

The Effectiveness of E-Learning in Improving Student Motivation and Learning Outcomes

Anggita Dwi Nugroho^{1✉}, Nasuka², Agus Raharjo³

^{1,2,3}Universitas Negeri Semarang, Indonesia

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Abstract

Media is one of the factors that can influence student motivation and learning outcomes. The purpose of this study was to analyze the effectiveness of using e-learning media in improving student motivation and learning outcomes. The subjects in this study were VIII students of SMP N 3 Ajibarang. Data collection techniques used questionnaires and tests. Data analysis techniques using paired sample t test. The results showed a significant difference in scores before and after learning. The t test results showed a p value of 0.023 for learning motivation and p 0.001 for learning outcomes. These results indicate that the hypothesis is accepted that there is a significant difference in motivation and learning outcomes in the stages before and after learning.

✉ Correspondence address:
Kampus Pascasarjana UNNES Jl. Kelud Utara 3, Gajahmungkur,
Semarang
E-mail: anggitaadwinugroho30@yahoo.com

INTRODUCTION

Learning is a form of interaction with education and sources in a learning environment so as to assist students in the acquisition of information and abilities, as well as the formation of attitudes and beliefs, is the main role of educators in education (Hamalik, 2015). Online learning is a program that organizes online learning to achieve a very broad and diverse target (Soemantri, 2019).

The development of the era in the world of education has not escaped the development of communication tools that are used especially in the world of education (Pudiyastuti, 2021). Various information-based activities are developing very quickly thanks to the development of information technology today (Setiawan, 2019). As a result, computers and other electronic devices play an important role in human existence (Sanjaya, 2016). Without them, we would not be able to receive accurate and timely data processing. The use of today's technology considers practical and portable aspects, one of which is a smartphone where users in Indonesia (Amal, 2019).

A learning model is an explanation of how a student will be guided through the learning process from start to finish using various learning strategies, methods, and tactics developed by the teacher (Rusman, 2017). Learning models can increase learning motivation in students (Isroani et al., 2022).

Student motivation and learning outcomes can be influenced by the learning media applied, and effective media can improve student learning outcomes. (Rosalina, 2018). Learning media is very important in the learning process because it has an impact on the success or failure of the grades given to students (Ulfa & Puspaningtyas, 2020).

(Syakur, 2020) says that teachers can use software and communication media to help them convey information and values, Teachers' creative learning models show the complete learning process graphically from beginning to end. One learning model contains the learning methodology, and the approach (Umam, 2018).

The existence of e-Learning is inseparable from the development of computer and internet

technology, the development of e-Learning at this time has been widely designed to support and facilitate the learning process which is usually called LMS (Learning Management System). (Nurgiansyah, 2021). LMS is a popular concept to be used in designing an internet-based distance learning (Rasheed & Wahid, 2021). Some examples of LMS are Moodle, Claroline, eFront, Schoology, ATutor, Sakai, Dokeos, LAMS, WebCT, and many others (Li & Zhan, 2020).

According to (Nurohma, 2021) that e-learning has a number of advantages, namely E-learning has the potential to reduce the amount of time and money needed to complete a course. Learners and learning materials can be integrated with each other in an e-learning environment. Learning materials can be accessed at any time, and participants can exchange knowledge with each other (Kirillova et al., 2019). Under these circumstances, learners can further strengthen their understanding of the content (Agatha Priska et al., 2019) (Agatha Priska et al., 2020). Each student is not only a passive recipient of information, but actively participates in the teaching-learning process when using e-learning (Baumann et al., 2019).

Based on observations, it is known that student motivation and learning outcomes in the ability to understand sports learning theories are still low. Students have difficulty understanding the material provided by the teacher. In addition, students lack enthusiasm for learning. Learning that is done does not use learning media so that it becomes less enthusiastic students in learning.

Students need a medium that can be interesting to follow learning (Scherer et al., 2019). Students who are interested in learning will increase their learning motivation. Students become more excited with the learning media used by the teacher (Isroani et al., 2022).

