

The Influence of Online Games on the Learning Concentration of Students at SMPN 1 Madapangga and the Level of Anxiety of Students' Parents

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Abstract

Online games currently affect various aspects of human life, including health, psychology, and concentration of students at SMPN 1 Madapangga, and cause anxiety among parents. This study is quantitative and qualitative, using descriptive qualitative methods. The population of this study was 554 students and 70 parents. The sample used was 50 students from grades VII, VIII, and IX, and 50 parents. The sampling technique used was non-probability sampling in the form of purposive sampling. Data collection techniques used included observation, interviews, documentation, and Likert scale questionnaires. Data analysis techniques used included interactive/model data analysis techniques and Spearman test data analysis techniques. The results of this study, namely from 25 male students at SMPN 1 Madapangga, who experienced low concentration levels were 10 students (20%), 7 students with moderate concentration levels (14%), and 6 students with high concentration levels (12%). Meanwhile, of the 25 female students, 5 experienced low concentration levels (10%), 12 experienced moderate concentration levels (24%), and 10 experienced high concentration levels (20%). This means that more male students experienced a decrease in learning concentration compared to female students. However, in terms of anxiety levels, female parents experienced higher levels of anxiety than male parents. There were 32 female parents who experienced mild, moderate, and severe anxiety with a percentage of 64%. Meanwhile, 18 male parents experienced mild, moderate, and severe anxiety with a percentage of 36%.

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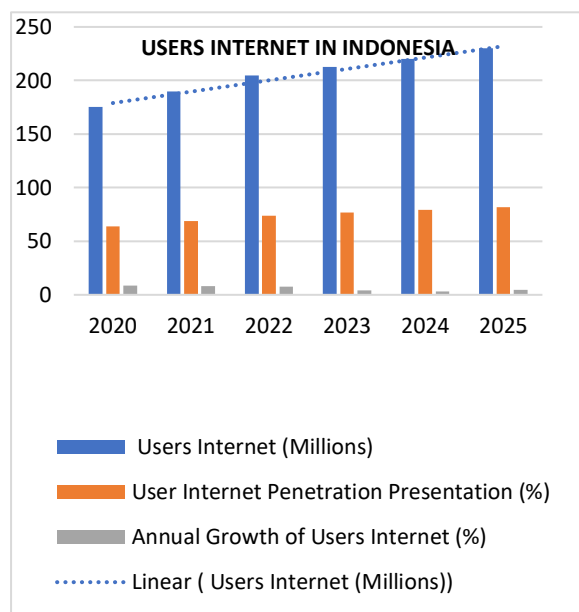
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1. INTRODUCTION

Education is present in human life and has the benefit of assisting students in guiding them during their growth and developing their human potential. Guiding and developing this potential can shape character, inherit culture, become good citizens, provide initial provisions for work (Tirtarahardja & Sulo, 2008), and be independent and responsible (Kasan, 2009). However, the arrival of the era of globalization, the era of Society 4.0, and 5.0, which utilize digital technology media in the learning process, makes the challenges of the world of education increasingly complex. Digital technology such as smartphones, in addition to providing benefits, also has a negative impact on students. This is because the presence of digital technology has a broad impact such as the economy, health, social, and education (Cholik, 2017). Smartphones are currently a tool used by humans in every activity of life (Rahmawati, 2020). Smartphones are used as tools in human activities because they

have various functions in the world of work and as entertainment because they have features for sending short messages, receiving and making calls, playing online and offline games, accessing social media, watching and listening to music (Hidayanto, et al., 2021).

Data from Hercodigital (2025) shows that over the past 6 years (2020-2025) the total of users smartphone in Indonesia has increased. In 2020, the total of users smartphone in Indonesia reached 160 million with an annual growth of 10.2%. In 2021, the total of users smartphone in Indonesia increased to 170.5 million with an annual growth of 6.5%. In 2022, the total of users smartphone in Indonesia increased to 180 million with an annual growth of 5.6%. In 2023, the total of users smartphone in Indonesia increased to 190 million with a growth of 5.5%. In 2024, the total of users smartphone in Indonesia increased to 200 million with a growth of 5.3%. In 2025, the total of users smartphone in Indonesia increased to 210 million with a growth of 5.5%. Based on this, the total of users smartphone in Indonesia increases every year, however, the annual growth rate continues to decline but increased by 0.1% in 2022.



