

The Effect of Social Media Learning on Student Learning Outcomes

Andini Nur Bahri¹⁾, Abdi Al Azra²⁾

^{1,2)} North Sumatra State Islamic University

Email: andininurbahri@uinsu.ac.id
abdialazra2407@gmail.com

Abstrak

Kata Kunci:

media pembelajaran, hasil belajar, mahasiswa, teknologi pendidikan, survei korelasional

Perkembangan teknologi informasi dan komunikasi (TIK) telah mengubah cara belajar- mengajar di perguruan tinggi, termasuk melalui penggunaan media pembelajaran berbasis digital. Media seperti video interaktif, aplikasi edukatif, dan learning management system (LMS) berpotensi meningkatkan pemahaman dan hasil belajar mahasiswa. Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan media pembelajaran terhadap hasil belajar mahasiswa. Metode yang digunakan adalah pendekatan kuantitatif dengan jenis penelitian survei korelasional. Sampel terdiri dari 26 mahasiswa yang dipilih secara purposive. Instrumen penelitian berupa kuesioner skala Likert yang telah diuji validitas dan reliabilitasnya (Cronbach's Alpha = 0,985). Hasil analisis regresi menunjukkan adanya pengaruh yang sangat signifikan antara penggunaan media pembelajaran dan hasil belajar, dengan koefisien determinasi (R^2) sebesar 0,944 dan nilai signifikansi $< 0,001$. Temuan ini menunjukkan bahwa media pembelajaran memainkan peran penting dalam meningkatkan capaian akademik mahasiswa jika digunakan secara tepat dan terarah. Penelitian ini merekomendasikan pengembangan strategi teknopedagogik bagi dosen serta peningkatan literasi digital bagi mahasiswa untuk optimalisasi media dalam pembelajaran.

Abstract

Key Word:

learning media, academic achievement, students, educational technology, correlational survey

The advancement of information and communication technology (ICT) has transformed teaching and learning processes in higher education, particularly through the use of digital learning media. Tools such as interactive videos, educational applications, and learning management systems (LMS) have the potential to enhance students' comprehension and academic achievement. This study aims to examine the influence of learning media usage on students' academic performance. A quantitative approach with a correlational survey design was employed. The sample consisted of 26 purposively selected university students. The research instrument was a Likert-scale questionnaire that had been tested for validity and reliability (Cronbach's Alpha = 0.985). Regression analysis results revealed a highly significant effect between the use of learning media and student achievement, with a coefficient of determination (R^2) of 0.944 and a significance value of < 0.001 . These findings suggest that learning media plays a crucial role in improving students' academic outcomes when used appropriately and effectively. The study recommends the development of technopedagogical strategies for instructors and the enhancement of students' digital literacy to optimize media use in the learning process.

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INTRODUCTION

The development of information and communication technology (ICT) has brought a major transformation in the world of education, especially in the way materials are delivered and the teaching-learning process. One of the concrete manifestations of this transformation is the utilization of technology-based learning media, such as learning videos, interactive applications, learning management systems (LMS), and social media used in educational contexts (Sadiman et al., 2011).

Learning media is defined as anything that can be used to channel learning messages so as to stimulate the attention, interest, thoughts, and feelings of students in learning activities. In the context of higher education, the use of learning media is one of the important factors that support the achievement of educational

goals. Students who are exposed to interactive learning media tend to show better learning outcomes because learning becomes more interesting and easy to understand (Heinich et al., 2002).

Learning outcomes are the main indicator in assessing the success of the educational process. According to Bloom (1956), learning outcomes include cognitive, affective, and psychomotor domains. Factors that influence learning outcomes are very diverse, both from internal (motivation, interest, learning readiness) and external aspects (learning environment, lecturer teaching strategies, and learning media used). Therefore, it is important to evaluate the contribution of learning media to students' academic achievement.

Several previous studies have shown a positive relationship between learning media utilization and improved learning outcomes. For example, research by Rusman (2017) states that the use of technology-based media can increase student engagement in learning and help understand difficult concepts. Another study by Gagne, Briggs, and Wager (2005) also confirms that appropriate learning media can accelerate the process of information internalization and improve retention.

