MIKAILALSYS
Journal of Multidisciplinary Sciences

e-ISSN : 2987-2286
p-ISSN : 2987-3924

Index: Harvard, Boston, Sydney, Copernicus, Sinta 4, Scilit, Semantic, Google, etc

https://doi.org/10.58578/mikailalsys.v4i3.11831

The Effect of Using AI-Based Learning Media on the Learning Motivation of Students in the Sociology Education Study Program at PGRI University of Sumatera Barat

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Article Info:

Submitted:	Revised:	Accepted:	Published:
Jul 7, 2026	Aug 4, 2026	Aug 16, 2026	Aug 21, 2026

Abstract

The increasing integration of artificial intelligence (AI)-based learning media into higher education offers students greater access to information and assistance in understanding course material and completing assignments. However, inappropriate use may undermine learning independence, engagement, and responsibility. This study examined the effect of AI-based learning media on the learning motivation of students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. Grounded in Maslow's Hierarchy of Needs Theory, the study employed a quantitative associative design. The population comprised 170 students from the 2022–2025 cohorts, from whom 65 participants were selected through purposive sampling. Data were collected using a Likert-scale questionnaire and analyzed using descriptive statistics, normality and linearity tests, simple linear regression, *t*- and *F*-tests, and the coefficient of determination in IBM SPSS Statistics 21. The results showed that AI-based learning media positively and significantly predicted students' learning motivation, as indicated by the regression equation $Y = 42.309 + 0.516X$ and a significance value of 0.003 ($p < 0.05$). The correlation coefficient ($R = 0.365$)

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indicated a low positive relationship, while the coefficient of determination (R^2 = 0.133) showed that AI-based learning media accounted for 13.3% of the variance in learning motivation, with the remaining 86.7% attributable to other factors. These findings indicate that AI-based learning media can support students' motivation when used appropriately, critically, and responsibly. The study underscores the importance of strengthening digital literacy and positioning AI as a learning support tool rather than a substitute for students' independence and critical thinking.

Keywords: Artificial Intelligence; Digital Literacy; Learning Media; Learning Motivation; Sociology Education

INTRODUCTION

The development of digital technology in the era of the Fourth Industrial Revolution has brought significant changes to various aspects of life, including the education sector. Digital transformation in learning has encouraged a paradigm shift from conventional learning toward technology-based learning that is more flexible, interactive, and student-centered. The utilization of digital technology enables the learning process to be carried out more effectively through the automation of learning systems, unlimited access to information, and learning experiences that can be tailored to the individual needs of students (Khairi et al., 2025).

Along with these developments, learning media have also evolved from conventional media toward more interactive digital learning media. Interactive learning media represent one form of innovation in the learning process because they are capable of presenting learning materials in a more engaging, communicative, and comprehensible manner. Through interactive learning media, students do not merely act as recipients of information but can also become actively involved in the learning process. This makes learning more dynamic and has the potential to enhance students' motivation and learning independence (Febriyantio et al., 2025).

The development of interactive learning media has subsequently created opportunities for the utilization of more adaptive technologies, one of which is through the application of Artificial Intelligence (AI). According to Luckin et al. (2016), AI in education, or Artificial Intelligence in Education (AIEd), refers to the utilization of intelligent systems to support the learning process through the analysis of learners' needs, the provision of

learning assistance, and the delivery of more adaptive learning experiences. In line with this perspective, Holmes et al., (2019) explain that AI in education can support the individualization of learning, assessment, and the provision of learning assistance tailored to learners' needs.

Accordingly, AI-based learning media can be understood as learning media that integrate artificial intelligence to deliver learning materials, provide feedback, and adjust the learning process based on students' characteristics, abilities, and learning needs. The utilization of AI in learning media enables more personalized presentation of learning materials, real-time feedback, and the provision of adaptive learning pathways according to individual students' needs (Fortuna et al., 2025). Therefore, AI-based learning media constitute one of the innovative alternatives for improving the quality of learning in the digital era, as AI has the potential to enhance learning, teaching, and assessment practices more effectively (UNESCO, 2025).

In higher education, AI-based learning media provide new opportunities to improve the quality of student learning. AI-based learning media can support the learning process by providing personalized feedback, thereby enabling students to understand their learning progress in a more directed manner. In addition, AI-based learning media enable the creation of learning experiences tailored to individual needs and learning styles, increase student engagement, and help identify learning difficulties in real time. These conditions have the potential to reduce learning barriers, enhance learning independence, and strengthen students' motivation to participate in the learning process (Tarumasely et al., 2024).

Learning motivation is one of the important factors determining students' academic success. Students with high levels of learning motivation tend to be more active in participating in lectures, persistent in completing assignments, and continuously interested in learning. Conversely, low learning motivation may lead to decreased academic participation and learning outcomes among students (Hamzah, 2019).

Before the use of AI-based learning media, students' learning motivation tended to depend on the learning methods employed, the availability of learning resources, and students' internal motivation to participate in academic activities. When the learning process is less engaging, does not correspond to students' learning needs, and fails to provide an interactive learning experience, students may experience a decline in learning motivation. This condition can be reflected in low levels of participation in learning activities, lack of

persistence in completing assignments, and weak learning responsibility among students (Uno, 2019).

