



The Influence of Mobile Legends Online Gaming Intensity on Learning Motivation among Junior High School Students

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ABSTRACT

This study aims to examine the effect of online gaming intensity, specifically Mobile Legends, on the learning motivation of junior high school students in Lamno, Aceh Jaya Regency. The research employed a descriptive quantitative approach with an ex post facto design, involving 133 students from three junior high schools selected using total sampling. The instruments used were an online gaming intensity scale and a learning motivation scale, with data analyzed using simple linear regression. The results showed that 53% of students fell into the moderate category for online gaming intensity. Meanwhile, 74% of students had high learning motivation. Regression analysis revealed that the influence of online gaming intensity on learning motivation was very small, accounting for only 1%. The conclusion indicates that the intensity of playing online games does not significantly affect students' learning motivation. The implication of this study serves as a reference for educators, parents, and school counselors to understand better the impact of online gaming, specifically Mobile Legends, on students' learning motivation and to develop balanced strategies for managing gaming habits and academic engagement.

KATA KUNCI

Intensitas;
Bermain Game Online;
Mobile Legends;
Motivasi Belajar;
Siswa SMP

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh intensitas bermain game online Mobile Legends terhadap motivasi belajar siswa SMP di Lamno, Kabupaten Aceh Jaya. Metode yang digunakan adalah kuantitatif deskriptif dengan pendekatan ex post facto, melibatkan 133 siswa dari tiga SMP yang dipilih melalui teknik total sampling. Instrumen yang digunakan berupa skala intensitas bermain game dan skala motivasi belajar, dengan analisis data menggunakan regresi linear sederhana. Hasil penelitian menunjukkan bahwa 53% siswa berada dalam kategori sedang pada intensitas bermain game online. Sementara itu, 74% siswa memiliki motivasi belajar dalam kategori tinggi. Hasil analisis regresi menunjukkan bahwa pengaruh intensitas bermain game online terhadap motivasi belajar sangat kecil, yaitu sebesar 1%. Kesimpulan menunjukna bahwa intensitas bermain game online tidak berpengaruh signifikan terhadap motivasi belajar siswa. Implikasi dari penelitian ini dapat menjadi referensi bagi para pendidik, orang tua, dan konselor sekolah untuk lebih memahami dampak game online, khususnya Mobile Legends, terhadap motivasi belajar siswa dan mengembangkan strategi yang seimbang dalam mengelola kebiasaan bermain game dan keterlibatan akademis.

1. INTRODUCTION

Modern technology has become a driving force behind changes in various aspects of life, including education. Advances in information technology have enabled the creation of various tools, such as the internet, which support the learning process and improve the quality of education (Haleem et al., 2022). However, on the other hand, technology also brings negative impacts, one of which is the increased intensity of online gaming among students. Online games like *Mobile Legends* have become a popular source of entertainment, especially among junior high

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school students. This activity often consumes hours of their time, potentially reducing students' motivation to study. Cowie states that intensity refers to the situation and condition in which an individual repeatedly performs an activity with a certain frequency (Hasibuan et al., 2019). Meanwhile, Horrigan (2002) explains that online gaming is considered a technology rather than a genre or type of game; it is a mechanism to connect players together rather than a specific pattern within a game. Based on these definitions, it can be concluded that the intensity of online gaming refers to the amount of time or level at which an individual repeatedly accesses online games with many people through the internet network. One of the popular online games today is the MOBA genre game, *Mobile Legends* (Nawawi et al., 2021).

This phenomenon has been observed among students in Lamno, Aceh Jaya. Observations show that students often neglect their study obligations, reduce time for other productive activities, and even display unstable emotional behavior when warned to stop playing games. Gadgets provided by parents for educational purposes are frequently used for online gaming, raising concerns about its impact on students' academic performance. In the educational context, this phenomenon needs further examination to understand its effect on students' learning motivation.

The rapid development of digital technology has brought significant changes to the lives of teenagers, particularly in terms of entertainment and daily activities. One of the most popular forms of entertainment among students is online gaming (Chan et al., 2022). *Mobile Legends* is one of the most favored online games among students, offering competitive and interactive gameplay (Rifkiana & Efrilianda, 2024). While it can provide enjoyment and foster teamwork, excessive gaming is often feared to interfere with students' academic responsibilities, especially their learning motivation.

