests, questionnaires with a Likert scale.

3. Results and Discussion

Learning outcomes in this study focused on cognitive aspects as measured using multiple-choice questions. In addition, to find out students' responses to blog learning media, an instrument in the form of a questionnaire was used. Overall cognitive abilities of students after the implementation of learning by using a blog and without a blog can be seen in the following table.

Table 2. Student Cognitive Ability Test Table Results

Group	Average pretest	Average posttest	N-Gain	Criteria
Experiment	40,5	78,7	0,64	Medium
Control	39,5	65,2	0,5	Low

The table above shows that the mean score of students' initial knowledge for the experimental and control classes has the same category, which is less. After the learning process was carried out, the experimental class using blog media increased cognitive value higher by 78.7 with a good category compared to the control class, where the learning did not use blog media at 65.2 (medium category). Based on the results of the calculation of the hypothesis test (t-test) obtained a significance value of (0.03), it can be concluded that the use of blog media in the experimental class increases the cognitive abilities of students compared to the control class that does not use blog media. Active involvement, both physically and mentally in learning activities, will bring influence on the development of cognitive abilities [1]. Well-developed cognitive abilities are able to have an impact on optimal learning outcomes.

In conducting research, student activity can be seen from the number of students who ask questions. Many students ask questions to fulfill their curiosity. This is consistent with the analysis of questionnaire data obtained from the results of the study, namely:

- Statement of learning by using the blog media makes me motivated to ask, as many as 36% of students answered strongly agree, and as much as 64% of students answered agree.
- In my opinion, learning by using blog media can stimulate learning enthusiasm, as many as 40% of students answer strongly agree, and as much as 60% of students answer agree
- I think it would be better to learn this lesson in an ordinary class than with a blog, which answers 73% disagree, and 27% strongly disagree.
- I enjoy learning by using blog media, which answers 53% strongly in agreement and 47% in agreement.
- In my opinion, learning by using blog media can stimulate learning enthusiasm, which answers strongly agree by 40%, and those who agree with 60%.

Based on the results of the questionnaire response analysis above, it is known that most students enjoy the use of blog media. According to students with a blog, media can be more motivating in learning. Submitting material with blog media is also more fun for students. Learning that does not use blog media, is considered too monotonous, does not attract students, and is not fun. This has an effect on student motivation. As a result of decreased communication will result in a decrease in student learning outcomes.

The use of blogs in the world of education as a learning medium to support formal education programs and as an online classroom program channel [2]. Imaginative material can be displayed in the form of images or animations through blogs, making it easier to understand the material. Blogs are used as explorative learning media and aim to enrich the themes or topics being discussed and help make learning more developing and interesting [3]. As for students, learning by using this blog is aimed so that students can share information about various matters relating to learning or self-development needs.

With the use of blogs, learning can be done anywhere and anytime; this is because the advantages of blogs have a high level of flexibility, namely the ease of accessing information. For teachers, the use of blogs can update their learning material anytime and from anywhere. Students can review teaching materials at any time and anywhere, if needed, to remember the material they have learned. In addition, students can also provide and obtain knowledge or material connected by the internet, so they can be more independent in gaining experience.

However, the use of blogs in learning often experiences obstacles. One of them is due to a lack of teacher expertise in utilizing technology, for example, in the use of computers. Though this is very important. The use of computers is very helpful in all school administration, including teaching. Therefore, it is important for teachers to learn and upgrade their abilities and be more creative in order to realize more effective, efficient, enjoyable learning and can improve student learning outcomes.

4. Conclusion

The conclusion of this study is the learning process using blog media has a positive effect on student learning outcomes when compared to the learning process that does not use blog. From the results of

the study found there are differences in learning outcomes between classroom control and experimental class

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