Following the introduction of AI-based learning media, students have opportunities to obtain learning experiences that are more flexible, interactive, and adaptive. AI-based learning media can assist students in searching for information, understanding learning materials, preparing summaries, obtaining feedback, and adapting the learning process to their individual needs. This is consistent with the view of Luckin et al., (2016), who explain that Artificial Intelligence in Education can support the learning process through the analysis of learners' needs, the provision of learning assistance, and the delivery of more adaptive learning experiences.

Thus, the utilization of AI-based learning media can be regarded as one external factor that has the potential to influence students' learning motivation. Such media function not only as a means of delivering learning materials but also as adaptive, interactive, and responsive learning tools that address students' learning needs. Nevertheless, the utilization of AI-based learning media also presents its own challenges. When not used appropriately, these media may create a risk of digital dependency that could reduce students' learning independence and enthusiasm. The ease of access to information and the automation provided by AI-based learning media may also weaken students' critical thinking abilities and encourage a tendency toward instant learning (Empati et al., 2024).

In line with this issue, a study by Faisal, (2024), entitled "The Effect of Artificial Intelligence Use on Students' Critical Thinking Skills in Digital Learning," demonstrated that the utilization of AI technology in learning does not always produce positive effects when used excessively. The findings revealed that some students tended to develop digital dependency, which could reduce their critical thinking abilities and creativity. Students frequently accepted instant answers generated by AI systems without engaging in a deeper reasoning process. These findings emphasize that the utilization of AI-based learning media requires appropriate control, guidance, and digital literacy to ensure that such media continue to function as learning support tools rather than substitutes for students' thinking processes.

On the other hand, a study by Abanyam et al., (2023), entitled "Artificial intelligence: Interactive effect of Google Classroom and learning analytics on academic engagement of business education students in universities in Nigeria," reported different findings. The study found that approximately 80% of respondents perceived the utilization of AI in learning as

capable of increasing students' motivation and learning outcomes because it created a learning process that was more interactive, flexible, and adaptive to individual needs. This finding indicates that the utilization of AI-based learning media has the potential to make a positive contribution to students' learning motivation when used appropriately and purposefully.

The differences in findings among previous studies encouraged the researcher to conduct an initial observation from April 7 to 14, 2026, in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. Based on the initial observation, several indications were identified suggesting that students' learning motivation was not yet optimal. This was evident from several conditions observed during the learning process. In terms of learning engagement, six students were found to have difficulty maintaining focus during learning activities and tended to use their mobile devices for personal purposes while learning materials were being delivered. Meanwhile, in terms of learning responsibility, five students did not submit assignments on time or completed assignments inadequately without paying sufficient attention to the quality of the content. These conditions indicate problems with students' engagement and responsibility during the learning process, which are associated with learning motivation.

To strengthen the findings of the initial observation, the researcher conducted a preliminary survey on April 9–10, 2026, using a questionnaire administered through Google Forms. The preliminary survey involved 43 students from the 2022–2025 cohorts of the Sociology Education Study Program as initial respondents. The preliminary survey was conducted to obtain an initial overview of the use of AI-based learning media and students' learning motivation. The results of the preliminary survey are subsequently presented in the following figure.

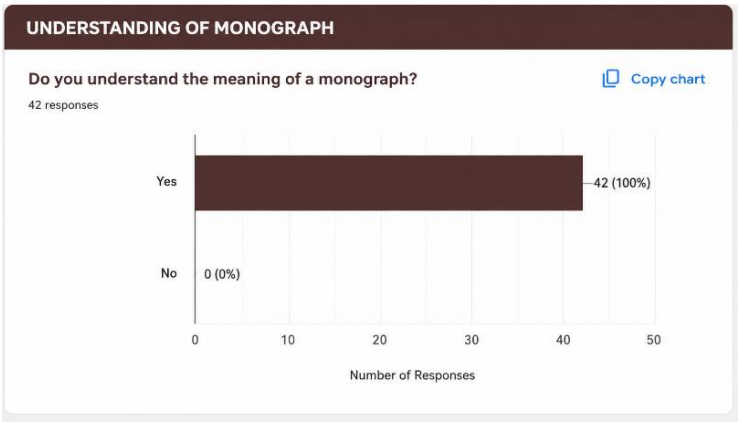


Figure 1. Students' Level of Knowledge of Artificial Intelligence (AI)

Based on Figure 1 , it is evident that all respondents, or 100% of the students, stated that they were aware of the existence of Artificial Intelligence (AI). This finding indicates that AI is no longer an unfamiliar technology to students but has become part of the digital ecosystem closely associated with their academic lives. The high level of students' knowledge of AI indicates an initial readiness to utilize this technology as part of AI-based learning media. However, knowledge of AI does not necessarily guarantee that students are capable of using it appropriately as a learning medium that can support the improvement of learning motivation.

