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Research Article

The Effect of the Implementation of Moodle-Based E-Learning Media on Student Learning Outcomes

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Abstract: This study aims to determine the effect of Moodle-based e-learning on the social studies learning outcomes of grade IX students at MTs Negeri 3 South Bolaang Mongondow. The research employed a quantitative approach with a Quasi-Experimental design using the Posttest-Only Control Group Design. The sample consisted of 43 students from classes IX A and IX B. Data were collected through observation, tests, and documentation. The data were then analyzed using an Independent Sample T-test. The findings revealed that the average posttest score of the control class was 61.91, while the experimental class, which used Moodle-based e-learning, scored an average of 84.15. The significance value obtained was 0.000 ($p < 0.05$), indicating a statistically significant difference between the two groups. These results suggest that the use of Moodle-based e-learning has a positive impact on student learning outcomes in social studies. Therefore, it can be concluded that Moodle is more effective than conventional learning methods in enhancing students' academic performance.

Keywords: E-learning, Learning outcomes, Moodle, Quasi experiment, Social studies.

1. Introduction

The development of science and technology (IPTEK) has brought a significant positive impact in various fields of life, including the field of education. One of these impacts is the use of information and communication technology (ICT) in the learning process to improve the quality of education. ICT allows for modernization in the learning component, both in terms of methods, models, and media used. The use of ICT opens up opportunities to carry out learning effectively without being limited by space and time, so that students can access learning resources anytime and anywhere.

In the modern educational paradigm, students are the center of the learning process. They thrive through learning experiences that are relevant to their abilities and needs. In this case, teachers play the role of facilitators and motivators who support students to learn actively, including through the use of technological media (Rusman, 2012). Interaction between students, both with each other and with digital learning media, is an important aspect in creating a meaningful learning experience.

The era of globalization has encouraged the acceleration of ICT development, including in the world of education. This technology is not only a means of disseminating information, but also an integral part of the strategy to increase the effectiveness and efficiency of the learning process (Suartama, 2015). In this context, e-learning is present as an internet-based digital education solution, which combines conventional approaches with modern learning systems.

According to Feby et al. (2019), e-learning is a digital learning system that allows students to learn independently through internet access. The use of e-learning media is expected to be able to overcome the problem of lack of student learning independence and encourage creativity and the achievement of better cognitive learning outcomes.

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One of the widely used e-learning platforms is Moodle (Modular Object Oriented Dynamic Learning Environment). Moodle is designed with a social constructionist pedagogy approach, which emphasizes that the best learning occurs from the perspective of the students themselves (Prakoso, 2005). The platform provides a variety of features such as discussion forums, online quizzes, assignment collections, learning calendars, and more, which allow interaction between teachers and learners to take place actively.

Rosenberg in Rusman (2012) stated that e-learning is the use of internet technology to deliver learning solutions that can improve knowledge and skills. Moodle, as one of the e-learning applications, allows teachers to manage learning materials digitally, including uploading materials, assigning assignments, monitoring activeness, and assessing student learning outcomes (Suartama, 2015). Meanwhile, students can access materials, interact, do assignments, and monitor their own learning progress independently.

However, the reality in the field shows that the learning outcomes of students in Social Sciences (IPS) subjects at MTs Negeri 3 South Bolaang Mongondow are still relatively low. Based on daily test data for the 2024/2025 school year, out of a total of 61 grade IX students, only 21 students (40%) have reached the Minimum Completeness Criteria (KKM), while the rest (60%) have not achieved it.

Table 1. Social Sciences Daily Exam Results

Class	Number of Students	KKM	Achieving KKM	Not yet reached the KKM
IX-A	22	75	6	13
IX-B	21	75	9	12
IX-C	18	75	8	15
Total	61 students		21 students (40%)	40 students (60%)

Source: Social Studies Teacher MTs Negeri 3 Bolaang Mongondow Selatan

The low achievement of learning outcomes shows the need for innovation in the selection of learning models and media. Teachers are required to be able to implement methods that can increase students' motivation and learning activities. One feasible alternative is e-learning-based learning using Moodle, which not only allows for flexible learning but also supports an engaging, interactive, and technology-integrated learning process.

According to Anunu et al. (2023), learning outcomes are the level of mastery achieved by students in following the teaching and learning process in accordance with the goals that have been set. The success of achieving learning outcomes depends on how the learning process takes place and how students acquire appropriate learning experiences. Therefore, the integration of Moodle in the social studies learning process can be a strategic solution to improve student learning outcomes.

