

The Impact of Mobile Legends on the Emotional Intelligence of PAI UMY Students

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Abstract

The rising popularity of online games like Mobile Legends serves as both entertainment and a platform for social interaction. However, on the other hand, this game also has the potential to influence emotional intelligence, an important skill for prospective educators such as students of Department of Islamic Education (PAI) at University of Muhammadiyah Yogyakarta (UMY). This study aims at analyzing the impact of the Mobile Legends game on the emotional intelligence of PAI students at UMY, with social skills as a mediating variable. This research used a descriptive quantitative approach with inferential analysis. Data were collected through closed-ended questionnaires distributed to the population (census sampling), consisting of 63 PAI students who play Mobile Legends. Data analysis was performed using simple linear regression and the Sobel test to examine direct and indirect relationships (through social skills as a mediator) between variables. The results showed that the Mobile Legends game had a positive impact on students' emotional intelligence, both directly with a contribution of 53.61%, and indirectly through social skills as a mediator with a contribution of 44.78%. However, an unbalanced and improper intensity of play can potentially lead to negative impacts on emotional management skills. The study concludes by emphasizing the importance of maintaining balanced gaming habits to maximize emotional intelligence benefits while mitigating potential risks to students' emotional well-being.

Keywords: Mobile Legends, Emotional Intelligence, Social Skills, Islamic Education.

1. Introduction

Emotional intelligence is the ability to understand, manage, and express emotions effectively to support thinking processes, decision-making, and interpersonal relationships. This ability is not only essential for individuals' daily lives but also contributes to life satisfaction and adaptability in various complex situations, whether in family, social, or professional environments (Hutasuhut & Sari, 2021). The term emotional intelligence was first introduced by Beldoch in 1964, and its popularity increased after Daniel Goleman published the book *Emotional Intelligence* in 1995 (Tiffin & Paton, 2020). According to Goleman (2003), emotional intelligence encompasses five main aspects: self-awareness, self-regulation, motivation, empathy, and social skills, all of which are vital foundations for building harmonious relationships and achieving emotional well-being.



In Islam, the concept of emotional intelligence aligns with the values contained in the Qur'an, as Allah Ta'ala says in His words:

الْمُحْسِنِينَ يُحِبُّ وَاللَّهُ النَّاسُ عَنِ الْعَافِينَ الْعَظِيمِ وَالْكَظِيمِ وَالضَّرَاءِ السَّرَّاءِ فِي يُنْفِقُونَ الَّذِينَ

"Those who spend (in the cause of Allah) during ease and hardship and who restrain anger and pardon the people – and Allah loves the doers of good" (Ali 'Imran: 134) (Kemenag, 2024).

Furthermore, a hadith classified as authentic and narrated by Al-Bukhari (884), with the hadith number 5649, states:

رَأَى يُصَلِّيَ وَسَلَّم عَلَيْهِ اللَّهُ صَلَّى النَّبِيُّ بَيْنَا قَالَ عَنْهُ اللَّهُ رَضِيَ اللَّهُ عَنْهُ عَنْ نَافِعٍ عَنْ جُوَيْرِيَةَ حَدَّثَنَا إِسْمَاعِيلُ بْنُ مُوسَى حَدَّثَنَا الصَّلَاةَ فِي وَجْهِهِ جِيَالٌ يَنْتَحِمْنَ فَلَا وَجْهَ جِيَالٍ اللَّهُ فَإِنَّ الصَّلَاةَ فِي كَانَ إِذَا أَحَدَكُمْ إِنْ قَالَ ثُمَّ فَتَغَيَّبَ بِيَدِهِ فَحَكَهَا نُخَامَةً الْمَسْجِدِ قِبْلَةً فِي

"Musa bin Isma'il narrated to us that Juwairiyah narrated from Nafi' from Abdullah (may Allah be pleased with him) who said: While the Prophet (peace be upon him) was praying, he saw spit in the direction of the Qiblah of the mosque. He then scraped it off with his hand and covered it, then said: 'When any one of you is praying, Allah is in front of him, so let him not spit in front of him during prayer'".

Emotional intelligence in Islam is not merely a psychological value but also a critical principle for creating a harmonious life and noble character, which is highly relevant in the context of education. In the realm of education, emotional intelligence plays a strategic role, especially for teachers as the main facilitators in the teaching-learning process. Teachers with high emotional intelligence are better able to understand the emotional needs of students, create a positive learning environment, and build inclusive relationships. Research by Sari et al. (2020) and Barkah & Hidayat (2023) show that emotional intelligence significantly contributes to effective classroom management, increases students' learning motivation, and supports overall teacher performance.