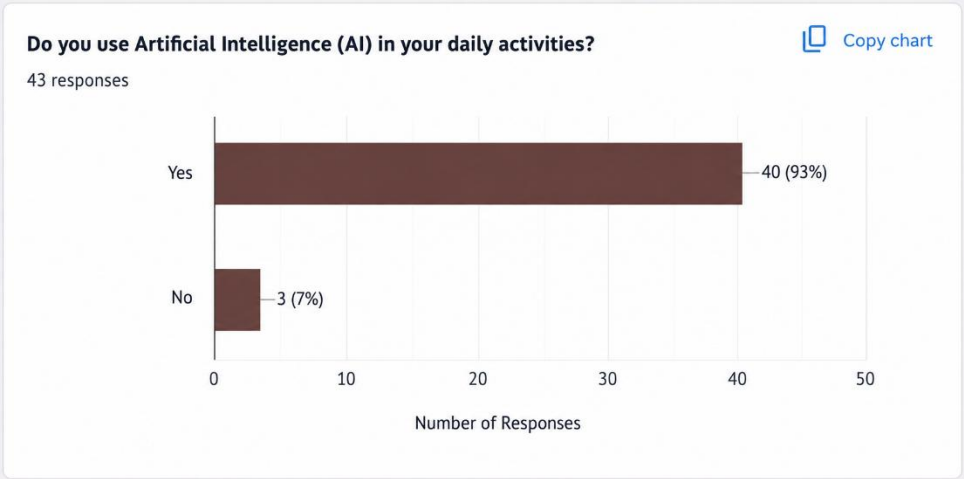


Figure 2. Students' Experience in Using Artificial Intelligence in Learning Activities

Based on Figure 2, it is evident that all respondents, namely 43 students or 100%, stated that they had used Artificial Intelligence (AI) in learning activities. This finding indicates that AI has been utilized by students as a form of AI-based learning media in academic activities, including searching for information, understanding learning materials, and supporting the completion of coursework assignments. This condition indicates that AI-based learning media have considerable potential to be utilized in a learning process that is more interactive, flexible, and adaptive.

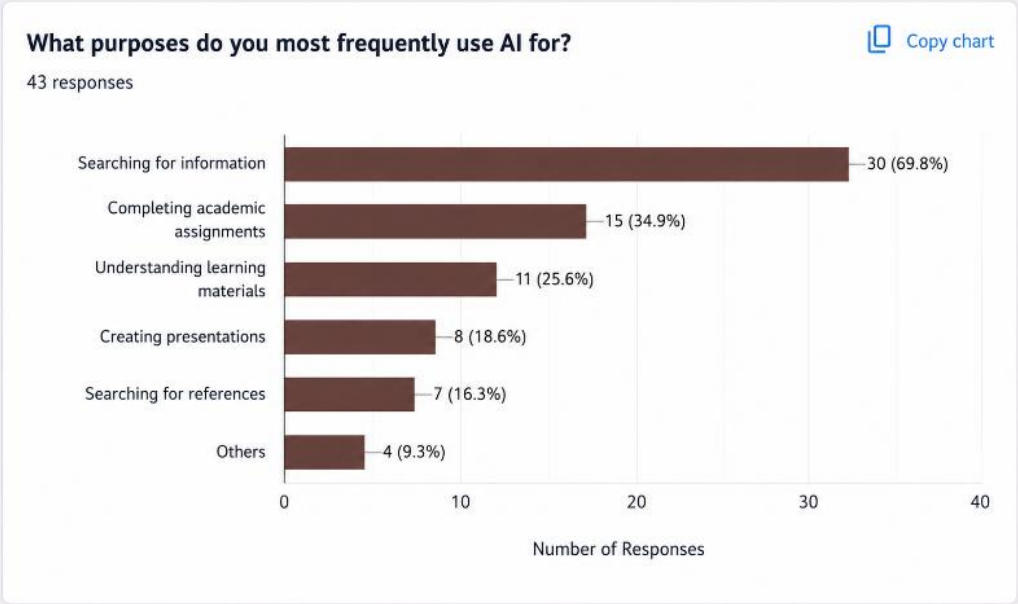


Figure 3. Forms of Artificial Intelligence Use in Students' Learning Activities

Based on Figure 3, it is evident that AI was most frequently used by students to complete assignments, as reported by 36 respondents or 83.7%. In addition, AI was used to obtain quick answers by 15 respondents or 34.9%, to understand learning materials by 14 respondents or 32.6%, to generate writing ideas by 9 respondents or 20.9%, to prepare summaries by 8 respondents or 18.6%, and for other purposes by 4 respondents or 9.3%. These data indicate that the use of AI in students' learning activities tends to be predominantly oriented toward supporting the completion of academic assignments. In this study, such use of AI is positioned as part of AI-based learning media because it is utilized to support students' learning activities.

