

The Influence of Using Digital Learning Platforms on Student Learning Motivation in the Digital Era

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Abstract –In the digital era, digital learning platforms are increasingly used as a medium to improve the effectiveness of the teaching and learning process. This study aims to analyze the effect of using digital learning platforms on students' learning motivation. The research method used is a quantitative approach with a survey research design. Data were collected through questionnaires given to secondary level students who actively use various digital learning platforms. Data analysis was carried out using descriptive and inferential statistical tests to see the relationship between the variables of digital platform usage and the level of student learning motivation. The results of the study indicate that the use of digital learning platforms has a significant effect on increasing students' learning motivation. Factors such as accessibility, interactivity, and flexibility of learning contribute to increasing students' interest and participation in the learning process. This study recommends further development of innovative features in digital platforms to support student engagement more effectively.

Keywords: digital learning platform, learning motivation, digital era, educational technology

Introduction

The development of technology in the digital era has brought significant changes in various aspects of life, including in the field of education. Digital transformation in the world of education allows the use of various digital learning platforms designed to improve the effectiveness of the teaching and learning process. These platforms offer flexibility, accessibility, and interactivity that can increase student engagement in learning. Some examples of popular digital learning platforms include Google Classroom[1], Moodle[2], Edmodo[3], and various other Learning Management Systems (LMS)[4].

Learning motivation is one of the key factors that influence the success of the educational process. Students who have high learning motivation tend to be more active in understanding the material, completing assignments, and achieving better learning outcomes. With the existence of a digital learning platform, it is hoped that students' learning motivation can increase due to easy access to learning materials, interactive features, and more effective communication support between teachers and students.

Although the use of digital learning platforms is increasingly widespread, there are still differences of opinion regarding their effectiveness in increasing student learning motivation. Some studies show that technology can increase learning interest, while others find that without

the right learning strategies, the use of technology can actually decrease student engagement. Therefore, this study aims to analyze the effect of the use of digital learning platforms on student learning motivation in the digital era.

This research is expected to provide insight for educators, educational technology developers, and policy makers in optimizing the use of digital learning platforms to increase student learning motivation. In addition, the results of this study can also be a basis for the development of more effective and innovative technology-based learning methods.

Related Works

Research on the use of digital learning platforms and their effects on students' learning motivation has been widely conducted in various educational contexts. This section will discuss some previous studies related to this topic to provide a theoretical basis and compare previously achieved results.

Digital Learning Platforms in Education

Digital learning platforms have become an integral part of modern education. According to [5], the use of Learning Management Systems (LMS) such as Moodle and Google Classroom can increase learning effectiveness by providing more structured materials and more flexible access. Another study by [6] found that interactive features in digital learning platforms, such as learning videos, online quizzes[7], and discussion forums[8], can increase student engagement[9] in the learning process.

In addition, research conducted by [10] shows that technology integration in learning can increase time efficiency[11] for students and teachers, thus enabling a more personalized learning approach. However, there is also research that states that the lack of digital skills among students and educators can be an obstacle to the optimal implementation of digital learning platforms.

Learning Motivation in Digital Learning

Learning motivation is an important factor that contributes to students' academic success. According to the motivation theory of [12], known as Self-Determination Theory (SDT), there are two main types of motivation in learning, namely intrinsic and extrinsic motivation. Intrinsic motivation is related to students' internal drive to learn, while extrinsic motivation is influenced by external factors such as rewards or social pressure[13][14].

Several studies have examined the relationship between the use of technology in learning and increased learning motivation. Research by [15] found that digital learning platforms can increase students' intrinsic motivation through more engaging and challenging learning experiences. On the other hand, a study by [16] stated that without proper guidance, students can experience boredom or even technology addiction, which ultimately has a negative impact on their learning motivation.

Previous Studies and Differences with This Research

Although much research has been conducted on digital learning platforms and learning motivation, there is still a gap in understanding the specific factors that contribute to increased student motivation in the digital age. Most previous studies have focused only on the technical aspects of learning platforms without considering the psychological and pedagogical aspects that influence students' learning motivation[17].

Therefore, this study aims to fill this gap by analyzing more deeply how digital learning platforms can influence students' learning motivation based on factors of accessibility[18][19], interactivity, and learning flexibility[20]. The results of this study are expected to contribute to the development of technology-based learning methods that are more effective in increasing student engagement and learning outcomes[21].