Grafik Pengguna Internet Tahun 2020-2025
(Hercodigital, 2025)



User Smartphone Graph 2020-2025 (Hercodigital, 2025)

Based on the total of users smartphone, the total of users internet is also increasing. Data from Hercodigital (2025) shows that users internet in Indonesia have continued to increase over the past six years, although the growth rate has slowed. In 2020, the total of users internet in Indonesia reached 175 million, with a penetration rate of 64%, and an annual growth rate of 8.5%. In 2021, the total of users internet increased to 190 million, with a penetration rate of 69%, and an annual growth rate of 8.3%. In 2022, the total of users internet increased to 204.7 million, with a penetration rate of 74%, and an annual growth rate of 7.7%. In 2023, the total of users internet increased to 212.9 million, with a penetration rate of 77%, and an annual growth rate of 4.0%. In 2024, the total of users internet increased to 220 million, with a penetration rate of 79.5%, and an annual growth rate of 3.3%. In 2025, the total of internet users will increase by 230 million, with user penetration rate of 82% with annual growth of 4.5%.

The total of users' internet worldwide reached 4.5 billion in 2020. 3.5 billion, or 80% of users' internet aged 16-64, have played online games (Mubarok, 2021). The increase in smartphone and user's internet in Indonesia has also led to an increase in online game users. Purwaningtyas & Ressay (2021) stated that in 2017, out of 54.68% of user's internet in Indonesia, 54.13% played online games. Users online game in Indonesia is predicted to have reached 34 million. Of the 34 million users, 19.9 million play paid-based online games, with an average expenditure of 130,000 Rupiah (Mubarok, 2021). Mona (2021) stated that 54.1% of Indonesian teenagers aged 15-18 have played online games. Online games are used by adolescent boys, 77.5% and by girls 22.5%, with a weekly time range of 2-10 hours. Yee (Kurniawan, 2022) suggests that adolescents who play online games intensively are at greater risk of addiction than adults. This is because adolescents consider online gaming a primary need. This is evidenced by 2018 data showing that 14% of junior high and high school students in Jakarta are addicted to online games (Halawa, 2021).

The presence of online and offline games has positive and negative impacts on various aspects of material, health (physical, psychological, and psychosocial), cognitive, behavioral, character, and violence against its users (Purwaningtyas & Ressay, 2021; Mubarok, 2021; Apriani, et al., 2025; Lusiana, 2023; Anggita, et al., 2023; Syahrani, 2015; Aginsha, 2022; Nasrul & Sa'adah, 2022; Syafi, Fathurohim., & Pipit 2023). Since 2016 in West Java, as many as 206 children and adolescents have been treated in mental hospitals because they were diagnosed with addiction to playing online and offline games (Nurmagandi & Hamid, 2020). Young (Mubarok, 2021) stated that addiction to online games is analogous to addiction to consuming drugs and alcohol.

The negative impacts associated with online gaming are that online game users must have an adequate internet connection to play their chosen games. Ensuring a reliable internet connection means that users tend to choose expensive internet packages. The average online game user spends 130,000 Rupiah on internet access, equipment, and in-game features (Mubarok, 2021). Those with limited financial means are forced to fulfill their children's desires, as unmet needs can lead to emotional outbursts. Regarding physical health, online game users spend excessive amounts of time in front of smartphone screens. This ultimately leads to a decline in physical health due to lack of rest and exercise. Physical impacts include red and swollen eyes due to insomnia, decreased vision, cardiovascular problems, pain in the fingers and wrists, obesity, carpal tunnel syndrome, digestive problems, aggression, and hyperactivity (Purwaningtyas & Ressay, 2021; Mubarok, 2021; Purwaningsih & Nurmala, 2021). Online gaming also impacts on the psychological health of its users. The damage to psychological health begins with bullying in the form of insults and intimidation between online game users due to one player's inability to play the game, which indicates depression (Purwaningtyas & Ressay, 2021). As a result, negative emotions develop within online game users (Purwaningsih & Nurmala, 2021). Online gaming also impacts the psychosocial health of its users. This is evident in user behaviors that experience signs of depression, such as anxiety, stress, and low life satisfaction (Purwaningtyas & Ressay, 2021), which result in online game users being antisocial, unsociable, and experiencing declining work and study ethic (Mubarok, 2021).