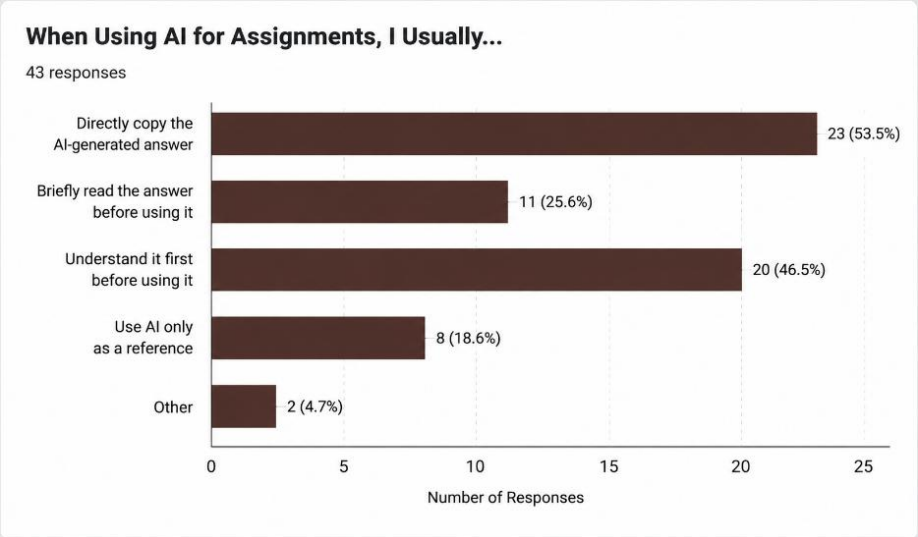


Figure 4. Patterns of Artificial Intelligence Use in Assignment Completion among Students of the Sociology Education Study Program, 2022–2025 Cohorts

Based on Figure 4, the patterns of AI utilization in students' assignment completion demonstrate considerable variation. A total of 23 respondents, or 53.5%, stated that they directly copied answers generated by AI when completing assignments. Furthermore, 20 respondents, or 46.5%, stated that they first understood the answers provided by AI before using them. A total of 11 respondents, or 25.6%, reported that they briefly reviewed the answers and then used the AI-generated responses, whereas 8 respondents, or 18.6%, used AI solely as a reference. Meanwhile, 2 respondents, or 4.7%, selected other forms of AI utilization.

These data indicate that a considerable proportion of students still tend to utilize AI instantaneously when completing academic assignments. The high percentage of students who directly copy answers generated by AI indicates that AI-based learning media have not yet been fully utilized as tools for enhancing understanding, learning independence, and critical thinking skills. This condition demonstrates that although AI-based learning media have the potential to support the learning process, their utilization needs to be accompanied by appropriate control, guidance, and digital literacy so that they can have a positive influence on students' learning motivation.

Based on this phenomenon, the researcher considers that the use of Artificial Intelligence (AI)-based learning media in students' learning activities should not be viewed solely in terms of technological convenience and benefits but should also be examined based on its impact on students' learning motivation. The high level of AI use for completing assignments indicates that this technology has become part of students' academic activities; however, the intensity of such use does not automatically indicate that AI has been utilized as a medium capable of fostering active participation, persistence, independence, and responsibility in learning. Therefore, the researcher argues that AI should be positioned as a supportive medium in the learning process that can assist students in understanding learning materials, obtaining information, receiving feedback, and developing their independent learning abilities, rather than serving as a substitute for students' thinking processes.

The researcher also considers that the relationship between the use of AI-based learning media and learning motivation needs to be empirically established. This is because the use of AI can provide a learning experience that is more convenient, flexible, and adaptive, but under certain circumstances, it may also encourage instant learning behaviors when it is not accompanied by the ability to use technology critically and responsibly. Thus,

the presence of AI in the learning process cannot be directly assumed to increase students' learning motivation. This relationship needs to be examined based on empirical data obtained from students who actually use AI-based learning media in their academic activities.

The findings of previous studies indicate that the utilization of Artificial Intelligence (AI) in education has not yet produced entirely consistent findings. Faisal, (2024) study emphasizes the potential negative effects of AI use, including digital dependency, decreased critical thinking abilities, and a tendency among students to accept answers instantaneously. In contrast, Luo et al., (2023) found that the utilization of AI could have positive effects on students' motivation and learning outcomes by supporting a learning process that is more interactive, flexible, and adaptive. These divergent findings indicate an empirical gap concerning whether the use of AI-based learning media can, in practice, enhance students' learning motivation.

This gap is particularly important to investigate because previous studies have differed in terms of their subject characteristics, research settings, variables, and methodological approaches from the context of the present study. Previous research on AI utilization has primarily examined critical thinking skills, learning outcomes, conceptual understanding, learning interest, or learning engagement, whereas the present study specifically examines the effect of AI-based learning media use on students' learning motivation in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. Accordingly, this study is expected to provide empirical evidence regarding the relationship between AI use and learning motivation within the context of higher education, particularly among students in Sociology Education.

The novelty of this study lies in its specific focus on examining the effect of AI-based learning media use on the learning motivation of students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. This novelty is not only reflected in the use of AI as a learning medium but also in the research context, study setting, and focus of the variables examined. This study positions AI use as the independent variable, measured based on its utilization for searching for information and learning resources, understanding learning materials, obtaining feedback, supporting independent learning, and assisting in the completion of academic assignments. Meanwhile, students' learning motivation is examined through their desire to achieve success, persistence, active participation, interest, independence, and responsibility in learning. With this focus, the study seeks to provide more

specific empirical evidence regarding the contribution of AI use to the learning motivation of Sociology Education students.