Learning motivation is an essential factor that influences students' success in achieving their academic goals (Almulla & Alamri, 2021). Students with high learning motivation tend to be more active in the learning process, display a strong curiosity, and are better at managing their time and responsibilities (Zainuddin, 2018). With the increasing intensity of online gaming use, there is growing concern that students may devote more of their time and energy to playing games rather than focusing on their studies.

Several studies have demonstrated the relationship between online gaming intensity and learning motivation. Research by Barseli and Sriwahyuningsih (2023) indicates that playing *Mobile Legends* can trigger a decline in learning motivation due to a lack of self-control. Students tend to choose gaming as a form of entertainment rather than studying. Another study by Barus et al. (2023) revealed that learning motivation can increase if parents challenge their children to complete assignments before gaming. However, without adequate control, students remain more attracted to games than studying.

Previous research has discussed the negative impacts of online games on student behavior. However, there remains a gap in understanding the specific influence of *Mobile Legends* gaming intensity on junior high school students' learning motivation (Hanafie et al., 2022; Gabrito et al., 2023; Li et al., 2022; Pasqualotto et al., 2023; Asman et al., 2025). Most studies have not used a quantitative approach or have not focused on the junior high school level. Therefore, this study aims to fill that gap by using a measurable quantitative approach.

Although numerous studies have examined online gaming, most have concentrated on elementary school students or relied heavily on qualitative methods, limiting the ability to draw broad, generalizable conclusions. This study seeks to fill that gap by applying a quantitative approach to analyze the influence of *Mobile Legends* playing intensity on the learning motivation of junior high school students in Lamno, Aceh Jaya. By focusing on this specific age group and using measurable variables, the research aims to produce statistically supported findings that reflect the real dynamics between gaming habits and academic engagement. Furthermore, the quantitative design allows for a more objective evaluation of the correlation between time spent gaming and students' drive to learn, offering evidence-based data that can be compared across different student populations.

This research offers a new contribution to understanding the relationship between online gaming intensity and learning motivation among junior high school students. Its primary strength lies in its use of reliable and valid instruments tailored to the cultural and educational environment of the students being studied. The findings are anticipated to provide actionable insights for educators, school counselors, and policymakers. These stakeholders can use the results to develop more targeted interventions, balancing students' interest in online games with strategies to sustain or even improve their academic motivation. Additionally, this study may serve as a foundation for future research exploring similar phenomena in other regions or with different age groups.

The objectives of this study are to describe the intensity of playing *Mobile Legends* among junior high school students in Lamno, to describe the level of learning motivation among these students, and to measure the effect of *Mobile Legends* gaming intensity on their learning motivation. This study is expected to contribute to the develop-

ment of both theory and practice in the field of guidance and counseling. Theoretically, it can serve as a reference regarding the influence of digital media on learning motivation. Practically, the findings can be a guideline for counselors in designing effective intervention programs to improve student motivation while reducing online gaming addiction among adolescents.

2. METHOD

2.1 Research Design

This study employs a quantitative approach with an ex post facto research design (Rohwer, 2022). This approach is used because the researcher does not manipulate the independent variable but instead observes events that have already occurred and traces back the effects or influence of those variables. Ex post facto design is suitable when the researcher aims to determine the relationship or influence between two variables without conducting a direct experiment. In this context, the researcher investigates the influence of the habit of playing online games on certain variables among students, based on existing data.

2.2 Research Subjects

The study was conducted in 2024 at SMP N Jaya, SMP N 2 Jaya, and SMP N 1 Indra Jaya. The population consisted of all 8th and 9th-grade students at these schools who play the online game *Mobile Legends*, totaling 199 students. The sampling technique used was total sampling, meaning all members of the population meeting the criteria were included as samples. However, out of the total population, 133 students consented and met valid criteria as samples. Thus, the sample size for this study was 133 respondents.

2.3 Data Collection

The data collection instrument was a questionnaire. The questionnaire consisted of statements with responses based on a four-point Likert scale: Strongly Agree (SS), Agree (S), Disagree (TS), and Strongly Disagree (STS). This instrument was designed to capture quantitative data regarding students' behaviors related to playing online games and its impact.