Purwaningsih & Nurmala (2021) suggest that adolescents addicted to online games experience emotional, behavioral, and cognitive dysfunction. Mubarok (2021) suggests that students addicted to online games experience decreased social relationships, decreased politeness, and a decreased learning ethic. Apriani et al. (2025) suggest that online game addiction can lead to decreased

school performance due to forgetfulness in completing assignments. Anggita et al. (2023) suggest that students who play online games have an impact on their academic performance. Students who tend to play online games for three hours per day have low academic interest, low learning motivation, low and declining academic achievement, and have lower grades due to having less study time (Johan, 2019; Asdar, et al., 2020; Yuliandra, et al., 2023; Masfiah & Putri, 2019; Prasetyo, et al., 2023; Aginsha, 2022; Nasrul & Nurus Sa'adah, 2022). Students who have a high intensity in playing online games tend to be lazy and rarely study, and have difficulty concentrating (Kurniawan, 2022).

Although online games have many negative impacts, they do offer several benefits to their users if used appropriately. Online games, as a form of entertainment, provide enjoyment and help relieve stress (Widiarto, 2018; Johnson, et al., 2013). In the world of learning, online games are beneficial for developing cognitive systems, problem-solving, creativity, and English language skills (Elindawati, 2020; Hadisaputra, 2022), fostering teamwork and socialization (Mertika & Mariana, 2020), and positively influencing learning motivation through challenges and competencies (Johan, 2019; Rahyuni, et al., 2021), with a planned and guided approach through educational online games (Halijah, et al., 2023; Sajidah, 2023).

The widespread use of online games among students at SMPN 1 Madapangga, Bima Regency, has raised concerns among parents. Parents are concerned about their children's condition because they continue to play online games without regard for time, which impacts their psychological, physical, psychosocial, and educational health. This is exacerbated by the condition of students during the teaching and learning process because students who play online games tend to have lower concentration compared to students who do not play online games. If this condition continues, these students will not succeed in their studies (Kurniawan, 2022) and parents' anxiety will increase, which will impact their health. Based on these problems, the researcher raised the title "The Effect of Online Games on the Learning Concentration of Students at SMPN 1 Madapangga and the Level of Anxiety of Parents of Students", to examine more deeply the problem regarding the influence of online games on learning concentration and anxiety of parents of students at SMPN 1 Madapangga. Based on these problems, the purpose of this study is to determine the effect of online games on the learning concentration of students at SMPN 1 Madapangga and the level of anxiety of parents of students.

2. MATERIALS AND METHOD

Online games are games that use an internet connection in the form of a Local Area Network (LAN) to access, play, and connect and communicate with opponents from various regions (Mubarak, 2021; Fitriani, et al., 2023; Apriani, et. Al., 2025). Online games are games that can be played by users through various media devices such as laptops, computers, smartphones, or gadgets (Syafi, Fathurohim., & Pipit, 2023). Internet users worldwide currently reach 4.5 billion people. Of these internet users, 80% (3.5 people) of internet users aged 16-64 years have played online games every month. Meanwhile, currently online game users in Indonesia have reached 34 million people (Mubarak, 2021). Various studies on online games state that online games are a type of game that has an impact on user behavior because it has addictive properties like alcohol and drugs. Adolescents who are addicted to online games experience emotional, behavioral, cognitive, antisocial dysfunction, decreased learning ethic and academic grades due to difficulty concentrating (Purwaningsih &

Nurmala, 2021; Mubarok, 2021; Apriani, et al., 2025; Anggita, et al., 2023; Johan, 2019; Asdar, et al., 2020; Yuliandra, et al., 2023; Masfiah & Putri, 2019; Prasetyo, et al., 2023; Aginsha, 2022; Nasrul & Nurus Sa'adah, 2022; Kurniawan, 2022).