Students of Islamic Religious Education (PAI) are prepared to become future educators, where they are required to have strong social competencies, including the ability to interact, communicate, and build relationships with students, parents, and colleagues (Madjid, 2016). As future teachers, emotional intelligence helps PAI students face challenges in managing classroom dynamics, dealing with work pressure, and serving as role models with good character (Singh et al., 2007; Melita Prati et al., 2003). These competencies form the basis for building harmonious relationships with students and achieving educational goals.

However, in the current digital era, technological advancements have brought new challenges for students. The internet and information technology have transformed interaction patterns and societal behavior. According to the Indonesian Internet Service Providers Association (2024), internet penetration in Indonesia reached 79.5%, with over 221 million users. *Mobile Legends* is one of the most popular MOBA games in Indonesia, with an average of 85 million monthly active players in 2024 (Activeplayer.io, 2024). This game attracts students, including PAI students at UMY, who regularly organize *Mobile Legends* e-sports tournaments during the PAI Gathering event.

Mobile Legends is a multiplayer online battle arena (MOBA) game developed by Moonton and released on July 11, 2016. The game combines elements of strategy and teamwork in a five-versus-five battle format. Each player selects a specific role, such as

Marksman (ranged attacker), Tank (defender), Support (healer or buffer), Fighter (melee combatant), or Assassin (swift attacker), to contribute to the team's success. In this game, coordination, communication, and team strategy are key to achieving the shared goal of destroying the opponent's base (Widianto, 2019; Arifin, 2023). The game also involves intense social interaction, such as communication, coordination, and teamwork within the team, but it can also trigger conflicts and negative emotions like frustration and anger (Paremeswara & Lestari, 2021; Wicaksana & Nasvian, 2022). In this context, social skills become a crucial element that supports emotional intelligence, aligning with Goleman's (2003) theory, which emphasizes the importance of these skills in resolving conflicts, leading, and collaborating within teams.

Research by Fitriani & Mulyani (2023) and Yuliana & Haryati (2023) found that playing *Mobile Legends* can impact an individual's ability to manage emotions, especially in competitive situations or when facing losses. Players frequently exposed to conflicts in this game tend to struggle with emotional regulation, potentially affecting their social relationships outside the game. This is of particular concern for PAI students, who are expected to be role models for their future students in managing emotions and fostering positive interpersonal relationships.

Based on this phenomenon, this research aims to analyze the emotional intelligence of PAI students who play *Mobile Legends*, examine the game's influence on their emotional intelligence, and investigate the role of social skills as a mediating variable in the relationship between playing *Mobile Legends* and emotional intelligence. This study is expected to provide deeper insights into how social skills mediate the relationship between gaming intensity and students' emotional intelligence. Furthermore, the findings of this study are hoped to serve as references for developing strategies that support the enhancement of PAI students' emotional intelligence, enabling them to become effective and inspiring educators in the future.

2. Literature Review

2.1. Emotional Intelligence

Emotion, derived from the Latin word *movere*, refers to the drive that motivates individuals to act when faced with changes or unexpected situations (Fitriani & Mulyani, 2023). According to the Indonesian Dictionary (KBBI), emotion is defined as an outburst of feelings that encompasses reactions such as anger, sadness, or happiness. This definition aligns with the perspective of the American Psychological Association, which describes emotions as physiological responses, behaviors, and subjective experiences arising from specific stimuli (Ali, 2023). Goleman & Hermaya (1999) further explain that emotions are intense mental activities manifesting in various forms, such as love or fear, which underpin human emotional experiences. Similarly, Cabanac (2002) posits that emotions emerge from situations tied to both positive and negative motivations.

Izard (1993) emphasizes that emotions are often triggered by internal or external stimuli without requiring deep cognitive evaluation. From an adaptive perspective, research by Domic-Siede et al., (2024) reveals a positive correlation between the variety of emotions experienced by an individual and psychological well-being. Salovey & Mayer (1990), categorizes emotion management styles into three types: self-awareness, being overwhelmed by problems, and resignation. Individuals with high self-awareness tend to exhibit better emotional control, whereas those who resign are more susceptible to negative emotions.

Emotional intelligence, according to Salovey & Mayer (1990), includes the ability to recognize, assess, and manage emotions to support intellectual and emotional growth. The

first model of emotional intelligence introduced by Mayer & Salovey in 1990 consisted of three components: handling, controlling, and expressing emotions. This model later evolved to include four components, incorporating reflective regulation of emotions for emotional growth (Trifonova, 2020). Goleman (2003) identifies emotional intelligence as comprising skills such as self-awareness, emotion regulation, motivation, empathy, and social skills. These five aspects form the foundation of emotional intelligence, influencing social adjustment, interpersonal relationships, and personal success.

Key factors influencing emotional intelligence include parenting styles and education. Goleman (1999) highlights the importance of parents in shaping a child's emotional intelligence through patient and empathetic interactions. Research also indicates that gender and social environments, including peers, significantly contribute to the development of emotional intelligence (Vaquero-Diego et al., 2020; Miller-Slough & Dunsmore, 2020). Thus, emotional intelligence is not merely an innate ability but also a product of dynamic learning and social interactions.