Based on the discussion of the development of Artificial Intelligence (AI) use in education, the empirical conditions of students, findings from previous studies, differences in research findings, and the research gap described above, an empirical study is needed to examine the effect of AI-based learning media use on students' learning motivation. This study focuses on students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat who have experience using AI-based media in their learning activities. This focus is intended to determine whether the use of AI-based learning media has an effect on students' learning motivation and to examine the extent of its contribution to learning motivation.

Accordingly, the objective of this study is to determine and analyze the effect of AI-based learning media use on the learning motivation of students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. This study is expected to provide empirical evidence regarding the utilization of AI as a supportive learning medium while also serving as a basis for students and educators to use AI technology appropriately, critically, independently, and responsibly in the learning process.

METHODS

This study employed a quantitative approach with a causal associative research design to analyze the effect of AI-based learning media use on students' learning motivation. The independent variable in this study was the use of AI-based learning media (X), while the dependent variable was students' learning motivation (Y).

The study was conducted in the Sociology Education Study Program at Universitas PGRI Sumatera Barat, with a population of 170 active students from the 2022–2025 cohorts in the 2025/2026 Academic Year. The minimum sample size, calculated using Slovin's formula with a 10% margin of error, was 63 students, while the actual sample that met the research criteria consisted of 65 students. The sample was selected using purposive sampling based on the following criteria: active students, enrolled in the 2022–2025 cohorts, had previously used AI-based learning media in learning activities, and were willing to participate as respondents.

The research instrument was a closed-ended questionnaire employing a five-point Likert scale ranging from strongly agree to strongly disagree. The initial instrument consisted of 36 statement items. Following the validity test, 28 items were determined to be valid, comprising 12 items for the AI-based learning media use variable and 16 items for the learning motivation variable. The reliability test using Cronbach's Alpha yielded values of 0.751 for variable X and 0.887 for variable Y, indicating that both instruments were reliable.

Data were collected through observation, questionnaires, and documentation. The initial observation was conducted from April 7 to 14, 2026, to identify the conditions of AI use and students' learning motivation. The questionnaire served as the primary source of quantitative data, while documentation was used as supporting data.

The data were analyzed using IBM SPSS Statistics version 21 through descriptive statistics, residual normality testing, linearity testing, simple linear regression analysis, t-test, F-test, and the coefficient of determination (R^2). Normality was assessed using the Kolmogorov–Smirnov and Shapiro–Wilk tests, while linearity was determined based on the Deviation from Linearity value. Simple linear regression analysis was employed to determine the direction and magnitude of the effect of AI-based learning media use on students' learning motivation.

RESULTS

Analysis Prerequisite Tests

1. Residual Normality Test

Table 1. Results of the Residual Normality Test

Variable	Kolmogorov–Smirnov Statistic	df	Sig.	Shapiro–Wilk Statistic	df	Sig.
Unstandardized Residual	0.110	65	0.050	0.969	65	0.103

Based on Table 1, the Kolmogorov–Smirnov test yielded a significance value of 0.050, while the Shapiro–Wilk test yielded a significance value of 0.103. Since the Shapiro–Wilk significance value is greater than 0.05, the residuals in the regression model can be considered normally distributed. Therefore, the research data satisfy the normality assumption and are suitable for subsequent simple linear regression analysis and hypothesis testing.

2. Linearity Test

Table 2. Results of the Linearity Test

	Sum of Squares	df	Mean Square	F	Sig.
TOTAL_Y × TOTAL_X					
Between Groups					
Combined	646.037	15	43.069	2.203	0.019
Linearity	214.016	1	214.016	10.946	0.002
Deviation from Linearity	432.021	14	30.859	1.578	0.120
Within Groups	958.025	49	19.552	—	—
Total	1604.062	64	—	—	—

Based on Table 2, the significance value for Linearity is 0.002, while the significance value for Deviation from Linearity is 0.120. Since the significance value of Deviation from Linearity is greater than 0.05 (0.120 > 0.05), there is no significant deviation from a linear relationship between the use of AI-based learning media and students' learning motivation. Therefore, the relationship between the two variables can be considered linear and meets the assumption required for simple linear regression analysis.

Based on the results of the residual normality test and the linearity test, the research data meet the prerequisites for further analysis. Therefore, the analysis can proceed to hypothesis testing using simple linear regression analysis.

3. Hypothesis Testing

a. Simple Linear Regression Analysis

Table 3. Results of the Simple Linear Regression Analysis

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
1					
Constant	42.309	7.772	—	5.444	0.000
TOTAL_X	0.516	0.166	0.365	3.114	0.003

[a] Dependent Variable: TOTAL_Y

Based on Table 3, the constant (a) is 42.309, while the regression coefficient for the use of AI-based learning media (X) is 0.516. Based on these results, the simple linear regression equation can be formulated as follows:

$$\mathbf{Y = 42.309 + 0.516X}$$

The regression equation indicates that the constant value of 42.309 represents the predicted value of students' learning motivation when the use of AI-based learning media variable is zero. Meanwhile, the regression coefficient of 0.516 indicates that every one-unit increase in the use of AI-based learning media is associated with a 0.516-unit increase in students' learning motivation.