However, the implementation of learning media does not always have a positive impact if it is not managed properly. Media selection errors, lack of training for lecturers, or media mismatch with student characteristics can hinder learning effectiveness. Therefore, it is important to conduct research that empirically measures the effect of learning media use on student learning outcomes.

Based on this background, this study aims to quantitatively analyze the relationship between the use of learning media and student learning outcomes. This study uses a correlational survey approach to determine the extent of the influence and strength of the relationship between the two variables. The results of this study are expected to contribute to the development of more effective learning strategies in higher education.

RESEARCH METHODS

This study uses a quantitative approach with a correlational survey type, which aims to determine whether there is a relationship and how much influence between two variables, namely the use of learning media (variable X) and student learning outcomes (variable Y). The quantitative approach was chosen because it allows researchers to make measurements objectively through numerical data that can be analyzed statistically (Sugiyono, 2021). Correlational research is very suitable for testing the extent of the strength of the relationship between two variables without manipulating these variables (Creswell, 2014).

The subjects of this study were active students at one of the universities in Indonesia. The sampling technique used is purposive sampling, which is the selection of samples based on certain considerations, such as students who have attended at least two semesters of lectures and have experience using digital learning media regularly. The number of respondents in this study was 26 students.

The research instrument was a Likert scale questionnaire with five answer options, ranging from "strongly disagree" (1) to "strongly agree" (5). This questionnaire was designed to measure two main variables: (1) the level of intensity and diversity of digital learning media use by students, and (2) students' perceptions of the learning outcomes achieved, including indicators such as material understanding, GPA achievement, and effectiveness of study time. Before being distributed, the instrument was tested for validity and reliability.

RESULTS AND DISCUSSION

This section presents the results of data analysis obtained from the questionnaire, which consists of validity test, reliability test, normality test, simple linear regression analysis, ANOVA test, and regression coefficient test (t test). The purpose of this analysis is to determine whether there is a significant influence between the use of learning media on student learning outcomes.

1. Validity Test

This aims to determine the extent to which the items in the questionnaire are able to measure the intended construct. All items in the instrument show a significance value $< 0,05$ in the Pearson Product Moment test, so they can be declared valid.

2. Reliability Test

The reliability test results show that the Cronbach's Alpha value is 0.985, which is well above the minimum limit of 0.70. This indicates that the items in the instrument have very high internal consistency.

Table 2. Reliability Test Results

Cronbach's Alpha	N of Items
0,985	15

3. Normality Test

Normality testing aims to determine whether the data is normally distributed. This test was carried out using the Kolmogorov-Smirnov method.

Table 3. Kolmogorov-Smirnov Normality Test

Parameters	Value
N	8
Std. Deviation	1,201
Asymp. Sig. (2-tailed)	0,189

Data distribution was tested using the Kolmogorov-Smirnov method, with the results of the Asymp. Sig. value of 0.189 (> 0.05), which means the data is normally distributed. Normal data distribution is one of the important requirements for conducting linear regression analysis. Field (2013) states that in research with small to medium sample sizes, the normality test is crucial to ensure the validity of the regression results.

4. Simple Linear Regression Analysis

The regression analysis results show that there is a very strong relationship between the use of learning media and student learning outcomes. The correlation coefficient (R) is 0.972, with a coefficient of determination (R^2) of 0.944. This means that 94.4% of the variation in student learning outcomes can be explained by the learning media usage variable.

Tabel 4. ANOVA^a (Simple Linear Regression)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1319,020	1	1319,020	403,963	< 0,001
Residual	78,365	24	3,265		
Total	1397,385	25			

The high coefficient of determination indicates that learning media plays a significant role in improving the quality of student learning outcomes. This finding supports previous research by Mayer (2021), which states that the use of multimedia-based media can substantially improve concept understanding and information retention.

5. Linearity Test (ANOVA Table)

Furthermore, the Linearity test is carried out to test the significance of the model simultaneously. The ANOVA test results show a Linearity value of 403.963 with a significance of < 0.001 . This shows that the regression model as a whole is significant in predicting the dependent variable, namely student learning outcomes.