2.2. Mobile Legends

According to Soesanto et al. (2020), Mobile Legends: Bang Bang is a MOBA game designed for mobile devices by Moonton and was released in 2016. The game features battles between two teams of five players, each controlling heroes with specific roles such as Assassin, Tank, Mage, and Support. Fitriana & Rois (2023) added that the gameplay requires strategy, teamwork, and effective communication to achieve the goal of destroying the enemy's base. Additionally, local elements such as the character Gatotkaca are designed to enhance the game's appeal in Indonesia.

Hanafi & Qodariah (2023) reported that Mobile Legends' popularity in Indonesia reached over 34 million active monthly players in 2023, making it one of the best-selling games. Java is the region with the highest concentration of players, followed by Sumatra (Joyoadikusumo 2023). Bayulianto et al. (2023) explained that tournaments like the Mobile Legends Professional League (MPL), launched in 2018, have played a significant role in expanding the player base and promoting the game at a national level.

Wicaksana & Nasvian (2022) emphasized the importance of three key aspects in Mobile Legends: coordination, teamwork, and communication. Coordination ensures that roles such as jungler and roamer are executed effectively, while teamwork is essential for addressing unexpected situations. Abie & Rosmilawati (2023) noted that challenges such as toxic behavior often arise within the player community, including verbal abuse, which can negatively affect the gaming atmosphere. However, post-game evaluations paired with good team communication can help address these issues.

With its combination of engaging gameplay, a strong community, and support from e-sports tournaments, Mobile Legends continues to symbolize the growth of the gaming industry in Indonesia (Bayulianto et al., 2023; Soesanto et al., 2020).

2.3. Social Skill

According to Cavell in Grover et al. (2020), social skills refer to micro-skills, such as eye contact and turn-taking in conversations, as well as more complex skill sets, such as problem-solving. These skills involve cognitive processes, such as attribution, and emotional processes, such as emotional regulation. Goleman (2003) explains that social skills are the ability to effectively manage emotions in social interactions. This includes accurately reading social situations, interacting smoothly, and using these skills to influence, lead, negotiate, resolve conflicts, and collaborate in teams.

Based on the perspectives of these two experts, social skills can be understood as the ability to interact effectively in various social situations. These skills encompass technical abilities, such as eye contact and turn-taking, as well as more complex abilities, such as problem-solving. Moreover, social skills involve cognitive processes, like attribution, and emotional management, which enable individuals to understand social contexts, communicate effectively, and achieve goals through influence, negotiation, conflict resolution, and teamwork.

2.4. Previous Research

Caro & Popovac (2021) found that emotional regulation exhibited no significant relationship with Gaming in Difficult Life Situations (GDLS), suggesting that factors such as age and self-efficacy play a more pivotal role in moderating the impact of gaming on emotional well-being. Similarly, Kircaburun et al. (2020) highlighted that high emotional intelligence can mitigate the risk of Internet Gaming Disorder (IGD) by encouraging healthier gaming motives, such as escapism and recreation, rather than compulsive behaviors. On the other hand, Zahra et al. (2020) identified a positive correlation between gaming and psychological distress, noting its negative influence on emotional intelligence and academic performance, thus emphasizing the dual-edged nature of gaming.

Sulaksono et al. (2020) observed that gaming disorder negatively affects emotional intelligence, particularly in areas like self-regulation and empathy, crucial components for navigating social and emotional challenges. This aligns with Amran et al. (2020), who documented the detrimental emotional impact of high-intensity Mobile Legends gameplay on students. Similarly, Marcella & Sazali (2023) demonstrated an inverse correlation between the intensity of online gaming and students' emotional intelligence, underscoring the risks of excessive gameplay.

Interestingly, Gunawan & Ningsih (2021) reported no significant relationship between emotional intelligence and online game addiction in their study conducted in Padang, indicating that addiction may operate independently of emotional intelligence in certain contexts. Conversely, Fitriani & Mulyani (2023) found that adolescents addicted to Mobile Legends experience negative emotional outcomes, such as heightened emotional instability.

Fatima & Zulfiqar (2023) contributed to this dialogue by showing that gaming disorder explains only a small variance in adolescents' emotional intelligence, suggesting that other factors, such as personal traits and social environment, may have a greater impact. Ramadhan (2022) emphasized a negative correlation between the intensity of online gaming and adolescents' emotional intelligence, mirroring Aziz (2022) findings that the intensity of Mobile Legends and PUBG Mobile gameplay significantly affects students' emotional intelligence, with social support playing a mitigating role. Nugrahanto (2022) concluded that online gaming minimally influences emotional intelligence, without yielding substantial impacts on broader emotional development.

