International Journal of Research and Review
[Indexed, Peer-Reviewed Journal]
Volume 12; Issue: 7; July 2025
Website: www.ijrrjournal.com
Research Paper *E-ISSN: 2349-9788; P-ISSN: 2454-2237*

The Effectiveness of Using Artificial Intelligence Based Learning Media on the Learning Interest of Grade 7 Students in Social Studies

Resaliano[1], Puji Lestari[2]

[1,2]Social Science Education Program Study, Social Science and Politics Faculty, Universitas Negeri Semarang

Corresponding Author: Resaliano

DOI: https://doi.org/10.52403/ijrr.20250762

ABSTRACT

This research is motivated by the lack of innovation and utilization of renewable technology, which is one of the main factors inhibiting the creation of an interactive learning atmosphere and student involvement. In addition, the observations show that the percentage of student involvement or participation in class during learning is less than 50%. This study aims to measure the use of AI learning media on student learning interest. The research method used is quantitative with a quasi-experiment approach with a nonequivalent control group design, where the determination of the sample is based on the criteria for the equality of the average results of student participation per class, namely students in experimental class 7D and control class 7F. The results of this T-test data analysis showed a significant value of 0.000. These results indicate that H0 is rejected and Ha¬ is accepted, and it can be concluded that the use of Artificial Intelligence learning media is effective in increasing student interest in social studies subjects compared to the control class. In addition, the N-Gain score test found a mean score of 67.23, including in the effective category. As for the control class with the media used PowerPoint obtained a mean score of 22.67 which is included in the ineffective category. It can be concluded that the use of Artificial Intelligence media effectively increases students' interest in learning social studies subjects.

Keywords: Effectiveness, Artificial Intelligence, Canva, Learning Interest, Social Studies Education

INTRODUCTION

The development of technology has existed and has been a part of life since human existence began. At first, the development of technology was limited to relying on the power of nature, such as hunting. As time goes by, technological developments are increasingly rapid and give rise to new terms for developments that occurred before. Currently, Society 5.0 is a further development of Society 4.0, where Society 5.0 is the concept of the future society envisioned by the Japanese government (Santoso, G., 2022). The concept of Society 5.0 makes humans a source of innovation which is not only limited to manufacturing/industrial factors, but can also solve social problems with the help of the integration of physical and virtual spaces. This is in line with the expression from Nusantara, T. (2020, in Ardinata, et al., 2022) that one of the basic ideas of this concept, namely the existence of artificial intelligence products, can transform Big Data (large amounts of data) from internet transaction products in all fields of life into

a new wisdom with the hope of creating products to improve human capabilities in opening up new opportunities for humanity.

Society 5.0 is experiencing developments that continue to expand into various fields, one of which is in the field of education where the use of digital learning media has now been significantly transformed and renewed which is widely applied, one of which is Artificial Intelligence. The presence of Artificial Intelligence as a tool that provides an effective and efficient experience in the process of teaching and learning activities in the classroom for teachers and students. According to the statement of Klamma et al. (2020, in Ronsumbre, et al., 2023) that Artificial Intelligence can be used as an effective learning media/tool by offering learning experiences for students. The use of media in teaching and learning activities has an important role, which is to be a unit used to channel the sender's message to the recipient. It can also stimulate students' feelings, thoughts, attention, and interest in learning. This statement is relevant to Lautfer (1999, in Rahmawati, 2023), that learning media is one of the teaching aids for teachers in delivering subject matter, increasing student attention and increasing student creativity during the learning process in the classroom. . One of the learning media that can be a tool in the learning process, namely Canva, is a platform that provides features in making visual editing designs that have integrated the use of Artificial Intelligence in one of its features, namely Magic Studio (Abrory, et al., 2024).