2. Literature Review

2.1. Definition of Media

The term "medium" comes from the Latin *medium*, which means "intermediary" or "introduction". In the context of learning, media is defined as anything that can be used to channel messages from sender to receiver so that it can stimulate students' thoughts, feelings, attention, and interest in learning (Amelia & Susanti, 2021). Learning media is not only limited to visual and audio aids, but also includes digital technologies such as computers and the internet.

The use of media in the learning process can increase the effectiveness of communication between teachers and students. Media serves as a tool that makes it easier for teachers to convey learning materials and helps students understand and remember the material. In addition, the media also plays a role in creating a more interesting and interactive learning atmosphere.

With the development of technology, the types of learning media are also increasingly diverse, ranging from print media to digital media. In modern learning, the use of information technology-based media such as e-learning is common because it can be accessed flexibly anytime and anywhere (Amelia & Susanti, 2021).

2.2. Learning and Learning

Psychologically, learning is the process of changing individual behavior as a result of interaction with the environment in order to meet the needs of life. Wittaker in Lefudin (2017) defines learning as a process in which behaviors are provoked or changed through practice or experience. Learning is not only limited to the cognitive aspect, but also includes affective and psychomotor aspects. According to Syah (2013), learning is an activity that takes place in the context of education and is a very fundamental element to achieve educational goals. Thus, learning includes permanent changes in behavior as a result of conscious experiences and exercises.

Learning is the process of interaction between students and educators and learning resources in a learning environment. According to Degeng, learning is a systematic effort to learn students, which includes planning, implementing, and evaluating learning activities. S. Bloom in Mahmudi et al. (2022) stated that learning objectives include three domains, namely: cognitive, affective, and psychomotor. These three domains complement each other to form individuals who are intellectually, emotionally, and skillfully whole.

2.3. E-learning

E-learning is a form of learning that utilizes electronic technology as a medium for delivering teaching materials. The word "e-learning" is made up of the words "electronic" and "learning", which means electronic learning. According to Nasir and Galung (2021), e-learning is a learning process through a computer network, usually using the internet or intranet. E-learning enables the transformation of learning from a conventional teacher-centered system to more flexible and student-centered learning.

The implementation of e-learning is highly dependent on educational needs and resources. Usually, e-learning is used as a forum to provide subject matter that can be accessed by students anytime and anywhere. Teachers can also update the material regularly and monitor student activities through the e-learning system. Features such as discussion forums and quizzes allow for students' interaction and active participation, which is one of the advantages of e-learning (Nasir & Galung, 2021).

According to Prabowo (2019), e-learning allows the learning process to take place more flexibly, efficiently, and adaptive to technological developments. E-learning utilizes the internet network as a means of communication and delivery of materials, so that teaching and learning activities are not limited to space and time.

Musa and Khasanah (2019) mentioned several advantages of e-learning, including: (1) it can be accessed anytime and anywhere; (2) does not require physical space; (3) facilitate the evaluation of attendance and participation; and (4) encourage students to be more active. However, e-learning also has disadvantages, such as: (1) the difficulty of controlling students' learning ethic; (2) depends on the quality of the internet network; (3) not all regions have adequate internet access; and (4) requires technological devices that are not always affordable.

According to Aviva Aurora et al. (2019), there are five indicators in e-learning, namely:

1. Independence and Autonomy: Students are required to be independent in managing their own learning and learning time.
2. Self-Regulated Learning: Students are able to manage and control their learning process independently.
3. Industrialization of Teaching: E-learning learning emphasizes on task sharing and the use of technology for efficiency.
4. Interaction: E-learning supports two-way communication between educators and learners through interactive features.
5. Communication: Technology allows the communication process in learning to continue to run effectively even though it is done remotely.

2.4. Moodle

Moodle (*Modular Object-Oriented Dynamic Learning Environment*) is a web-based learning platform that is open-source and is used to host online courses. According to Khasanah (2019), Moodle provides various features such as forums, quizzes, assignments, and recordings of learners' learning activities. With a good user management system, educators can objectively observe and evaluate student learning activities. According to I Wayan A. W. and Luh Indrayani (2022), Moodle has advantages in terms of ease of installation and management. Its main features include: (1) completeness of learning tools; (2) tests and

assignments; and (3) discussion forums. These features allow for independent and collaborative learning, as well as increase student activeness in the learning process.