These studies collectively underscore the complex and multifaceted relationship between gaming and emotional intelligence. While gaming can foster social and emotional skills under specific conditions, excessive intensity or addiction can undermine these benefits, highlighting the importance of moderation and context in leveraging gaming as a developmental tool.

3. Methods

3.1. Research Design and Approach

This study adopts a quantitative research design grounded in the positivist paradigm, which emphasizes objective measurement and statistical analysis to identify and validate causal relationships (Sugiyono, 2022). The design was chosen to examine the effect of Mobile Legends gameplay (independent variable) on emotional intelligence (dependent variable), with social skills acting as a mediating variable. The core objective is to understand not only the direct relationship between gameplay and emotional intelligence but also the indirect effects through the mediation of social skills.

The research utilizes a regression analysis framework to evaluate the nature and strength of these relationships. Specifically, a mediated regression model will be employed, where the primary focus is to assess whether social skills mediate the relationship between Mobile Legends gameplay and emotional intelligence. This design is particularly suited for exploring complex causal pathways and understanding the mechanisms that underlie observed relationships between variables.

3.2. Population and Samples

The study population consisted of all 63 students enrolled in the Islamic Education (PAI) Program at the Faculty of Islamic Studies (FAI), Universitas Muhammadiyah Yogyakarta, from the 2021–2022 cohort who actively engage in playing Mobile Legends. The targeted population was chosen based on the relevance of their participation in Mobile Legends gameplay, which is central to the research inquiry.

Given the relatively small size of the population (N=63), the study utilized a census sampling technique, meaning that all members of the population were included in the study (Sugiyono, 2022). This approach was selected to ensure comprehensiveness and representation, eliminating sampling bias and maximizing the reliability and generalizability of the findings within the context of this specific cohort of students. The census sampling method allows for the inclusion of the entire population of interest, thus providing a complete data set and enhancing the statistical power of the analysis.

In terms of inclusivity, the study focused on students who are actively involved in Mobile Legends gameplay, assuming that this factor directly influences their emotional intelligence and social skills, which are the variables under investigation. By including the entire cohort of Mobile Legends players, the study ensures that the sample is both relevant to the research objectives and sufficiently diverse within the specific context of the PAI program.

The research was carried out within the Islamic Education Program of FAI, Universitas Muhammadiyah Yogyakarta, providing insights specifically into this academic context and contributing to the understanding of how digital engagement, like Mobile Legends, may affect students' emotional intelligence and social behaviors in the realm of Islamic education.

3.3. Data Collection Methods

Data for this study were collected using a Likert-scale questionnaire designed to measure the three key variables: Mobile Legends gameplay, emotional intelligence, and social skills. The questionnaire utilized a four-point Likert scale with response options: strongly agree (SS), agree (S), disagree (TS), and strongly disagree (STS) (Sugiyono, 2022). To ensure the reliability and validity of the data, the scale included both positively and negatively worded statements, which helped minimize response bias and provided a more accurate reflection of the participants' true attitudes and behaviors. This combination of a structured scale and

varied statement wording aimed to capture a well-rounded view of the participants' behaviors and attitudes.

The questionnaire was distributed electronically to all participants, ensuring convenient access and completion. Informed consent was obtained from all respondents, explaining the purpose of the study and assuring them of the confidentiality and anonymity of their responses. The items related to Mobile Legends gameplay assessed the frequency and intensity of gaming behavior, while the emotional intelligence section measured self-awareness, empathy, and emotional regulation. The social skills section focused on interpersonal abilities and communication patterns in both digital and real-life contexts. Ethical considerations were strictly followed throughout the data collection process to ensure participants' rights and privacy were respected.

3.4. Data Analysis

The data analysis in this study involved both descriptive and inferential analyses to explore the relationships among the variables and assess the proposed hypotheses. The initial step, descriptive analysis, was employed to summarize and describe the characteristics of the respondents and the key variables. This included calculating frequencies, percentages, means, and standard deviations to present a clear overview of the participants' demographic profiles and the distribution of responses for each variable. Descriptive statistics served as a foundation for understanding the general trends and patterns within the data.

For the inferential analysis, regression analysis was conducted to examine the influence of the independent variable (Mobile Legends gameplay) on the dependent variable (emotional intelligence) while considering the mediating role of social skills. Specifically, a Sobel test was applied to assess the significance of the mediating effect of social skills in the relationship between independent and dependent variables. The Sobel test uses the formula $t = \alpha\beta / \text{SE}\alpha\beta$, where α represents the path from the independent variable to the mediator, and β represents the path from the mediator to the dependent variable. The calculated t-value was compared to the critical t-value of 1.96 (at a 5% significance level) to determine whether the mediation effect was statistically significant. If the t-value exceeded the critical value, the mediating role of social skills was considered significant. To ensure precision and ease of calculation, an online Sobel calculator was used.