The positive regression coefficient indicates that the use of AI-based learning media has a positive direction of effect on students' learning motivation. Thus, higher levels of AI-based learning media use tend to be associated with higher levels of students' learning motivation.

b. t-Test

The t-test was conducted to determine whether the use of AI-based learning media (X) has a statistically significant effect on students' learning motivation (Y). The decision criterion was based on the significance value: if the significance value is less than 0.05, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected.

Based on the analysis presented in Table 3, the calculated t-value was 3.114, with a significance value of 0.003. Since the significance value is less than 0.05 (0.003 < 0.05), H_0 is rejected and H_a is accepted. Therefore, it can be concluded that the use of AI-based learning media has a positive and statistically significant effect on the learning motivation of students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. Accordingly, the research hypothesis stating that the use of AI-based learning media has an effect on students' learning motivation is supported.

c. F-Test

Table 4. Results of the F-Test

Model	Sum of Squares	df	Mean Square	F	Sig.
1					
Regression	214.016	1	214.016	9.700	0.003[b]
Residual	1390.046	63	22.064	—	—
Total	1604.062	64	—	—	—

Based on Table 4, the calculated F-value was 9.700, with a significance value of 0.003. Since the significance value is less than 0.05 (0.003 < 0.05), the regression model is statistically significant. Therefore, the simple linear regression model is considered appropriate for explaining the effect of AI-based learning media use on the learning motivation of students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat.

d. Coefficient of Determination (R^2)

Table 5. Results of the Coefficient of Determination Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.365[a]	0.133	0.120	4.697

Based on Table 5, the R value was 0.365, while the R Square value was 0.133. This R Square value indicates that the use of AI-based learning media accounts for 13.3% of the variance in students' learning motivation. The remaining 86.7% is attributable to other factors outside the variables examined in this study. Thus, the use of AI-based learning media contributes to students' learning motivation, although other factors also play a role in influencing learning motivation beyond the research model.

DISCUSSION

1. Use of AI-Based Learning Media among Students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat

Based on the research findings, the use of Artificial Intelligence-based learning media has a positive and significant effect on the learning motivation of students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. This is evidenced by the results of the t-test, which yielded a significance value of 0.003 (<0.05), indicating that the research hypothesis is supported. This result demonstrates that the better the use of Artificial Intelligence-based learning media, the greater the tendency for students' learning motivation to increase.

This finding is supported by observations conducted by the researcher from April 7 to 14, 2026. Based on the observations, students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat had utilized Artificial Intelligence-based learning media as one of their learning resources during the lecture process. The AI-based learning media used by students included ChatGPT, Google Gemini, and Claude AI. These three media were utilized to assist students in understanding lecture materials, searching for academic references, preparing summaries of learning materials, developing assignment outlines, translating scientific articles, and obtaining additional explanations of materials that they had not yet fully understood.

Based on the observations, ChatGPT was more frequently utilized by students to obtain explanations of lecture materials that they did not fully understand, prepare summaries of learning materials, and assist in developing assignment outlines. Google Gemini was used

to search for additional references, compare information from various sources, and broaden students' understanding of the materials being studied. Meanwhile, Claude AI was utilized to assist in preparing academic writing, improving sentence structures, summarizing scientific articles, and developing ideas for completing coursework assignments. The utilization of these three media indicates that Artificial Intelligence has played a role as a learning medium that supports students' learning processes according to their learning needs.

The utilization of Artificial Intelligence-based learning media provides various benefits in the learning process. Students can more easily access learning resources, understand lecture materials, expand academic references, and organize assignments in a more systematic manner. In addition, AI-based learning media assist students in obtaining additional explanations of materials that they have not yet understood, thereby making the learning process more effective and efficient. Thus, Artificial Intelligence-based learning media function not only as providers of information but also as supporting media that contribute to improving the quality of students' learning processes.

Nevertheless, the observations also indicated that the utilization of AI-based learning media has not yet been fully optimized. Some students have used AI to improve their understanding of lecture materials, whereas others still utilize AI merely to obtain answers quickly when completing assignments without first understanding the materials being studied. This condition indicates that the use of AI-based learning media needs to be accompanied by critical thinking skills, digital literacy, and academic responsibility so that learning objectives can be achieved optimally.

This finding is also consistent with Erningsih et al., (2024) who stated that technological development from the perspective of the sociology of education constitutes part of the dynamics of social change that influence educational processes. Such developments encourage innovation in the use of learning media, meaning that the learning process no longer relies solely on conventional media but also utilizes digital technology as a supporting medium for learning. In the context of this study, the use of ChatGPT, Google Gemini, and Claude AI demonstrates that AI-based learning media have been utilized as supporting tools that help students acquire broader knowledge, improve the effectiveness of the learning process, and adapt learning to students' needs.