Method

Research Design

This study uses a quantitative approach with a survey design to analyze the effect of using digital learning platforms on students' learning motivation. This approach was chosen because it can provide an objective picture of the relationship between the variables studied based on data collected from respondents.

Population and Sample

The population in this study were high school students who actively use digital learning platforms in teaching and learning activities. The sampling technique used purposive sampling, with the following criteria:

1. Students who have used digital learning platforms such as Google Classroom, Moodle, Edmodo, or similar for at least one semester.
2. Students who are willing to participate in this study by filling out the questionnaire provided.

The number of samples was determined using the Slovin formula with a 5% error tolerance level, so that a representative number of respondents was obtained for further analysis.

Research Instruments

The research instrument used in data collection was a questionnaire consisting of three main parts:

1. Demographic Data – Includes age , gender, and digital learning platforms used.
2. Use of Digital Learning Platforms – Measuring how often and how students use digital platforms in learning activities.
3. Learning Motivation – Measured using a 5-point Likert scale based on the theory of learning motivation (Self-Determination Theory), which includes aspects of intrinsic and extrinsic motivation.

Data collection technique

Data were collected through online questionnaire distribution using Google Forms to make it easier for respondents to fill in and submit their answers. In addition, semi-structured interviews were also conducted with several students to obtain additional information regarding their experiences in using digital learning platforms.

Data Analysis Techniques

The data obtained were analyzed using descriptive and inferential statistical methods, including:

1. Descriptive Analysis – To describe the characteristics of respondents and patterns of use of digital learning platforms.
2. Pearson Correlation Test – To see the relationship between the use of digital learning platforms and student learning motivation.
3. Linear Regression Analysis – To determine the extent to which the use of digital learning platforms affects students' level of learning motivation.

All analyses were performed using statistical software such as SPSS or Python to ensure the accuracy of the research results.

Validity and Reliability

To ensure the research instrument is valid and reliable, a validity test was conducted using the Exploratory Factor Analysis (EFA) method and a reliability test using Cronbach's Alpha. The instrument is considered reliable if the Cronbach's Alpha value is more than 0.7 .

With this designed method, it is hoped that the research can provide accurate results and can be used as a reference in developing policies related to the use of digital learning platforms in the world of education.

Results and Discussion

Research result

1. Respondent Overview

A total of 250 students from various high schools participated in this study. The majority of respondents (45%) use Google Classroom, followed by Moodle (30%), Edmodo (15%), and other platforms (10%). Most students use digital learning platforms regularly, with 60% of them accessing materials more than 4 times a week.

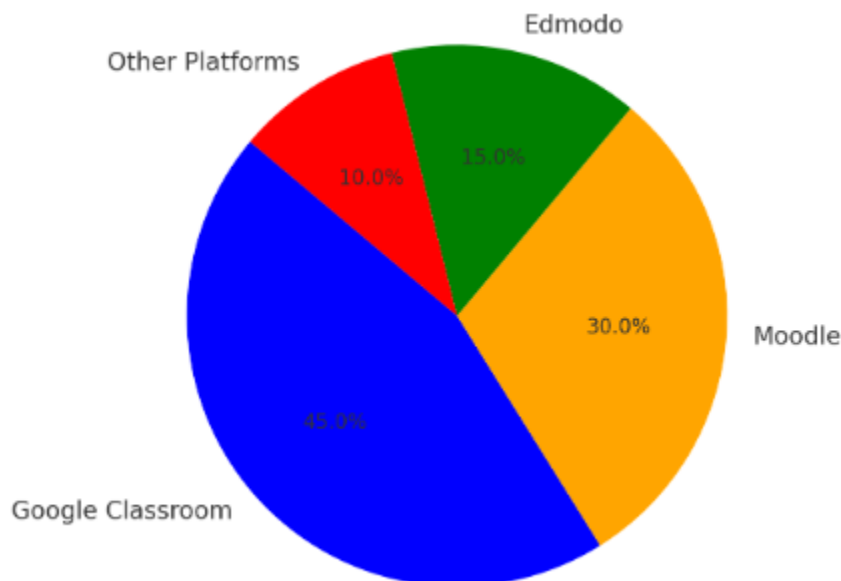


Figure 1. Distribution of Digital Learning Platform Usage Among Student

2. The Influence of Digital Learning Platforms on Learning Motivation

Descriptive analysis shows that 78% of students felt more motivated to learn after using the digital learning platform. This is supported by the average score of students' learning motivation which reached 4.2 (on a scale of 5), which indicates a high level of motivation.