This study combines both quantitative and qualitative approaches. The quantitative approach examines the relationship between the influence of online games on learning concentration and anxiety among parents of students at SMPN 1 Madapangga. The qualitative approach examines the phenomenon of online game addiction on learning concentration and anxiety among parents of students at SMPN 1 Madapangga. The descriptive qualitative method was used to describe the qualitative data.

The population of this study was 554 students, consisting of 264 male students and 290 female students. In addition to the population raised by students, 70 students were also sourced from parents. The sample used was 50 students consisting of grades VII, VIII, and IX, and 50 parents. The sample used in this study was determined using a non-probability sampling technique in the form of purposive sampling with various criteria and considerations. The criteria and considerations in determining the research sample were determined by age, duration of playing online games, decreased concentration in learning, and parents who felt anxious about their children playing online games. The location of this study was carried out in various places, including SMPN 1 Madapangga and at the residences of the students' parents (Bolo, Dena, Tonda, and Rade Villages).

The data collection techniques used in this study were observation, interviews, documentation, and a Likert scale questionnaire. The data analysis technique used was interactive data analysis/water model, which included data collection, reduction, presentation, and verification. In addition to these techniques, this study also used the Spearman test to analyze the relationship between online games and learning concentration and parental anxiety among students at SMPN 1 Madapangga.

3. RESULTS

Online games have an impact on the learning concentration and anxiety of parents of students at SMPN 1 Madapangga. The various results of the influence of online games on the learning concentration and anxiety of parents of students at SMPN 1 Madapangga are presented in the following table.

Table 1. **Distribution of Students by Gender and Age**

Gender	Age	F	ΣF	%	$\Sigma\%$
Male	13-15 Year	25	25	50%	50%
Female	13-15 Year	25	50	50%	100%

Based on the table above, the total of respondents used as a sample of students at SMPN 1 Madapangga was 50 students. The total of male students aged 13-15 years was 25 with a percentage of 50%. The total of female students aged 13-15 years was 25 with a percentage of 50%. Based on these data, the total of male and female students used as the research sample was equal. The

determination of the sample also aimed to see the level of influence based on gender and age of SMPN 1 Madapangga students.

Table 2. **Distribution of Students Based on Gender and Duration of Online Game Play**

Gender	Online Game Playing Duration	F	ΣF	%	$\Sigma\%$
Male	1 - 2 Hours/Week	10	10	20%	20%
Female	1 - 2 Hours/Week	7	17	14%	34%
Male	3 - 5 Hours/Week	15	32	30%	60%
Female	3 - 5 Hours/Week	7	39	14%	78%
Male	6 - > 6 Hours/Week	9	48	18%	96%
Female	6 - > 6 Hours/Week	2	50	4%	100%

Based on the table above, the total of male students who play online games with a time span of 1-2 hours / week is 10 students with a percentage of 20% while female students are 7 people with a percentage of 14%. The total of males who play online games 3-5 hours / week is 15 students with a percentage of 30% while female students are 7 students with a percentage of 14%. The total of males who play online games 6 - > 6 hours / week who play online games is 9 students with a percentage of 18% while female students are 2 with a percentage of 4%.

Table 3. **Distribution of Online Game Addiction Levels Based on Gender and Duration of Online Game Play**

Gender	Addiction Level	F	ΣF	%	$\Sigma\%$
Male	Light	10	10	20%	20%
Female	Light	7	17	14%	34%
Male	Medium	15	32	30%	60%
Female	Medium	7	39	14%	78%
Male	Heavy	9	48	18%	96%
Female	Heavy	2	50	4%	100%

Based on the table data above, the total of male students who experienced mild addiction was 10 people with a percentage of 20% and female students were 7 people with a percentage of 14%. The total of male students who experienced moderate addiction was 15 people with a percentage of 30% and female students experienced moderate addiction was 7 people with a percentage of 14%. The total of male students who experienced severe addiction was 9 people with a percentage of 18% and female

students were 2 students with a percentage of 4%. The total total of male students who experienced mild, moderate, and severe addiction to online games was 34 students with a percentage of 68% and female students were 16 people with a percentage of 32%. This indicates that the total of male students who experienced online game addiction was more than female students.