Additionally, effect size analysis was conducted to evaluate the magnitude of the relationships between the variables. This included measuring the direct effect ($X \rightarrow Y$), which refers to the independent variable's influence on the dependent variable without mediation, and the indirect effect ($X \rightarrow M \rightarrow Y$), which reflects the impact of the independent variable on the dependent variable through the mediator (social skills). The total effect was derived by combining the direct and indirect effects, providing a comprehensive understanding of the overall influence of the independent variable on the dependent variable. The contributions of each effect were expressed as percentages to illustrate the proportion of variance explained by direct and indirect pathways. This analysis not only assessed the statistical significance of the relationships but also provided practical insights into the relative strength of direct versus mediated effects, shedding light on the most dominant influences in the study's model.

4. Results and Discussion

4.1. The Emotional Intelligence Condition of Students Who Play Mobile Legends

This study reveals the emotional intelligence condition of PAI UMY students who play Mobile Legends. The data indicates a variation in emotional intelligence categories, ranging from "Very Low" to "Very High."

Table 1. Emotional Intelligence Categorization Output

No	Category	Frequency	Percentage
1	Very Low	8	13%
2	Low	14	22%
3	Moderate	10	16%
4	High	21	33%
5	Very High	10	16%

The majority of students fall into the "High" category (33%), followed by the "Low" category (22%). Meanwhile, the "Very High" and "Moderate" categories each account for 16%, and 13% of respondents are in the "Very Low" category. These results indicate that most students have a relatively good ability to recognize, understand, and manage their emotions, although there is a specific group that faces significant challenges in emotional regulation.

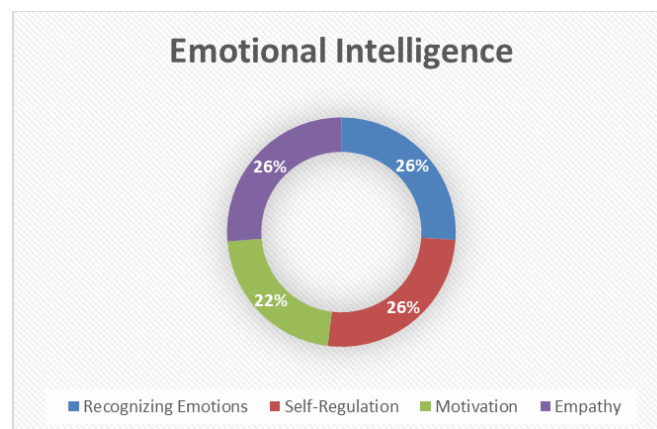


Figure 1. Emotional Intelligence Pie Chart

The dimensions of emotional intelligence analyzed in this study include recognizing emotions, self-regulation, motivation, and empathy. The findings reveal that recognizing emotions, self-regulation, and empathy contribute the most, each accounting for 26%, whereas the motivation dimension contributes the least at 22%.

According to Goleman (1999), emotional intelligence involves the ability to recognize one's own emotions and those of others while effectively managing them. In the context of students playing Mobile Legends, recognizing emotions emerges as the dominant dimension, indicating that the game helps students become more aware of their feelings during play, especially when facing pressure.

Conversely, the lowest contribution from the motivation dimension suggests that students may face challenges in maintaining enthusiasm or focus during gameplay. Cabanac (2002) explains that motivation is closely linked to positive emotions. In competitive games like Mobile Legends, the drive to win or improve rankings often serves as a key motivator.

However, without proper emotional management, this motivation can turn into a burden, as observed among students in the "Very Low" category. Research by Fitriani & Mulyani (2023) supports this, demonstrating that high-intensity gameplay without emotional regulation can lead to a loss of focus and decreased motivation.

This study finds that students in the "High" and "Very High" emotional intelligence categories exhibit strong abilities to recognize and manage their emotions during gameplay. This aligns with the findings of Gunawan & Ningsih (2021), which note that team-based games like Mobile Legends can enhance self-regulation and empathy through healthy social interactions. Students in these categories maintain good relationships with their teams and respond to in-game pressure constructively. However, students in the "Low" and "Very Low" categories often struggle with emotional regulation. Zahra et al. (2020) found that extended gameplay durations can diminish emotional regulation abilities, leading to increased frustration. In this study, students in these categories may experience high game intensity without effective time management strategies, negatively affecting their emotional intelligence.

Empathy also emerges as a critical dimension in this study. Students with high empathy are more likely to understand their teammates' emotions, maintaining harmony during gameplay. This is consistent with research by Gunawan & Ningsih (2021), which highlights that healthy team interactions can improve empathy. Conversely, students with low empathy tend to struggle with teamwork, often leading to conflicts during gameplay.