But in reality, media as a tool to increase attention and creativity during the learning process in the classroom does not always go as expected. The selection of learning media used in the process of learning activities in the classroom is not appropriate and cannot attract students' attention. One of the previous studies that discussed the same topic, namely research conducted by Baringbing, E. K. B., et al. (2024) entitled "Utilization of AI-based learning media to increase student interest in learning SD Negeri 060972 Simalingkar B Medan". In the study, the results show that the use of Artificial Intelligence (AI) as media can make it easier to increase student interest in learning. But it is not known to what extent the effectiveness of the use of the media affects student interest in learning. In addition, based on observations made by researchers at SMP Negeri 4 Semarang, especially in grade 7, it shows that the use of renewable technology media, such as Artificial Intelligence, has not been applied and is only limited to the use of video and PowerPoint media. In addition, the low involvement or interest of students during the learning process is one of the factors showing low student interest in learning. This can be seen from the average results of student participation in the learning process with a percentage below 50% or less than half of the total number of students in the class.

The selection of learning media can affect student interest in learning, especially in social studies subjects. In addition, the lack of optimization of the application of technology-based learning media causes student interest in the material being presented to decrease and can affect student interest in learning social studies in the classroom. In this condition, learning media is needed that can support the learning process more effectively and interactively by optimizing the use of technology. This is in line with research conducted by Baringbing and Rahim (2024) that the use of Artificial Intelligence technology can facilitate in increasing student interest in learning subjects because it is considered more effective and practical. Technology that can be utilized in the learning process, such as Canva, is the right media to use as learning media. This is because Canva is a media that has combined the use of design technology with Artificial Intelligence in one application/web that can be used in making visual media designs, such as timelines. Where the timeline emphasizes more on the information to be displayed

which is able to clarify the content of the learning material (Arisandi, et al., 2023). In addition, according to Maufidhoh, I., & Maghfirah, I. (2023) Artificial Intelligence is defined as an information system that deals with capturing, modeling, and storing human intelligence in an information technology system, so that the system has human-like intelligence. In the field of education, the use of Artificial Intelligence is implemented, one of which is as intelligent content that Artificial Intelligence makes it easy for users to search for structured, fast, and efficient material (Handayani, et al., 2025).

Learning with the use of Artificial Intelligence as a learning medium is assisted by one of the applications that provide these features, namely Canva. Canva is an online graphic design application or website that is used to facilitate individuals in creating attractive visual or graphic displays. According to Jannah, F. N. M., Nuroso, H., Mudzanatun, M., & Isnuryantono, E. (2023) there are several things about Canva, namely, a) intuitive use interface, b) various types of design projects, c) collection of templates and design elements, d) text and graphic formatting tools, e) collaboration and sharing, f) and integration with other platforms. As a tool for distributing subject matter, Artificial Intelligence is applied together with the Project Based Learning (PJBL) learning method, where Project Based Learning is an approach developed with the principles of problem solving, contructivism, research, inquiry, integrated studies, and reflection which emphasizes aspects of theoretical studies and their application. Learning using the Project Based Learning method students can develop a project both individually and in groups in producing something (Nugraha, et al., 2023).

The application of learning media as a means of channeling material can generate student interest in learning, especially in social studies learning. This is in line with the statement according to Slameto (2015, in Aulia, et al., 2021) explaining that interest in learning is a sense of preference and there is a sense of interest in a thing or activity without prompting. In addition, interest in learning has several indicators that can be observed through student behavior. This is in accordance with a quote from the journal (Hidayah, N. C., et al., 2023) which explains that interest in learning has several indicators, namely a) a feeling of pleasure towards learning, b) a focus of attention and thoughts on learning, c) a willingness to learn, d) an inner willingness to be active in learning, e) and the existence of efforts made to realize the desire to learn.

Based on the explanation previously described, the researcher assumes that it is necessary to conduct a study on this issue to understand how the application of Artificial Intelligence learning media can effectively increase student interest in learning. Therefore, the author proposes the research title "The Effectiveness of Using Artificial Intelligence Based Learning Media on the Learning Interest of Grade 7 Students in Social Studies".