2.4 Data Analysis

The data analysis involved descriptive statistics, as well as classical assumption tests including normality, linearity, and homogeneity tests. For hypothesis testing, simple linear regression analysis, coefficient of determination analysis, and significance testing (t-test) were conducted.

2.5 Further Data Analysis

The collected data were analyzed descriptively to provide an overview of students' responses regarding the studied variables. Before inferential analysis, classical assumption tests were performed, including Normality, Linearity, and Homogeneity tests.

Hypothesis testing was then conducted using: (1) Simple Linear Regression Analysis, to examine the effect of one independent variable on one dependent variable; (2) Coefficient of Determination (R^2) Analysis, to measure how much the independent variable contributes to the dependent variable; (3) Significance Testing (t-test), to determine whether the observed effect is statistically significant at a certain confidence level.

3. RESULTS AND DISCUSSION

3.1 Results

Descriptive analysis showed that the intensity of playing *Mobile Legends* among junior high school students in Lamno falls into the moderate category, with 53% of students in this group. Most students engage in this game with a fairly high level of involvement, although not excessively so.

Among the intensity aspects, the indicator "thinking about the game" was the most dominant, with 80% of students showing moderate cognitive involvement. This suggests that students often think about the game even when not playing, which could disrupt their concentration on other activities, including studying.

Table 1. Descriptive Statistics of *Mobile Legends* Online Game Playing Intensity

Variable	Hypothetical				Empirical			
	Min	Max	Mean	SD	Min	Max	Mean	SD

Variable		Hypothetical				Empirical		
Intensity of Online Game Play				11				
	22	88	55		22	88	60	5

The overall learning motivation of junior high school students in Lamno falls into the high category, with 74% of students classified as highly motivated. Among the aspects of learning motivation, the indicator "effort to seek new things" has the most significant influence, with 66% of students demonstrating a high level of effort in exploring new information.

Table 2. Descriptive Statistics of Learning Motivation

Variable		Hypothetical				Empirical		
Learning Motivation Intensity	Min	Max	Mean	SD	Min	Max	Mean	SD
	17	68	42,5	8,5	17	68	50	4

The results of the simple linear regression analysis indicate a very small relationship between the intensity of playing Mobile Legends and students’ learning motivation. The influence accounted for only 1%, meaning that the intensity of playing games has a minimal impact on learning motivation. The remaining 99% is influenced by other factors not discussed in this study.

3.2. Discussion

This study focused on the intensity of playing Mobile Legends and its influence on the learning motivation of middle school students in Lamno. The results showed that the intensity of gameplay falls within the moderate category at 53 percent, with the highest contribution coming from the cognitive aspect of “thinking about the game,” which was indicated by 80 percent of students. This suggests that students often think about the game even outside of playtime, which could disrupt their focus on other activities, including studying. However, despite the relatively high intensity of gameplay, students’ learning motivation remained high at 74 percent. The aspect of effort in seeking new things was the most dominant, with 66 percent of students demonstrating a strong drive to learn and discover new information.

The simple linear regression analysis revealed that the intensity of playing games had a very small effect on learning motivation, only 1 percent. Therefore, it can be concluded that the intensity of playing Mobile Legends is not the primary factor determining students’ motivation to learn. Other factors such as family support, learning environment, and intrinsic motivation likely have a greater influence on maintaining students’ motivation.

These findings share similarities with previous studies but also reveal important differences. For example, Barseli and Sriwahyuningsih (2023) found that playing Mobile Legends could decrease learning motivation due to a lack of self-control. In contrast, this study shows that even though students have a relatively high intensity of gaming, their motivation to learn remains high. This suggests the presence of compensatory factors such as a supportive learning environment or intrinsic student motivation that help maintain a balance between gaming and studying. Another study by Barus et al. (2023) found that parental challenges could boost the motivation of students who play games. Although direct parental intervention was not observed in this study, students’ learning motivation remained high, possibly due to support from the school environment or the students’ own learning strategies. Additionally, Amalia and Naya (2023) found that online gaming can affect students’ emotional behavior, with frequent gamers showing more negative emotions, such as irritability when interrupted. However, this study revealed that despite some emotional impacts, students with strong social support and good counseling were able to maintain their learning motivation.