2.5. Learning Outcomes

Learning outcomes are changes in behavior or abilities obtained by students after participating in the learning process. According to Andriyandi et al. (2023), learning outcomes reflect students' achievements in understanding the material and mastering certain competencies. Nasution in Andriyandi et al. (2023) stated that learning outcomes are not only in the form of knowledge, but also include attitudes, skills, and habits.

Learning outcomes are an indicator of the success of the learning process and can be measured through various evaluations. By understanding learning outcomes, educators can determine the right learning strategies and identify individual student learning needs.

3. Proposed Method

Research design describes a plan, procedures or strategies that allow researchers to collect the data necessary to test the research hypothesis to achieve good results between independent variables and bound variables in the study. The research design used in this study is Posstest-Only Control Group Design. Quasi Experimental Design is a design that has a control group but cannot fully function to control external variables that affect the execution of the experiment. The experimental group is a group that is taught e- using moodle-based e-learning media. The control group is a group that is taught without using moodle-based e-learning media. The design can be seen in the following table:

Table 2. Research Design

Group	**Treatment**	**Post-test**
Experiment	X	O1
Control		O2

Information:

X : The effect of using Moodle-based e-learning media (only experimental groups received treatment)

O1 : Giving the final test (Post-test using Moodle-based e-learning learning media)

O2 : Giving the final test (post-test using Moodle-based e-Learning learning media)

By looking at the design above, this study involves two classes that are given different treatments. Where class IX-A is used as an experimental class and class IX-B is used as a control class. To find out the learning outcomes, students were given different treatment in classes IX-A and IX-B.

4. Results and Discussion

Research on the application of moodle-based e-learning media to the learning outcomes of grade IX social studies students was carried out at MTS Negeri 3 Bolaang Mongondow Selatan with a sample of 41 students consisting of class IXA (20 students) as an experimental group and class XB (21 students) as a control class. To be able to enter this moodle-based e-learning learning, by typing moodle in the browser address. This is because this learning media has been run online and is no longer offline, so an internet connection is needed to be able to access this moodle-based e-learning learning media.

4.1. Validity and Reliability Tests

Validity and reliability testing is intended to find out whether the instrument or question as a measuring tool used is valid and reliable or not. The test used was in the form of a written test in the form of multiple choice as many as 15 questions that were tested to a sample of 41 grade IX students. The following are the results of testing the validity of the question items can be seen in the table below:

Table 3. Validity Test

Question Items	r_{count}	$R_{Table\ \alpha\ 5\%}$	Criterion
Question 1	0.355	0.308	Valid
Question 2	0.545	0.308	Valid
Question 3	0.344	0.308	Valid
Question 4	0.394	0.308	Valid
Question 5	0.328	0.308	Valid
Question 6	0.309	0.308	Valid
Question 7	0.365	0.308	Valid
Question 8	0.589	0.308	Valid
Question 9	0.386	0.308	Valid
Question 10	0.467	0.308	Valid
Question 11	0.365	0.308	Valid
Question 12	0.391	0.308	Valid
Question 13	0.395	0.308	Valid
Question 14	0.506	0.308	Valid
Question 15	0.314	0.308	Valid

Source: Data processing results from SPSS 21

Table 3. is the result of testing the validity of 15 questions using the Pearson Product Moment validity model using the IBM SPSS statistics program version 21.0. The basis for making decisions about the validity test of the Pearson Product Moment is to compare the calculated value with the rtables. If the calculated value> rtable = valid while if the r<rtable value = is invalid. Or by looking at the significance value (Sig.), namely if the value of sig<0.05 = valid while if the value of sig>0.05 = Invalid. Testing the validity of the instrument with the Pearson product moment model with a total of 41 research samples and at a sig level of 5%, the rtable of 0.308 was obtained. Based on table 3. Above it can be seen that all the questions used have a rcalculus value > rtable with the overall criteria of valid questions. It can be concluded that all the questions used have a good validity value and are suitable for use as a measuring instrument in this study.