Table 4. Distribution of Students' Learning Concentration Levels Based on Gender and Duration of Online Game Play

Gender	Learning Concentration Level	F	ΣF	%	$\Sigma\%$
Male	Light	10	10	20%	20%
Female	Light	5	15	10%	30%
Male	Medium	7	22	14%	44%
Female	Medium	12	34	24%	68%
Male	Heavy	6	40	12%	80%
Female	Heavy	10	50	20%	100%

Based on the data in the table above, of the 25 male students used as research samples, there were 10 students who experienced low learning concentration during the learning process at school and at home with a percentage of 20% and 5 female students with a percentage of 10%. Meanwhile, 7 male students experienced moderate learning concentration during the learning process at school and at home with a percentage of 14% and 12 female students with a percentage of 24%. 6 male students experienced high learning concentration during the learning process at school and at home with a percentage of 12% and 10 female students with a percentage of 20%. Based on this, more male students experienced a decrease in the level of learning concentration at school and at home than female students. This is influenced by the level of student addiction in playing online games.

Table 5. Distribution of Students' Parents by Gender and Age

Gender	Age	F	ΣF	%	$\Sigma\%$
Male	40-60 Year	25	25	50%	50%
Female	40-60 Year	25	50	50%	100%

Based on the table above, the total of respondents sampled from parents of students at SMPN 1 Madapangga was 50 people. The total of male parents with an age range of 40-60 years was 25 with a percentage of 50%. The total of female parents with an age range of 40-60 years was 25 with a percentage of 50%. Based on these data, the total of male and female parents of students used as

research samples was equal. The determination of the sample also aims to see the level of anxiety based on gender and age of parents of students at SMPN 1 Madapangga.

Table 6. Distribution of Parents' Anxiety Levels Regarding Online Game Addiction and Learning Concentration Based on Gender and Duration of Online Game Play

Gender	Age	Parental Anxiety Levels Regarding Student Learning Addiction and Concentration	F	ΣF	%	$\Sigma\%$
Male	40-45	Light	6	6	12%	12%
Female	40-45	Light	8	14	16%	28%
Male	46-50	Medium	5	19	10%	38%
Female	46-50	Medium	10	29	20%	58%
Male	51-60	Heavy	7	36	14%	72%
Female	51-60	Heavy	14	50	28%	100%

Based on the table data above, there are parents of students who experience mild, moderate, and severe levels of anxiety. Six male parents experience mild anxiety regarding online game addiction and student learning concentration (12%), and eight female parents (16%). Five male parents experience moderate anxiety regarding online game addiction and student learning concentration (10%), and ten female parents (20%). Seven male parents experience severe anxiety regarding online game addiction and student learning concentration (14%), and 14 female parents (28%).

The data shows that female parents experience higher levels of anxiety about online gaming than male parents. Thirty-two female parents experienced mild, moderate, and severe anxiety, representing 64%. Eighteen male parents experienced mild, moderate, and severe anxiety, representing 36%. The level of anxiety among parents of students is not solely influenced by the amount of time students spend playing online games. Parents' anxiety is also influenced by declining grades due to lack of time spent studying, poor sleep quality leading to frequent lateness to school and decreased concentration, irregular eating patterns and lack of exercise leading to frequent illness, lack of outdoor activities, and frequent use of harsh language.

4. CONCLUSION

Online game addiction impacts various aspects of human life. The existence of online games also has a negative impact on the lives of students at SMPN 1 Madapangga, resulting in a decrease in students' concentration. This impact has made parents worry about their children's education, health, and psychology. Based on the results of the study, of the 25 male students at SMPN 1 Madapangga, those who experienced low concentration levels were 10 students (20%), 7 students with moderate concentration levels (14%), and 6 students with high concentration levels (12%). Meanwhile, of the 25 female students, 5 students with low concentration levels (10%), 12 students with moderate

concentration levels (24%), and 10 students with high concentration levels (20%). This means that more male students experienced a decrease in learning concentration compared to female students. However, in terms of anxiety levels, female parents had higher levels of anxiety than male parents. There were 32 female parents of students who experienced mild, moderate, and severe anxiety, representing 64%. Meanwhile, 18 male parents experienced mild, moderate, and severe anxiety, representing 36%.

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