MATERIALS & METHODS

This study uses a quantitative approach with a type of quasi-experimental research design, with a Nonequivalent Control Group Design, where Canva-based Artificial Intelligence can increase the learning interest of grade 7 students, especially in social studies learning subjects (Sugiyono, 2019). This research was conducted at SMP Negeri 4 Semarang with the samples used in this study, namely class VII-D (Experimental Class), VII-F (Control Class), and VII-B (Trial Class). The use of these samples is based on the criteria of the similarity of the average value of the percentage of student participation in each class.

The data collection techniques used in this study were a questionnaire, observation, and documentation. In collecting questionnaire data, researchers used a Likert scale with the following score provisions: Write here the procedure/technique of your research study.

Table 1 Likert Scale

Jawaban	Skor Positif	Skor Negatif
Sangat Setuju	5	5
Setuju	4	4
Ragu-Ragu	3	3
Tidak Setuju	2	2
Sangat Tidak Setuju	1	1

Data Source: Wibowo, A., et. al. (2023)

The data analysis technique in this study uses normality, homogeneity, hypothesis, and N-Gain tests with the help of the SPSS for Windows version 27 application. Where is the normalized gain (g)= $\frac{posttest\ score - pretest\ score}{75 - Pretest\ score}$*, with the normalized gain interpretation category below:*

Table 2 N-Gain Score

Range	Category
N-Gain ≥ 0,70	High
0,30 ≤ *N-Gain* ≤ 0,70	Medium
N-Gain ≤ 0,30	Low

Source: (Harianja, et al., 2024)

Meanwhile, the division of categories of N-Gain in percent can be seen in the table below:

Table 3: Interpretation of N-Gain Effectiveness

Percentage %	Interpretation
< 30	Not Effective
31-45	Less Effective
46-55	Moderately Effective
>56	Effective

Source: (Akbar, M., et al., 2022)

RESULT

In this study, the method used by researchers in data collection is a quasi-experiment, where there are experimental classes and control classes. In the experimental class, the research focuses on the use of Artificial Intelligence learning media on student interest in social studies subjects, and the control class in the form of using PowerPoint learning media. Each class consists of 32 students, with a pre-test treatment before treatment and a post-test after treatment in the form of a student interest questionnaire. Learning activities are carried out as many as 4 times of learning or treatment, with the first activity, students are given questions and pre-test questionnaires before being given treatment, which aims to determine the condition of students. In the second and third learning activities, students are given treatment, and at the end of the fourth meeting, students are given a post-test learning interest questionnaire to find out the results of the students after treatment.

Normality test

The normality test was carried out after researchers had conducted data collection research and obtained data from the field, namely pre-test scores and post-test scores in experimental and control classes. The purpose of the normality test is to determine whether and to what extent the data obtained from the field is normally distributed. In this study, researchers used the Shapiro-Wilk normality test with the help of the SPSS version 27 for Windows application. This is because the number of samples used by researchers <50, which is 32 students.

Table 4: Normality Test

	Class	Shapiro-Wilk		
		Statistic	df	Sig.
Learning about the interest of IPS	Pre-test Experiment	0,965	32	0,381
	Post-test Experiment	0,959	32	0,251
	Pre-test Control	0,984	32	0,897
	Post-test Control	0,961	32	0,298

Based on the results of the normality test using SPSS for the Windows version 27 application, the results of Sig. Pre-test and post-test of the experimental class were 0.381 and 0.251, respectively. While in the control class, the Sig. Pre-test and post-test results were 0.897 and 0.298, respectively. Based on these results, the data can be said

to be normal because it has a significant value> 0.05.

Homogeneity test

The homogeneity test in this study was used to find out about the data from 2 treatment groups that have homogeneous or the same properties. This homogeneity test was carried out on the pre-test and post-test results of the experimental class and control class. The following are the results of the homogeneity test with the help of the SPSS for Windows version 27 application.