4.2. Reliability Test

The reliability test is a test to find out the extent to which the instrument used in this study is reliable or reliable, whether the measuring tool will still provide consistent results if the measurement is repeated. The instrument is declared reliable if the reliability coefficient is at least 0.6. The reliability test in this study was carried out using the IBM SPSS statistics program version 21. The following are the results of the reliability test in the following table:

Table 4. Reliability Test

Cronbach's Alpha	N of Items
,748	15

Source: Data processing results from SPSS 21

Based on table 4. Above can be seen the results of the instrument reliability test as many as 15 question questions given to the research sample of classes IXA and IXB have a Cronbach's alpha value of 0.748 > 0.60. It can be concluded that the instrument has a good reliability value for use in research. An instrument can be said to have a high level of confidence if the instrument can provide the right results. The instrument is said to be reliable and can be used more than once in different times, but still shows relatively consistent results (Ghozali, 2007).

4.3. Post-Test

The implementation of the post-test stage as the final assessment stage in this study was carried out in the control class group and the experimental class group by distributing questions/tests/quizzes after the learning model treatment process was completed. The results of the control class post-test can be seen in table 5. as follows:

Table 5. Control Class Post-Test Results

Yes	Name	Value	Completeness ≥ 75
1.	Alyssa Bottihe	59	Incomplete
2.	Ajijah Kaharu	59	Incomplete
3.	The Hidden Treasure	40	Incomplete
4.	Deya Sapitri Adingo	66	Incomplete
5.	Diki Abas	73	Incomplete
6.	Irma Hulawa	86	Conclusion
7.	Israwati Gintutulangi	73	Incomplete
8.	Mayirah Kamba	46	Incomplete
9.	Melissa Mooduto	53	Incomplete
10.	Miyanti Usman	59	Incomplete
11.	Moh. Muslih Mohulaingo	60	Incomplete
12.	Mohamad Danil Pakaya	59	Incomplete
13.	Polan Raima	65	Incomplete
14.	Princess Imelda Huata	73	Incomplete
15.	Princess I.R Adabaye	59	Incomplete
16.	Grace Sisko Saripi	59	Incomplete
17.	Ridho Islaku	46	Incomplete
18.	Silva Datuage	73	Incomplete
19.	Exile Wife	66	Incomplete
20.	Yey	73	Incomplete
21.	Sri Jihan Badjuni	59	Incomplete
Sum *(Sum)*		**1300**	**Incomplete**
Average *(Mean)*		**61,91**	
Completion Percentage *(%)*		**5%**	

Source : Data processing results from SPSS 21.

Based on the results of the control class post-test in table 5. Above, a student's post-test score was obtained based on individual completeness criteria, namely there was only 1 student who had reached the KKM score standard set by the school, which was 75. Meanwhile, the other 20 students still did not reach the KKM score standard. The total number of total scores of all students is 1300 and the average score is 61.91 and the percentage of completeness is 5%.

Score in table 5. It can be done with the following calculations:

- Calculating average value =
  Total Values 1300 = **61,91**
  Number of Students 21
- Calculating the Classical Completeness Percentage
  Number of students completed 1 x 100% = **5 %**
  Number of Students 21

Furthermore, the results of the post-test of the experimental class can be seen in table 6. as follows:

Table 6. Results of Post-Test Experiment Class

Yes	Name	Value	Completeness ≥ 75
1.	Sister Ponile	59	Incomplete
2.	Afdal Pakaya	66	Incomplete
3.	Amira Faradiba Saripi	79	Conclusion
4.	Depitasari D. Samaila	92	Conclusion
5.	Farhan Nasiki	86	Conclusion
6.	Fitrianti One	86	Conclusion
7.	Judika Rivai	86	Conclusion
8.	Karmila Bagi	92	Conclusion
9.	Khoirul Azam Lendjago	79	Conclusion
10.	Marsel Tilome	92	Conclusion
11.	Melodies of Usman	76	Conclusion
12.	Izzan Djahuari	86	Conclusion
13.	Sabri Bidjun	86	Conclusion
14.	Natalia Moses	92	Conclusion
15.	Nur Ain Lamuluto	79	Conclusion
16.	Grace One	86	Conclusion
17.	Riski Aditya Arafa	86	Conclusion
18.	Sicilian Hasan	92	Conclusion
19.	Siti Ana Isa	86	Conclusion
20.	Siti Zahratu Syifa Katili	86	Conclusion
Sum *(Sum)*		**1683**	**Conclusion**
Average *(Mean)*		**84,15**	
Completion Percentage *(%)*		**90%**	

Source : Data processing results from SPSS 21.