This finding can also be explained through Abraham Maslow's Hierarchy of Needs Theory. According to Maslow, an individual's motivation arises from the drive to fulfill various levels of needs, ranging from physiological needs, safety needs, and social needs to

esteem needs and self-actualization needs. In the context of this study, the use of AI-based learning media assists students in fulfilling their learning needs through easier access to information, improved understanding of lecture materials, and more effective completion of academic assignments. Such convenience increases students' confidence in their learning abilities and encourages them to continue developing their academic potential. Therefore, the use of Artificial Intelligence-based learning media can support the fulfillment of esteem needs and self-actualization needs, which ultimately contribute to increased student learning motivation.

The findings of this study are also consistent with the study conducted by Liu, (2025) which found that the utilization of Artificial Intelligence in learning could increase students' learning motivation by providing learning experiences that were more interactive, flexible, and aligned with individual needs. Thus, the findings of this study reinforce the evidence that the use of AI-based learning media can serve as a supporting learning medium that contributes to increasing students' learning motivation when utilized appropriately, critically, and responsibly.

2. Effect of AI-Based Learning Media Use on the Learning Motivation of Students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat

Based on the distribution of the research questionnaire conducted on July 20, 2026, among 65 students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat, it was found that AI-based learning media had been utilized by students in the learning process. The results of the descriptive statistical analysis showed that the AI-based learning media use variable had a mean score of 46.77, while the students' learning motivation variable had a mean score of 66.45. These mean scores indicate a positive tendency in both the use of AI-based learning media and students' learning motivation. This finding indicates that students have utilized AI-based learning media as one of the supporting media for facilitating their learning process.

The descriptive statistical findings were further supported by the results of the simple linear regression analysis, which produced the regression equation $Y = 42.309 + 0.516X$. The regression equation indicates that the use of AI-based learning media has a positive effect on students' learning motivation. Every one-unit increase in the use of AI-based learning media is followed by a 0.516-unit increase in students' learning motivation. The t-test yielded a significance value of 0.003 (<0.05), indicating that the research hypothesis is supported. In

addition, the F-test also yielded a significance value of 0.003, indicating that the regression model is appropriate for explaining the effect of AI-based learning media use on students' learning motivation. Thus, the statistical analysis demonstrates that the use of AI-based learning media has a positive and significant effect on the learning motivation of students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat.

Based on the coefficient of determination (R Square) of 0.133, it was found that the use of AI-based learning media accounts for 13.3% of the variance in students' learning motivation, while the remaining 86.7% is influenced by other factors that were not analyzed in this study. This finding indicates that students' learning motivation is a condition influenced by multiple factors; therefore, the use of AI-based learning media is not the only factor affecting students' learning motivation. Other factors, such as learning interest, the learning environment, instructional strategies implemented by lecturers, academic ability, and individual student characteristics, may also contribute to learning motivation but were not the focus of this study.

The questionnaire findings were further supported by observations conducted by the researcher from April 7 to 14, 2026. Based on the observations, students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat had utilized ChatGPT, Google Gemini, and Claude AI as AI-based learning media in their lecture activities. These three media were used to assist students in understanding lecture materials, searching for academic references, preparing summaries of learning materials, developing assignment outlines, translating scientific articles, and obtaining additional explanations of materials that they had not yet fully understood. These observational findings reinforce the research results that AI-based learning media have been utilized as supporting learning media that help students obtain information more quickly, expand learning resources, and improve the effectiveness of the learning process.

Nevertheless, the observations also revealed that the utilization of AI-based learning media has not yet been fully optimized. Some students have utilized AI-based learning media to improve their understanding of lecture materials and expand their learning references. However, other students still use AI merely to obtain answers quickly when completing assignments without first understanding the materials being studied. This condition indicates that the use of AI-based learning media can provide more optimal benefits when accompanied by critical thinking skills, digital literacy, and academic responsibility in the learning process.

This finding is also consistent with Chakraborty, (2018) who stated that technological development from the perspective of the sociology of education constitutes part of the dynamics of social change that influence educational processes. Such developments encourage innovation in learning media, meaning that the learning process no longer relies solely on conventional media but also utilizes digital technology as a supporting medium for learning. In this study, the use of ChatGPT, Google Gemini, and Claude AI demonstrates that AI-based learning media have become part of learning innovation that helps students acquire knowledge, expand access to learning resources, and improve the effectiveness of the learning process.

The findings of this study can also be explained through Abraham Maslow's Hierarchy of Needs Theory. According to Maslow, motivation arises from the drive to fulfill needs arranged hierarchically, beginning with physiological needs, safety needs, social needs, esteem needs, and self-actualization needs. In this study, the convenience experienced by students through the use of AI-based learning media to understand materials, obtain academic references, and complete assignments contributes to their confidence in their learning abilities. This confidence encourages students to participate more actively in the learning process, complete assignments independently, and develop their academic potential. Therefore, the use of Artificial Intelligence-based learning media can support the fulfillment of esteem needs and self-actualization needs, thereby contributing to increased students' learning motivation.

The findings of this study are consistent with the study conducted by Sari et al., (2024) which found that the utilization of Artificial Intelligence in learning could increase learning motivation by providing learning experiences that were more interactive, flexible, and aligned with learners' needs. The consistency of these findings reinforces the evidence that the use of AI-based learning media can serve as an alternative learning medium that supports increased student learning motivation when utilized appropriately, critically, and responsibly.