While this study offers new insights, some limitations must be noted. It used only a quantitative approach and was limited to middle school students in Lamno. Therefore, the results may not be generalizable to a broader population. Furthermore, other factors influencing learning motivation, such as teaching methods, relationships with teachers, or family conditions, were not deeply explored.

These findings hold significant implications in the educational context. Although online games are often viewed as distractions, this study shows their impact on students’ learning motivation is minimal. Instead, learning motivation appears to be more strongly influenced by factors such as family and teacher support and a conducive learning environment (Liu & Chiang, 2019). This aligns with Maslow’s motivation theory, which emphasizes the

importance of psychological needs and social support in sustaining individual motivation (Acevedo, 2018). In this context, while online games can be distracting, strong social support helps students stay focused on their academic goals.

The main finding of this study is that the intensity of playing Mobile Legends does not significantly affect the learning motivation of middle school students in Lamno. Learning motivation remains high despite students spending time playing games. This finding is important as it suggests that with proper support, students can effectively manage their time and stay focused on academic goals.

These results are consistent with other literature, such as Wiranata (2020), who found that good time management can reduce the negative effects of online gaming on learning. Similarly, Iskandar (2021) emphasized that social environment factors, including peers and family, have a significant impact on students' motivation to learn. Thus, this study reinforces the view that the negative impact of online gaming can be minimized through appropriate interventions.

This finding also relates to similar studies highlighting the influence of online games on learning motivation. However, this study shows that such influence is contextual rather than universal. Students who possess good time management skills or receive sufficient guidance from family and teachers can mitigate the negative effects of gaming. An alternative explanation for these findings is that other factors, such as interest in subjects or innovative teaching methods, play crucial roles in sustaining students' learning motivation.

4. RESEARCH IMPLICATIONS

The findings of this study carry significant implications within the educational context, particularly concerning the enhancement of guidance and counseling services in schools. Although the study revealed that the intensity of playing online games like Mobile Legends has a minimal direct impact on students' learning motivation, the broader implications of excessive gaming cannot be overlooked. School counselors play a pivotal role not only in addressing academic challenges but also in fostering students' overall well-being. Therefore, counseling programs should be tailored to equip students with self-regulation skills, including how to set healthy boundaries for gaming, prioritize academic tasks, and manage stress effectively. Additionally, awareness campaigns and psychoeducation sessions can be integrated into the school curriculum to promote digital well-being and encourage a balanced lifestyle. These efforts not only support students in maintaining their academic performance but also prepare them to navigate the digital age with responsibility and resilience.

5. CONCLUSION

This study found that the intensity of playing the online game Mobile Legends among middle school students in Lamno falls into the moderate category. Students often think about the game even when they are not playing, which can potentially interfere with their concentration in daily activities, including studying. Nonetheless, students' learning motivation remains high, particularly in the aspect of effort to seek out new things. Simple linear regression analysis showed that the influence of gaming intensity on learning motivation is very small only about 1% indicating that gaming intensity is not the primary factor affecting students' motivation to learn.

The findings suggest that other factors, such as family support, a conducive school environment, and students' intrinsic motivation, play a more significant role in maintaining and fostering learning motivation. This indicates that although online gaming can be a source of distraction, students who receive sufficient guidance and social support are able to manage their time effectively and maintain their focus on studying. This study aligns with motivation theories that emphasize the importance of psychological needs and social support in enhancing students' learning enthusiasm.

Based on these results, it is recommended that schools and parents not only focus on directly limiting gaming time but also emphasize strengthening time management skills and providing appropriate support and guidance for students. Teachers and school counselors can play an active role in helping students develop effective learning strategies and build strong learning motivation through approaches tailored to students' needs. As a result, students can achieve a better balance between gaming and studying activities.

For future research, it is recommended to adopt a more comprehensive approach, such as mixed methods combining quantitative and qualitative data, and to broaden the scope of the research subjects. Further studies should also explore other factors influencing learning motivation, such as students' relationships with teachers, teaching methods applied, and students' psychological conditions, in order to obtain a more holistic understanding of the dynamics of student motivation in the digital era.

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AUTHOR CONTRIBUTION STATEMENT

The authors declare that they have contributed equally and substantially to this work. Their contributions include the conception and design of the study, data collection, data analysis and interpretation, as well as the drafting, critical revision, and final approval of the manuscript.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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