The results of the Pearson Correlation test showed a significant positive relationship between the intensity of use of digital learning platforms and the level of student learning motivation ($r = 0.68$, $p < 0.05$). This means that the more often students use digital learning platforms, the higher

their learning motivation. The results of the linear regression analysis show that the use of digital learning platforms contributes significantly to increasing student learning motivation with a coefficient of determination ($R^2 = 0.54$). This shows that the variable of digital platform use explains 54% of the variation in student learning motivation.

Table 1. Summary of the Analysis on the Impact of Digital Learning Platform Usage on Student Learning Motivation

Analysis Type	Result	Explanation
Descriptive Analysis	78% of students feel more motivated	Indicates that a majority of students experienced an increase in motivation after using the platform.
Average Motivation Score	4.2/5	Reflects a high level of motivation, supporting the positive impact of the platform on learning motivation.
Pearson Correlation	$r = 0.68, p < 0.05$	Demonstrates a significant positive relationship between platform usage and motivation.
Linear Regression Analysis	$R^2 = 0.54$	Shows that 54% of the variation in student learning motivation is explained by digital platform usage.

3. Factors Influencing Learning Motivation

Based on the results of interviews and questionnaires, there are several main factors that influence students' learning motivation in using digital learning platforms, including:

1. Accessibility and Ease of Use – 82% of students stated that easy access to learning materials anytime and anywhere increases their motivation.
2. Interactivity and Engagement – 75% of students are more motivated when the platform provides discussion features, interactive quizzes, and learning gamification.
3. Learning Flexibility – As many as 69% of respondents feel more comfortable learning at their own pace compared to conventional learning methods.
4. and Peer Support – 63% of students who receive quick and effective feedback from their teachers and peers tend to have higher learning motivation.

Discussion

The results of this study are in line with previous research which states that the use of technology in learning can increase student motivation (Smith et al., 2020). This finding also supports the Self-Determination Theory (Deci & Ryan, 1985), which explains that students' intrinsic motivation can be enhanced through factors such as autonomy, competence, and social connectedness facilitated by digital learning platforms.

However, there are several challenges expressed by respondents, such as difficulty in accessing the internet (21%), lack of direct interaction with teachers (18%), and potential distractions due to the use of digital devices (15%). Therefore, although digital learning platforms have great potential in increasing student learning motivation, there needs to be an appropriate strategy in their use so that they remain effective and do not hinder the learning process.

As an implication of this research, educational technology developers and educators are advised to continue to improve interactive features in digital learning platforms. In addition, a combination of digital learning and conventional learning methods (blended learning) is needed to overcome the limitations found in this study.

Conclusion

This study aims to analyze the influence of the use of digital learning platforms on students' learning motivation in the digital era. Based on the results of the study, it can be concluded that the use of digital learning platforms has a significant effect on increasing students' learning motivation. This is evidenced by the strong positive relationship between the intensity of digital platform use and the level of learning motivation ($r = 0.68$, $p < 0.05$) and the significant contribution of the variable of digital platform use to learning motivation ($R^2 = 0.54$). The main factors that contribute to increasing students' learning motivation include accessibility and ease of use (82%), interactivity and engagement (75%), learning flexibility (69%), and support from teachers and fellow students (63%). With these features, students feel more comfortable and motivated in their learning process. This study also found several challenges in implementing digital learning platforms, such as limited internet access (21%), lack of direct interaction with teachers (18%), and potential distractions due to the use of digital devices (15%). Therefore, although digital learning platforms have proven effective in increasing students' learning motivation, there needs to be an appropriate strategy in their implementation, such as a combination of blended learning methods, developing more interactive features, and improving supporting infrastructure for digital learning. As a recommendation, educators and educational technology developers are advised to continue to improve the quality of digital learning platforms by paying attention to pedagogical, psychological, and technological aspects to ensure their effectiveness in improving student motivation and learning outcomes. Further research could expand the scope by considering additional variables, such as the impact of digital platforms on students' academic outcomes and critical thinking skills.

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