The findings of this study are consistent with Gyonyoru, (2024) who found that the utilization of Artificial Intelligence (AI) in learning could improve students' motivation and learning outcomes by providing a more interactive, flexible, and adaptive learning environment. Similarly, Kholis and Muhtadibillah (2025) found that AI-based learning media could enhance conceptual understanding, learning motivation, and student engagement through more interactive and personalized learning experiences. These findings reinforce the

argument that AI can contribute positively to learning motivation when appropriately and purposefully utilized.

The findings are also consistent with Paputungan et al., (2025) who found that Canva AI-based learning media influenced students' learning interest. Although the dependent variable differed, the study supports the potential of AI-based technology to enhance students' affective engagement in learning. However, the present findings differ from Syifa, (2025) who found no significant effect of AI-based interactive learning media on students' learning motivation ($p = 0.744$). This discrepancy suggests that the effects of AI may vary according to student characteristics, study programs, forms and patterns of AI use, learning environments, and research methods.

The present study contributes additional empirical evidence by demonstrating a positive and significant effect of AI-based learning media on students' learning motivation, with a significance value of 0.003, particularly among students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. Nevertheless, this positive effect should be interpreted critically. Varghese, (2025) reported that excessive AI use may encourage digital dependency and the acceptance of instant answers without deep reasoning. Similar behavior was also identified in the present study, as some students used AI to obtain answers quickly without first understanding the learning materials. Therefore, AI should be positioned as a learning support tool rather than a substitute for students' thinking processes. Appropriate AI use can facilitate access to information, understanding of learning materials, feedback, and independent learning, whereas inappropriate use may encourage instant learning behavior and technological dependency. Consequently, digital literacy, critical thinking, and academic responsibility are essential for ensuring that AI contributes positively to students' learning motivation.

Although this study found a positive and significant effect of AI-based learning media use on students' learning motivation, several limitations should be considered when interpreting the findings. First, this study was limited to students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat; therefore, the findings cannot be broadly generalized to students at other higher education institutions with different learning contexts and student characteristics. Second, the study examined only AI-based learning media use as the independent variable and learning motivation as the dependent variable. The coefficient of determination showed that AI use explained only 13.3% of the variance in learning motivation, while the remaining 86.7% was attributable to other factors. Future

studies should therefore consider variables such as learning interest, learning environment, lecturers' teaching methods, academic ability, psychological conditions, and student characteristics. Third, the quantitative approach and questionnaire-based data collection enabled statistical analysis of the relationship between variables but did not provide an in-depth understanding of students' reasons for using AI, their experiences with AI, or its effects on their thinking processes and learning behaviors. Fourth, students demonstrated different patterns of AI use. Some used AI to understand learning materials and obtain information, whereas others used it primarily to obtain answers quickly. This study did not examine in depth the distinction between productive and instant-oriented AI use. Future research should therefore investigate the quality, intensity, purpose, and patterns of AI utilization more specifically.

Finally, the rapid development of Artificial Intelligence means that AI applications, features, and patterns of use may continue to change. Therefore, the findings of this study should be interpreted within the specific temporal and educational context in which the research was conducted.

Based on the overall analysis, it can be concluded that the use of AI-based learning media has a positive and significant effect on the learning motivation of students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. This effect is reflected in the positive regression coefficient of 0.516 and the significance value of 0.003, while the contribution of AI use to learning motivation is 13.3%. These findings reinforce previous research demonstrating the benefits of AI for learning motivation and engagement, while also indicating that the effect of AI does not operate independently, as most of the variation in learning motivation is influenced by other factors. Therefore, the utilization of AI in learning should be directed toward critical, productive, and responsible use so that the convenience provided by technology genuinely supports students' learning processes without replacing independent thinking activities.

CONCLUSION

Based on the research findings, it can be concluded that the use of AI-based learning media has a positive and significant effect on the learning motivation of students in the Sociology Education Study Program at Universitas PGRI Sumatera Barat. Simple linear regression analysis produced the equation $Y = 42.309 + 0.516X$, with a significance value of $0.003 < 0.05$, indicating that the research hypothesis is supported. The use of AI applications

such as ChatGPT, Google Gemini, and Claude AI assists students in understanding learning materials, searching for information and academic references, preparing summaries, and obtaining additional explanations during the learning process. The R Square value of 0.133 indicates that AI use accounts for 13.3% of the variance in students' learning motivation, while the remaining 86.7% is influenced by other factors outside the scope of this study. These findings contribute to the development of educational technology research by providing empirical evidence that Artificial Intelligence can serve as a supporting learning medium that contributes to students' learning motivation and supports the fulfillment of esteem and self-actualization needs, as explained by Maslow's Hierarchy of Needs Theory. Future research is recommended to expand the sample size and respondent characteristics, research settings, and variables examined, as well as to employ different research approaches to identify other factors influencing learning motivation and obtain a more comprehensive understanding of the effectiveness of AI use in learning.

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