Tabel 5. ANOVA Table Results

Sumber Variasi	Sum of Squares	df	Mean Square	F	Sig.
Between Groups (Combined)	35,438	5	7,088	0,111	0,987
Linearity	0,020	1	0,020	0,000	0,003
Deviation from Linearity	35,417	4	8,854	0,138	0,964
Within Groups	640,000	10	640,000		
Total	675,438	15			

1. Test t (Partial) and Regression Coefficient

The t-test analysis was conducted to see the effect of the independent variables partially on the dependent variable. The t test results show that the regression coefficient value of the learning media usage variable is 0.652 with a significance value

Tabel 6. Hasil Uji t dan Koefisien Regresi

Variabel	B	Std. Error	Beta	t	Sig.
Konstanta	0,823	1,025	-	0,803	0,430
X	0,652	0,032	0,972	20,099	0,001

These results show that the use of learning media makes a real contribution to academic achievement.

Discussion

The results showed that there is a very strong and significant relationship between the use of learning media and student learning outcomes. The coefficient of determination (R^2) of 0.944 indicates that the use of learning media contributes 94.4% to variations in student learning outcomes. This finding reinforces the importance of media integration in the learning process in higher education.

In theory, learning media is a tool that not only conveys information, but also forms a richer and more meaningful learning experience (Arsyad, 2019). When students are involved in learning that uses media such as interactive videos, animations, or simulations, they tend to be more active, focused, and interested in the material presented. This is in accordance with Paivio's Dual Coding theory which states that information presented through visual and verbal pathways simultaneously is easier to process and remember (Mayer, 2021).

Learning media also plays a role in increasing student learning motivation. In the context of modern learning, motivation is not only influenced by the content of the material, but also by how the material is delivered. According to the ARCS (Attention, Relevance, Confidence, Satisfaction) theory developed by Keller (2009), attractive media can increase student attention and engagement, which in turn will have a positive impact on learning outcomes. Thus, the use of relevant and contextual media can be an effective strategy in building students' enthusiasm for learning.

In addition, this finding is in line with previous research by Rusman (2017), which states that

technology-based media such as e-learning and interactive multimedia can improve students' concept understanding and critical thinking skills. Even in online learning, learning media becomes the main element that replaces the function of direct interaction between lecturers and students. Therefore, the effectiveness of media depends not only on its technology, but also on its instructional design.

However, it should be noted that the contribution of learning media to learning outcomes does not stand alone. Although its influence is significant in this study, other factors such as internal motivation, social support, lecturer teaching methods, and learning environment still play an important role. Santrock (2021) states that learning outcomes are the product of the interaction of various biological, psychological, and environmental aspects.

In this context, the t-test results that show a significant effect partially also emphasize that the use of learning media makes a real contribution, but cannot replace other factors that also affect students' academic performance. Therefore, a holistic and integrative learning approach needs to be implemented.

As a practical implication, lecturers need to improve their competence in designing and utilizing effective learning media. Educational institutions should also provide technopedagogic training so that lecturers can optimally integrate media in lecture activities. On the other hand, students should also be equipped with digital literacy to be able to access and use learning media independently and responsibly (Clark & Mayer, 2016).

CONCLUSION

Based on the results of data analysis and discussion, it can be concluded that the use of learning media has a very significant influence on student learning outcomes. The coefficient of determination of 0.944 indicates that almost all of the variation in student learning outcomes can be explained by how intensively and effectively learning media are used. This finding reinforces the theory that well-designed learning media can increase students' engagement, comprehension, and retention of information. Digital learning media such as interactive videos, animations, and LMS platforms are proven to not only enrich the learning experience, but also significantly improve students' academic outcomes.

However, the effectiveness of learning media is inseparable from the support of other factors such as learning motivation, ability to manage time, and students' digital literacy skills. Therefore, the utilization of learning media should be done integratively and adjusted to the characteristics of students. Lecturers need to have technopedagogic competence in choosing and managing the right media, while higher education institutions need to provide adequate policy and infrastructure support. This research provides an empirical contribution to the development of effective media-based learning strategies in higher education, as well as a basis for further studies on other factors that influence learning outcomes in the digital era.

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