Table 5 Homogeneity Test (Pre-test)

		Levene Statistic	df1	df2	Sig.
Learning about the interest of IPS	Based on Mean	0,537	1	62	0,467
	Based on Median	0,586	1	62	0,447
	Based on Median and with adjusted df	0,586	1	61,669	0,447
	Based on trimmed mean	0,537	1	62	0,466

Table 6 Homogeneity Test (Post-test)

		Levene Statistic	df1	df2	Sig.
Learning interest of IPS	Based on Mean	0,537	1	62	0,467
	Based on Median	0,586	1	62	0,447
	Based on Median and with adjusted df	0,586	1	61,669	0,447
	Based on trimmed mean	0,537	1	62	0,466

Based on the results of the homogeneity test conducted by researchers, the significance value of the base on mean for the pre-test and post-test is 0.467 and 0.193, respectively. It can be concluded that the data obtained can be said to be homogeneous because the value of the P-value is greater than 0.05.

Hypothesis test

The hypothesis test conducted in this study used an independent sample t-test, where the post-test results found were compared, namely the experimental class and the control class. In this hypothesis test, using SPSS version 27 for Windows applications, the following are the results of the data obtained.

Table 7: Hypothesis Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		f	Sig.	t	df	Sig (2-tailed)	Mean	Std Error	95% Confidence Interval of the Difference	
									Low	Up
Learning about the interest of IPS	Equal variances assumed	7,443	0,008	11,834	62	0,000	16,469	1,392	13,687	19,251
	Equal variances not assumed.			11,834	44,777	0,000	16,469	1,392	13,665	19,272

Based on the data results above, the significant value obtained is 0.000, and the data can accept Ha and reject H0 because the significance value is smaller than 0.05. The conclusion obtained is that the use of Artificial Intelligence learning media in social studies subjects can effectively increase the learning interest of 7th-grade students at SMPN 4 Semarang.

N-Gain test

The N-Gain test in this study was used to determine the increase in student interest in learning by calculating the pre-test and post-test scores in the experimental and control classes. The following are the results of the calculation of the N-Gain test data percent score with the help of the SPSS version 27 for Windows application.

Table 8 N-Gain Test

	Class			Statistic	Std. Error
N Gain Percent	Experience	Mean		67,23	2,680
		95% Confidence Interval for Mean	Lower Bound	61,76	
			Upper Bound	72,70	
		5% Trimmed Mean		66,78	
		Median		63,58	
		Variance		229,869	
		Std. Deviation		15,161	
		Minimum		44	
		Maximum		100	
		Range		56	
		Interquartile		22	
		Skewness		0,401	0,414
		Kurtosis		-,718	0,414
	Control	Mean		22,67	2,385
		95% Confidence Interval for Mean	Lower Bound	17,80	
			Upper Bound	27,53	
		5% Trimmed Mean		22,19	
		Median		22,40	
		Variance		182,081	
		Std. Deviation		13,494	
		Minimum		-5	
		Maximum		55	
		Range		60	
		Interquartile		16	
		Skewness		0,623	0,414
		Kurtosis		0,582	0,809

Based on the results of the N-Gain test that has been carried out, it is known that the mean score in the experimental class is 67.23 and the mean score in the control class is 22.67. So, it can be concluded that Artificial Intelligence media in the experimental class is said to be effective because it has a mean score of more than 56. Conversely, PowerPoint media in the control class is said to be ineffective because it has a mean score of less than 30. So, classes that use Artificial Intelligence media have an increase in learning interest that is better than classes that use PowerPoint media in learning activities.

DISCUSSION

Based on the results of research conducted by researchers regarding the effectiveness of the use of Artificial Intelligence learning media, the results of the effectiveness criteria, where there is data that supports the effectiveness of learning media. Researchers used the assumption test and found that in the normality test, with a pre-test significance value for the experimental class and control class of 0.381 and 0.897, respectively, which can be said to be normally distributed data. This is because the data obtained has a significance value of more than 0.05. Based on the results of the homogeneity test calculations that have been carried out by researchers, it is known that the significance value of Base on Mean is 0.467. This value can be interpreted as the data having a homogeneous or equal variant because it has a significance value of more than 0.05.