Based on the results of the control class post-test in table 6. Above, student post-test scores were obtained based on individual completeness criteria, namely there were 18 students who had reached the KKM score standard set by the school, which was 75. Meanwhile, the other 2 students still did not reach the KKM score standard. The total number of scores for all students was 1683 and the average score was 84.15 and the percentage of completion was 90%.

Score acquisition in table 6. It can be done with the following calculations:

- Calculating average value =
  Total Values 1683 = **84,15**
  Number of Students 20
- Calculating the Classical Completeness Percentage
  Number of students completed 18 x 100% = **90 %**
  Number of Students 21

4.4. Descriptive Statistical Test Results

Based on descriptive statistical analysis using the IBM SPSS statistics program application version 21.0, it can be seen in table 7. The following:

Table 7. Descriptive Statistical Table

		PostTest_Eksperimen	PostTest_Kontrol
N	Valid	21	20
	Missing	21	22
Mean		84,1500	61,9100
Median		86,0000	59,0000
Std. Deviation		9,95944	11,14970
Variance		99,190	124,316
Range		33,00	46,00
Minimum		59,00	40,00
Maximum		92,00	86,00
Sum		1741,00	1240,00

Source : Data processing results from SPSS 21.

Based on the data in the table above, there is a difference in the average learning outcomes of students in the control class (post-test) and the experimental class (post-test), where the results of the control class are 61.91 and the experimental class is 84.15. Therefore, it can be concluded that the learning outcomes of the experimental class are higher than those of the control class.

4.5. Results of the Analysis Prerequisite Test

The normality test aims to find out whether or not the research sample data is normally distributed at the pre-test values of the control class and the experimental class. The normality test of this research data uses the IBM SPSS statistics program version 21.0. The normality test used is the Kolmogorov-Smirnov Test with the following test criteria:

- If the Probability value > 0.05 then the data is distributed normally.
- If the Probability value < 0.05 then the data is not normally distributed.

For the calculation of the normality test datai values of the pretest of the control class and the experimental class, it can be seen in the following table:

Table 8. Normality test results post-test experimental class and control class

One-Sample Kolmogorov-Smirnov Test

		Hasil_Belajar
N		41
Normal Parameters, b	Mean	72,7073
	Std. Deviation	14,85134
Most Extreme Differences	Absolute	,205
	Positive	,163
	Negative	-,205
Kolmogorov-Smirnov Z		1,312
Asymp. Sig. (2-tailed)		,064

a. Test distribution is Normal.
b. Calculated from data.

Source : Data processing results from SPSS 21.

Based on the SPSS results above, the Asymp value can be known. Sig (2-tailed) is 0.064 > 0.05. From the results of the normality test of the Kolmogorov-Smirnov Test, it can be concluded that the data of the control class and the experiment are normally distributed.

4.6. Homogeneity Test Results

The homogeneity test was carried out to find out whether the two data had the same variant or not. If the two data have the same variant, the data is said to be homogeneous. For homogeneity testing, this study uses the IBM SPSS statistics program version 21.0. The calculation of the data homogeneity test of the pre-test values of the control class and the experimental class can be seen in the table below:

Based on the results of the data homogeneity test above, it can be seen that the significance value (sig) of student learning outcomes in the control class and the experiment class is 0.210 > 0.05 so that it can be concluded that the data is homogeneous.

4.7. Hypothesis Test Results

After meeting the requirements for data normality and data homogeneity, the data analysis can be continued on comparative hypothesis testing for parametric statistics, namely by independent sample t-test. Independent test sample t-test is or a different test of two unpaired samples, namely different samples and undergoing two different treatments or measurements. The results of the parametric difference test test in the SPSS program will obtain a significance

value (sig) on the data used for decision-making, if the significance value (sig) of the data is > 0.05 then H0 is accepted and H1 is rejected. and if the significance value (sig) < 0.05 then H0 is rejected and H1 is accepted.

- H0 = There was no significant difference in learning outcomes between the group of students who followed the application of moodle-based e-learning media and the group of students who followed the conventional learning model.

- H1 = There was a significant difference in learning outcomes between the group of students who followed the application of moodle-based e-learning media and the group of students who followed the conventional learning model.

The testing carried out was by testing the results of the students' post-test in the control class and the experimental class. The test results are presented in the table below:

Table 9. Results of independent sample t-test Statistics

	Class	N	Mean	Std. Deviation	Std. Error Mean
Hasil_Belajar	Experiment	20	84,1500	8,53414	1,90829
	Control	21	61,9171	10,88708	2,37576

Source : Data processing results from SPSS 21.