4.2. The Impact of Mobile Legends on Emotional Intelligence

To examine both direct and indirect effects, this study employs a three-stage regression process. The first stage involves regression from Mobile Legends (X) to Social Skills (M), followed by regression from Social Skills (M) to Emotional Intelligence (Y). These two regressions are essential for conducting the Sobel test and determining the indirect effects. The final stage involves regression from Mobile Legends (X) to Emotional Intelligence (Y) to identify the direct effects.

Table 2. Simple Regression of Mobile Legends Game on Social Skills

		Coefficient ^a			t	Sig.
Model		Unstandardized Coefficient		Standardized Coefficient		
		B	Std. Error	Beta		
1	(Constant)	5,892	2,566		2,297	,025
	Mobile Legends	,604	,042	,878	14,359	<,001

^a Dependent Variable: Social Skill

The regression results indicate that the constant value of 5.892 represents the baseline level of social skills in the absence of Mobile Legends activity. A regression coefficient of 0.604 signifies that each one-unit increase in Mobile Legends activity leads to an increase of 0.604 units in social skills, with a standard error of 0.042, reflecting the precision of the coefficient estimation.

Table 3. Simple Regression of Social Skill on Emotional Intelligence

		Coefficient ^a			t	Sig.
Model		Unstandardized Coefficient		Standardized Coefficient		
		B	Std. Error	Beta		
1	(Constant)	23,049	3,997		5,766	<,001
	Social Skill	1,037	,093	,818	11,103	<,001

^a Dependent Variable: Emotional Intelligence

The regression results indicate that the constant value of 23.049 represents the baseline level of emotional intelligence without the influence of social skills. A regression coefficient of 1.037 shows that each one-unit increase in social skills leads to an increase of 1.037 units in emotional intelligence, with a standard error of 0.093, reflecting the accuracy of the coefficient estimation.

Table 4. Simple Regression of Mobile Legends on Emotional Intelligence

		Coefficient ^a			t	Sig.
Model		Unstandardized Coefficient	Std. Error	Standardized Coefficient		
		B		Beta		
1	(Constant)	23,393	3,806		6,146	<,001
	Mobile Legends	,723	,062	,829	11,576	<,001

^a Dependent Variable: Emotional Intelligence

The regression results indicate that the constant value of 23.393 represents the baseline level of emotional intelligence in the absence of Mobile Legends activity. A regression coefficient of 0.723 suggests that each one-unit increase in Mobile Legends activity leads to an increase of 0.723 units in emotional intelligence, with a standard error of 0.062, reflecting the accuracy of the coefficient estimation.

Input:		Test statistic:	Std. Error:	p-value:
a	0.604	Sobel test: 8.81198025	0.07107914	0
b	1.037	Aroian test: 8.79870504	0.07118638	0
s _a	0.042	Goodman test: 8.82531573	0.07097174	0
s _b	0.093	Reset all	Calculate	

Figure 2. Sobel Test Output

Based on the Sobel test results, the mediation variable (M) demonstrates a significant effect in the relationship between the independent variable (X) and the dependent variable (Y). The path coefficient from X to M (a) is 0.604, while the path coefficient from M to Y (b) is 1.037. The standard errors are 0.042 for a and 0.093 for b, respectively. The Sobel test yielded a test statistic value of 8.811 > 1.96 with a p-value of 0.000, which is below the 0.05 significance threshold. These results indicate that M significantly mediates the relationship between X and Y. Therefore, it can be concluded that social skills mediate the relationship, with part of X's influence on Y occurring through M.

4.3. Effect Size Analysis

To evaluate the effect size within the mediation analysis, three key components must be calculated: total effect, indirect effect, and direct effect. The indirect effect is determined by multiplying the regression coefficient of the independent variable (X) to the mediator (M) with the regression coefficient of the mediator (M) to the dependent variable (Y). In contrast, the direct effect represents the regression coefficient directly linking the independent variable (X) to the dependent variable (Y). The total effect is then obtained by summing the values of the direct and indirect effects.

Following the calculation of the total effect, further analysis is performed to determine the proportion of contribution from both the direct and indirect effects. This involves expressing the contributions as percentages of the total effect, providing insight into the

dominance of either pathway within the overall relationship. A detailed breakdown of the calculations is presented below:

1. Total Effect
Indirect Effect:
 $a (X \rightarrow M) \times b (M \rightarrow Y)$
 $= 0.626$
Direct Effect + Indirect Effect
 $0.723 + 0.626$
 $= 1.349$
2. Indirect Effect Percentage
 $(\text{Indirect Effect}) / (\text{Total Effect}) \times 100\%$
 $0.604 / 1.349 \times 100\%$
 $= 44.78\%$
3. Direct Effect Percentage
 $(\text{Direct Effect}) / (\text{Total Effect}) \times 100\%$
 $0.723 / 1.349 \times 100\%$
 $= 53.61\%$

Based on the effect size analysis, the direct contribution of Mobile Legends to emotional intelligence was 53.62%, while the indirect contribution through social skills as a mediating variable was 44.78%. These findings indicate partial mediation, where social skills contribute to explaining the relationship but do not fully account for it. This suggests that while social skills play a significant role in mediating the relationship between Mobile Legends and emotional intelligence, the direct impact of Mobile Legends remains prominent. According to Hair et al. (2014), an indirect effect value between 20% and 80% signifies partial mediation, meaning the mediator provides only partial explanation for the observed relationship. The greater direct effect compared to the indirect effect highlights the possibility of additional mediating variables or external factors influencing the relationship, which could be explored in future research.