After conducting normality and homogeneity tests, the significance value is determined to prove that the data is normally distributed and homogeneous. Then, the t-test is carried out to determine whether the data obtained rejects or supports the hypothesis. The results of the analysis carried out by researchers show that the significant value (2-tailed) is 0.000, so the data can be said to be effective in increasing students' interest in learning because the value obtained is less than 0.05.

To determine the level of effectiveness of the use of Artificial Intelligence learning media on student interest in local history material using the N-Gain Test with the help of the SPSS version 27 for Windows application. The results obtained based on data processing by researchers show that the average N-Gain score is 67.23 percent, with a minimum and maximum score of 44 and 100, respectively. Based on the category of interpretation of the effectiveness of N-Gain, if the percent value is more than 56, then the media is included in the effective category. Meanwhile, the control class with PowerPoint learning media showed a score of 22.67 percent. This can be interpreted that Artificial Intelligence media is more effective to be used as learning media compared to PowerPoint media.

From the data that has been obtained by researchers, it shows that the use of Artificial Intelligence learning media is a form of innovation that is relevant in the times that provides significant potential in learning activities. In addition, the use of Artificial Intelligence learning media is effectively used in directed and efficient learning activities, as well as supporting interactive and communicative learning for students and teachers. In addition, students can be actively involved in exploring knowledge, especially in social studies learning.

CONCLUSION

The effectiveness of the use of Artificial Intelligence media on Student Learning Interest in Social Studies Class 7 SMPN 4 Semarang, as evidenced by the results of the T-test data, which shows a significant value of 0.000. These results indicate that H0 is rejected and Ha¬ is accepted, and it can be concluded that the use of Artificial Intelligence learning media is effective in increasing student interest in social studies subjects. While the value of the effectiveness of the use of media interpreted using the N-Gain score test is a known mean score of 67.23, which is in the effective category. As for the control class with the media used, PowerPoint obtained a mean score of 22.67, which is included in the ineffective category.

Declaration by Authors

Acknowledgement: None

Source of Funding: None

Conflict of Interest: No conflicts of interest declared.

REFERENCES

1. Ardinata, R. P., Rahmat, H. K., Andres, F. S., & Waryono, W. (2022). Kepemimpinan transformasional sebagai solusi pengembangan konsep smart city menuju era society 5.0: sebuah kajian literatur [Transformational leadership as a solution for the development of the smart city concept in the society era: a literature review]. Al-Ihtiram: Multidisciplinary Journal of Counseling and Social Research, 1(1).
2. Santoso, G. (2022). Revolusi Pendidikan di era society 5.0; pembelajaran, tantangan, peluang, akses, dan keterampilan teknologi. Jurnal Pendidikan Transformatif, 1(2), 18-28.
3. Ronsumbre, S., Rukmawati, T., Sumarsono, A., & Waremra, R. S. (2023). Pembelajaran Digital Dengan Kecerdasan Buatan (AI): Korelasi AI Terhadap Motivasi Belajar Siswa. Jurnal Educatio FKIP UNMA, 9(3), 1464-1474.
4. Rahmawati, F. Efektivitas Penggunaan Media Pembelajaran POSFIVA dalam Meningkatkan Minat Belajar dan Hasil Belajar Siswa. Jurnal Pendidikan Madrasah, 8(2), 241-248.
5. Abrory, M. W. (2024, December). Analisis Kepuasan Pengguna Terhadap Fitur Magic Studio Aplikasi Canva Pada Lingkup