In the SPSS output results above, the results of the descriptive statistic summary of the two research sample data are shown. The mean value of the control class sample was 61.91 while the mean value of the experimental class sample was 84.15.

Table 10. Independent sample T-Test results

		Levene's Test for Equality of Variances		**t-test for Equality of Means**		
		F	**Sig.**	**t**	**Df**	**Sig. (2-tailed)**
Hasil_Belajar	**Equal variances assumed**	**1,627**	**,210**	**7,256**	**39**	**,000**
	Equal variances not assumed			**7,299**	**37,640**	**,000**

Source : Data processing results from SPSS 21.

In the SPSS output results table above, it can be seen that the significance value (sig 2-tailed) is 0.000 which means a value of sig<0.05 (H0 rejected and H1 accepted). It can be concluded that there is a significant difference in the improvement of learning outcomes between the group of students who follow the application of moodle-based e-learning media and the group of students who follow the conventional learning model.

5. Comparison

Student learning outcomes are the abilities that children acquire after going through teaching activities. Learning outcomes are certain abilities that can be achieved by students after participating in the learning process. Learning outcomes can also change student behavior in the form of new abilities acquired when participating in the learning process (Meliyana et al., 2023). Based on the results of the research that has been conducted, the researcher measured the extent to which the use of Moodle-based e-learning media affects student learning outcomes. In the initial stage, the researcher makes a learning implementation plan and questions that will be used as an instrument for assessing student learning outcomes

with a final test (posttest) in the experimental class and the control class, each carried out for four meetings.

This is in line with the opinion of Meliyana et al. (2023) that learning outcomes are one of the important aspects that teachers need to assess the potential of each student, because each student has differences in academic aspects and their potential that can be achieved. These differences are used as a benchmark to determine the increase or decrease in students' abilities during the learning process. Learning outcomes include competencies or skills in the cognitive, affective, and psychomotor domains that students achieve or master after participating in the teaching and learning process.

The learning outcome variables are constructed based on indicators from Bloom and Wijaya's theory in Muna (2023), namely: (1) Cognitive Domain, in the form of behavioral changes due to the learning process involving the receipt of stimulus, storage, and processing of information by the brain; (2) Affective Domain, related to student values, attitudes, and behaviors, which are arranged from low to high levels; (3) Psychomotor Domain, which is a motor skill that also develops gradually, and can only be achieved if students have mastered previous learning outcomes.

According to Sulistyo in Syamsudin et al. (2013), the use of e-learning as a learning medium in schools is quite effective to achieve learning goals. Meanwhile, according to Fendi in Syamsudin et al. (2013), the development of Moodle-based e-learning is considered feasible and good to be used as a learning support medium. The variables of Moodle-based e-learning learning media are constructed from the indicators put forward by Aurora et al. (2019), namely: (1) Independence and autonomy; (2) Self-regulated learning; (3) Industrialization of teaching; (4) Interaction; and (5) Communication.

Moodle-based e-learning is an online learning medium that can be accessed at any time. It uses a variety of variations such as video, audio, and documents, which make learning more engaging, as well as features such as discussion forums and quizzes that can increase student engagement. Meanwhile, learning outcomes are the results of evaluation that can be seen from the changes experienced by students after participating in the learning process. The relationship between the two variables shows the effectiveness of the use of Moodle-based e-learning media in improving student learning processes and outcomes.

6. Conclusions

Based on the results of the analysis of research data, it can be concluded that there is a significant difference in learning outcomes between students who participate in learning using Moodle-based e-learning media and students who participate in conventional learning. This is proven by the independent sample t-test which produces a significance value of 0.000 ($p < 0.05$), which means that H0 is rejected and H1 is accepted. Thus, the use of Moodle-based e-learning media is able to significantly improve student learning outcomes compared to conventional learning methods. These findings show that the integration of technology, especially Moodle, in social studies learning in grade IX can be an alternative learning strategy that is effective and has a positive impact on the achievement of student learning outcomes. Therefore, several suggestions were put forward, namely for teachers to be able to provide a greater portion in the use of moodle-based e-learning media for each learning process considering that student learning outcomes can support the improvement of student learning outcomes. Then for other researchers, it is possible to develop and include other variables including other learning models that are identified to improve student learning outcomes.

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