The regression analysis further supports the mediation findings, showing that Mobile Legends gameplay (X) has a significant positive effect on social skills (M), with a constant value of 5.892 and a regression coefficient of 0.604. This implies that for every one-unit increase in Mobile Legends activity, social skills improve by 0.604 units. As a team-based game, Mobile Legends fosters an environment of social interaction where players are encouraged to communicate effectively, develop strategies, and collaboratively resolve conflicts. This aligns with Goleman (1999) framework, which identifies social skills as a critical component of emotional intelligence, encompassing communication, relationship-building, and conflict resolution. Through its gameplay mechanics, Mobile Legends creates opportunities for players to enhance their interpersonal skills, thereby contributing to their overall emotional intelligence development. These findings underscore the importance of considering both direct and mediated pathways when evaluating the broader impact of interactive activities like gaming on personal and social competencies.

Previous studies further reinforce these findings, providing valuable context for understanding the relationship between Mobile Legends, social skills, and emotional intelligence. Kircaburun et al. (2020) highlight that gaming, particularly with a skill-development motive, can significantly enhance social skills and reduce the risk of emotional disorders. This aligns well with the observed indirect effect of social skills as a mediator in this study. Mobile Legends, as a game that relies on teamwork and collaboration, encourages

players to understand group dynamics, practice effective communication, and demonstrate empathy toward teammates key components of social skills. However, Marcella & Sazali (2023) caution that excessive gameplay intensity can negatively affect emotional intelligence, suggesting that while gaming has developmental benefits, moderation and controlled playtime are critical factors to maximize its positive impact.

The regression results further validate the mediating role of social skills in the relationship between Mobile Legends (X) and emotional intelligence (Y). Specifically, social skills (M) were found to have a significant positive influence on emotional intelligence, with a constant value of 23.049 and a regression coefficient of 1.037. This indicates that every one-unit increase in social skills enhances emotional intelligence by 1.037 units. These findings are consistent with Salovey & Mayer (1990) theory, which conceptualizes emotional intelligence as the ability to perceive, understand, and manage emotions within social contexts. In this study, social skills function as a bridge that enables individuals to effectively process their emotions and empathize with others, facilitating the development of harmonious interpersonal relationships.

Additional evidence from Zahra et al. (2020) supports the notion that online games can positively influence emotional intelligence, particularly when they involve intensive social interactions. Within the context of Mobile Legends, activities such as teamwork, negotiation, and collaborative decision-making promote the development of emotional intelligence aspects like empathy and emotional regulation. However, as Fitriani & Mulyani (2023) note, excessive engagement with Mobile Legends can lead to emotional disturbances, including heightened anger and communication difficulties. This duality underscores the importance of how players engage with the platform: leveraging its social and cognitive opportunities for personal growth while avoiding overuse that could undermine emotional well-being.

The direct regression analysis between Mobile Legends (X) and emotional intelligence (Y) yielded a constant value of 23.393 and a regression coefficient of 0.723, confirming a significant relationship. However, the smaller coefficient compared to the mediated pathway through social skills (M) suggests that Mobile Legends is more effective in enhancing emotional intelligence when social skills are involved. These findings align with the research of Gunawan & Ningsih (2021), which highlights that the emotional intelligence of online game players is often shaped by the quality of social interactions occurring during gameplay. In this study, social skills act as a catalyst, amplifying the positive effects of gaming on emotional intelligence by facilitating deeper interpersonal engagement and emotional regulation.

The mediating role of social skills is further substantiated by the Sobel test results, which indicate a significant mediation effect with a test statistic value of 8.811 ($p < 0.001$). The Sobel test also reveals that 53.61% of the influence of Mobile Legends on emotional intelligence occurs through social skills, while 46.39% is attributed to the direct effect. These percentages underscore the pivotal role of social skills as a bridge between gaming activities and the development of emotional intelligence. This finding aligns with Sulaksono et al. (2020), who argue that key components of emotional intelligence such as empathy, self-regulation, and motivation are significantly influenced by social skills fostered through group interactions.