Based on the explanation above, this study analyzes the effect of learning media on student motivation and learning outcomes in participating in sports learning.

METHODS

This type of research uses a type of development research with the ADDIE model, namely "Analysis, Design, Development,

Implementation, Evaluation". The resulting product will then be tested for effectiveness. MOODLE-based E-learning research and development approach. A data source is anything that can offer information about the data needed (Sugiyono, 2019). The source of data in this study was obtained directly from students.

The population in this study were VIII grade students of SMP N 3 Ajibarang. The total population in this study was 213 students. The sampling technique used purposive random sampling technique. The samples in this study were 8B and 8G grade students totaling 62 students. The data collection technique in this study used tests. Data analysis techniques using paired sample t test.

RESULTS AND DISCUSSION

Based on the results of learning research using MOODLE-based e learning media, an assessment of student motivation and learning outcomes was carried out. The results of the assessment before and after learning are as follows.

Table 1. Learning outcomes

Value	Pretest	Postes
Min	55	70
Max	70	90
Mean	65	88

The assessment results for student ability tests, namely learning outcomes before and after learning using learning media, look different. The minimum score obtained by students at the stage before using the media was 55. This value is different when it has been given learning using the media increased to 70. for the highest score increased considerably which previously at the stage before learning only 70 increased to 90 after learning. The class average score also showed an increase from 65 to 88 after learning using e learning media.

The results of measuring learning motivation are as follows.

Table 2. Learning Motivation

Value	Pretest	Postes
Min	20	35

Max	30	50
Mean	26	43

The assessment results for student learning motivation in participating in sports learning before and after learning using learning media look different. The minimum score obtained by students at the stage before using the media obtained a score of 20. this score is different when it has been given learning using the media increased to 35. for the highest score increased considerably which previously at the stage before learning only 30 increased to 50 after learning. the class average score also shows an increase which previously only 26 increased to 43 after learning using e learning media.

The results of hypothesis testing on motivation variables and learning outcomes can be seen as follows.

Table 3. Hypothesis Test Results

Variables	T count	P value
Motivation	9.234	0.001
Learning outcomes	6.721	0.023

Based on the results of hypothesis testing using the paired sample t test presented in table 3, it can be concluded as follows.

The results of hypothesis testing on learning motivation variables obtained t count 9.234 with a p value of 0.001. the p value is lower than 0.05 so that the hypothesis is accepted that there is a significant difference in the average value before and after learning using e-learning media.

The results of hypothesis testing on the learning outcomes variable obtained t count 6.721 with a p value of 0.023. the p value is lower than 0.05 so the hypothesis is accepted that there is a significant difference in the average value before and after learning using e-learning media.

The results of this study indicate that the use of e-learning media is effective in increasing students' learning motivation. Students become motivated in participating in learning after participating in learning using the media. The results of this study are in accordance with the opinion of (Nurseto, 2018) that the media has a function, one of which is to increase student learning motivation. Learning using media can attract students' interest in learning to be

enthusiastic in participating in learning (Firman & Rahayu, 2020).

The results of this study are supported by research (Maritsa et al., 2021), (Sartika, 2021) that media has a significant effect on student learning motivation. Students become eager to learn when the teacher uses the media during learning. This enthusiasm will make learning convey what the learning objectives are (JIhad & Abdul, 2015).

Learning media will make the material easy for students to understand. Teachers will find it easier to convey material to students when using learning media. (Rojuli, 2017). media as an intermediary facilitates communication between teachers and students so that difficulties in understanding the material can be overcome (Kiantini, 2021).

The results of this study are supported by the results of research (Syakur, 2020), (Alseelawi et al., 2020), (Setiawan, 2019) which shows that learning using e learning can improve student learning outcomes. Learning with this e learning model is effective in improving student learning outcomes.

CONCLUSION

Based on the research results, it can be concluded as follows.

MOODLE e-learning model can effectively increase students' learning motivation.

E-learning can effectively improve student learning outcomes.

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