Mahasiswa Menggunakan Metode TAM. In Prosiding Seminar Nasional Teknologi dan Sistem Informasi (Vol. 4, No. 1, pp. 168-177).
6. Baringbing, E. K. B., & Rahim, R. (2024). Pemanfaatan Media Pembelajaran Berbasis AI Untuk Meningkatkan Minat Belajar Siswa SD Negeri 060972 Simalingkar B Medan. Kesatria: Jurnal Penerapan Sistem Informasi (Komputer dan Manajemen), 5(4), 1515-1523.
7. Arisandi, W. F., Fauziah, F., & Nurasiah, N. (2023). Implementasi Model Pembelajaran Problem Based Learning Berbantuan Media Timeline Dalam Meningkatkan Motivasi Belajar Sejarah Siswa Kelas XI MIPA 5 SMAN 2 Banda Aceh. JIM: Jurnal Ilmiah Mahasiswa Pendidikan Sejarah, 8(4), 5516-5526.
8. Maufidhoh, I., & Maghfirah, I. (2023). Implementasi pembelajaran berbasis artificial intelligence melalui media puzzle maker pada siswa sekolah dasar. Abuya: Jurnal Pendidikan Dasar, 1(1), 30-43.
9. Jannah, F. N. M., Nuroso, H., Mudzanatun, M., & Isnuryantono, E. (2023). Penggunaan aplikasi canva dalam media pembelajaran matematika di sekolah dasar. Jurnal Pendidikan Dasar, 11(1), 138-146.
10. Nugraha, I. R. R., Supriadi, U., & Firmansyah, M. I. (2023). Efektivitas strategi pembelajaran project-based learning dalam meningkatkan kreativitas siswa. Jurnal Penelitian Dan Pendidikan IPS, 17(1), 39-47.
11. Aulia, N. I. P., & Araniri, N. (2021). Peran Guru Pendidikan Agama Islam Sebagai Konselor Dalam Meningkatkan Minat Belajar Siswa. Al-Mau'izhoh, 3(1), 9-22.
12. Hidayah, N. C., & Fajriyah, K. (2023). ANALISIS MINAT BELAJAR SISWA MELALUI MEDIA GAMBAR SISWA KELAS 2 SDN SAWAH BESAR 01. Didaktik: Jurnal Ilmiah PGSD STKIP Subang, 9(2), 3966-3976.
13. Wibowo, A., Yulianto, N., & Arfinanti, N. (2022). Pengembangan Modul Ajar Matematika dengan Metode Pembelajaran Kooperatif Berbasis Gamifikasi untuk Meningkatkan Minat Belajar Peserta Didik. Polynom: Journal in Mathematics Education, 3(3), 1-7.
14. Harianja, M. R., Yusup, M., & Siahaan, S. M. (2024). Uji N-Gain pada Efektivitas Penggunaan Game dengan Strategi SGQ untuk Meningkatkan Berpikir Komputasi dalam Literasi Energi. Jurnal Intelektualita: Keislaman, Sosial dan Sains, 13(2), 303-310.
15. Handayani, J. R., & Marsofiyati, M. (2025). Pengaruh Penggunaan Artificial Intelligence (AI) dan Media Quizizz Terhadap Minat Belajar Mahasiswa pada Mata Kuliah Teknologi Digital Pendidikan. *Mutiara: Jurnal Penelitian Dan Karya Ilmiah*, *3*(1), 54-75.
16. Akbar, M., Nizaar, M., Fujiaturrahman, S., Haifaturrahmah, H., & Sari, N. (2022, July). Keefektifan Media Audio Visual Berbasis Etnosains Terhadap Minat Belajar Siswa Sekolah Dasar. In Seminar Nasional Paedagoria (Vol. 2, pp. 17-23).

How to cite this article: Resaliano, Puji Lestari. The effectiveness of using artificial intelligence based learning media on the learning interest of grade 7 students in social studies. *International Journal of Research and Review*. 2025; 12(7): 588-595. DOI: *10.52403/ijrr.20250762*

******