However, it is important to acknowledge the potential limitations posed by excessive gaming. Research by Amran et al. (2020) warns that Mobile Legends addiction can result in emotional instability and aggressive behavior, ultimately hindering the development of social skills. Similarly, Ramadhan (2022) identified a negative correlation between gaming intensity and emotional intelligence, suggesting that prolonged or unregulated playtime may erode the socio-emotional benefits of gaming. These insights emphasize the need for moderation and

mindful engagement with games like Mobile Legends to harness their potential as tools for personal growth and emotional development.

In Mobile Legends, each player assumes specific roles critical to achieving victory, creating a strong demand for intensive social interactions. These interactions include coordination, teamwork, communication, and conflict resolution (Wicaksana & Nasvian, 2022). The regression analysis highlights that Mobile Legends activity has a coefficient of 0.604 on social skills (M), reinforcing its role as an effective medium for enhancing communication and coordination skills. Goleman (1999) defines social skills as the ability to interpret social situations, build positive relationships, and resolve conflicts effectively all of which are intrinsic to the dynamics of Mobile Legends gameplay.

Further evidence from Sulaksono et al. (2020) supports this perspective, showing that team-based games improve emotion regulation and empathy, particularly when players collaborate to overcome challenges. In Mobile Legends, players frequently encounter situations that demand joint decision-making, such as strategizing attacks, allocating roles, or determining retreat strategies. These scenarios necessitate clear and effective communication, fostering the development of social abilities crucial for managing group dynamics.

However, the social benefits of Mobile Legends are not without risks. Fitriani & Mulyani (2023) found that high gaming intensity could exacerbate interpersonal conflicts, such as aggressive behavior or difficulties in accepting criticism. In this context, the positive impact of Mobile Legends on social skills relies heavily on constructive communication and collaborative behavior, rather than excessive competitiveness. Moreover, Zahra et al. (2020) revealed that players who engage in late-night gaming sessions are more prone to emotional disturbances, including challenges in social communication. These findings align with this study's results, emphasizing that the benefits of Mobile Legends are conditional on factors like controlled playtime and purposeful gaming objectives.

Overall, Mobile Legends positively influences the emotional intelligence of PAI UMY students by fostering social skills, including communication, empathy, and emotional regulation. The game's team-oriented environment encourages players to work collaboratively, manage in-game pressures, and resolve conflicts constructively. These intensive in-game interactions help students hone socio-emotional skills that are invaluable in both academic and everyday contexts.

However, achieving these positive outcomes requires mindful moderation of gaming intensity. Excessive gameplay can disrupt emotional balance and diminish the social benefits derived from the game. These findings suggest that Mobile Legends serves not only as a source of entertainment but also as a platform for interpersonal and emotional learning. For PAI UMY students, it represents a unique opportunity to develop essential socio-emotional competencies, provided it is approached with intentionality and balance.

5. Conclusion

PAI UMY students who engage in playing Mobile Legends demonstrate varying levels of emotional intelligence, ranging from "Very Low" to "Very High." Notably, the majority of students fall into the "High" category (33%), followed by "Low" (22%) and "Very High" (16%). Among the dimensions of emotional intelligence, recognizing emotions emerges as the strongest, highlighting that the game significantly enhances emotional awareness, particularly in high-pressure gameplay situations. However, the motivation dimension shows the weakest contribution (22%), reflecting challenges in maintaining consistent focus and enthusiasm, particularly among students with intense gaming habits. This finding underscores the dual

nature of Mobile Legends: while it fosters certain dimensions of emotional intelligence, it also reveals areas for improvement when gaming intensity is unchecked.

The regression analysis further reinforces these findings. Mobile Legends exhibits a direct influence on emotional intelligence, with a regression coefficient of 0.723, alongside an indirect influence mediated through social skills amounting to 0.626. The Sobel test results confirm significant partial mediation, with 53.61% of the influence occurring directly and 44.78% mediated through social skills. These results highlight the critical role of social skills developed through in-game interactions such as communication, teamwork, and conflict resolution in enhancing emotional intelligence.

However, the benefits of Mobile Legends are tempered by its intensity of use. Excessive gameplay can lead to emotional instability, manifesting as difficulties in emotion regulation and social communication. This aligns with previous research emphasizing the importance of moderation in gaming to maximize its socio-emotional benefits. When approached mindfully, the game's structured, team-based challenges offer a unique platform for players to develop interpersonal and emotional skills, including empathy, self-regulation, and emotion management.

In conclusion, Mobile Legends serves as more than just entertainment for PAI UMY students it is a potential tool for socio-emotional development. By fostering social skills through collaborative gameplay, it contributes to emotional intelligence in meaningful ways. However, the impact of the game is moderated by gaming intensity, suggesting that players must balance their engagement to fully harness its developmental potential. For educators and counselors, this insight provides an opportunity to explore how structured gaming activities might be integrated into strategies for developing emotional and interpersonal competencies among students.

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