The Association of Intensity of Game Playing: Mobile Legends Bang-Bang and the Intensity of YouTube Gaming Access Towards Toxic Behavior in Game Among Students

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ABSTRACT

Indonesia was recorded as the country with the highest average daily internet usage in 2022, reaching 5.7 hours per day. Most of this time was spent playing mobile games, especially Mobile Legends: Bang-Bang. There were 41.73% of players who spent 3–5 hours per day playing Mobile Legends, while 17.29% played more than 5 hours every day. Meanwhile, YouTube Gaming experienced significant growth, with over 100 billion hours of gaming content watched in 2020 alone, 10 billion of which were live streams. This study explores the relationship between the intensity of playing Mobile Legends: Bang-Bang and the level of engagement with YouTube Gaming on toxic behavior in games among students.

A quantitative method with a survey design was applied in a positivistic paradigm, aiming to explain the relationship between variables. The study involved 118 college student respondents over the age of 17 who regularly play Mobile Legends and consume gaming content on YouTube. Data was collected through a structured Likert scale questionnaire and analyzed using multiple linear regression via SPSS. The results indicate that both the frequency of playing Mobile Legends and the habit of accessing YouTube Gaming have a statistically significant effect on toxic behavior in digital games. The regression model showed a significance level of 0.00 (< 0.05) for both variables and an R² value of 0.666, indicating that these factors explain 66.6% of the variation in behavior, while the remaining 33.4% may be attributed to other factors such as peer influence, parenting style, or mental health. This study provides useful insights into how digital engagement patterns are related to behavioral tendencies among students.

Keywords: Mobile Legends, YouTube gaming, toxic behavior, students, online engagement, gaming behavior

ABSTRAK

Indonesia tercatat sebagai negara dengan penggunaan internet harian rata-rata tertinggi pada tahun 2022, mencapai 5,7 jam per hari. Sebagian besar waktu ini dihabiskan untuk bermain game mobile, terutama Mobile Legends: Bang-Bang. Ada 41,73% pemain yang menghabiskan 3–5 jam per hari bermain Mobile Legends, sementara 17,29% bermain lebih dari 5 jam setiap hari. Sementara itu, YouTube Gaming mengalami pertumbuhan yang signifikan, dengan lebih dari 100 miliar jam konten game ditonton hanya pada tahun 2020, 10 miliar di antaranya adalah siaran langsung. Studi ini mengeksplorasi hubungan antara intensitas bermain Mobile Legends: Bang-Bang dan tingkat keterlibatan dengan YouTube Gaming terhadap perilaku toksik dalam permainan di kalangan siswa.

Metode kuantitatif dengan desain survei diterapkan dalam paradigma positivistik, bertujuan untuk menjelaskan hubungan antara variabel. Studi ini melibatkan 118 responden mahasiswa berusia di atas 17 tahun yang secara rutin bermain Mobile Legends dan mengonsumsi konten game di YouTube. Data dikumpulkan melalui kuesioner skala Likert terstruktur dan dianalisis menggunakan regresi linier berganda melalui SPSS. Hasilnya menunjukkan bahwa baik frekuensi bermain Mobile Legends maupun kebiasaan mengakses YouTube Gaming memiliki pengaruh yang signifikan secara statistik terhadap perilaku toksik dalam permainan digital. Model regresi menunjukkan tingkat signifikansi 0,00 ($< 0,05$) untuk kedua variabel dan nilai R^2 sebesar 0,666, yang menunjukkan bahwa faktor-faktor ini menjelaskan 66,6% variasi dalam perilaku, sementara 33,4% sisanya mungkin disebabkan oleh faktor lain seperti pengaruh teman, gaya pengasuhan, atau kesehatan mental. Studi ini memberikan wawasan berguna tentang bagaimana pola keterlibatan digital terkait dengan kecenderungan perilaku di kalangan siswa.

Kata kunci: Mobile Legends, YouTube gaming, perilaku toksik, siswa, keterlibatan online, perilaku bermain game

INTRODUCTION

The popularity of mobile games in Indonesia keeps on increasing each year, more than 3.45 billion downloads of mobile games had been recorded through Google Play in 2022, increased 0.32 billion from the previous year, this number made Indonesia in top 3 countries with most downloaded mobile games through Google Play in the world (Jeihan, 2023).

One of the most popular mobile games in Indonesia is Mobile Legends: Bang-Bang (MLBB), based on suara.com total players of Mobile Legends in Southeast-Asia reached 70 million users in 2021 and almost 50% of them are Indonesian players with more than 34 million active users (Agung & Rezza, 2021). Based on data.ai, reported by "State of Mobile 2023", Mobile Legends is the most popular mobile games in Indonesia and the most played mobile games in Indonesia. In 2022, 703 million hours in total is the time spend by all Mobile Legends players spend in playing Mobile Legends (Galuh & Yudha, 2023).

Head of YouTube Gaming, Ryan Watt said more than 100 billion hours gaming contents had been watched in 2020, this number increased twice than in 2018. From 100 billion hours, 10 billion hours of it was watched directly from YouTube Gaming (Maria, 2020). YouTube claimed that they have more than 40 million active gaming channels with 80.000 channels reached 100.000 subscribers, 1.000 channels reached 5 million subscribers and 350 channels reached 10 million subscribers on YouTube (Maria, 2020).

Over the past few decades, the gaming sector has grown; most of the users fall between the ages of 18 and 29, so both teens and adults including students. Online games typically lead to addiction in teenagers; nevertheless, they are a normal past time activity that they engage in.

Although Mobile Legend is among the most popular online games available in Indonesia, it causes problems for young people and children there. Bullying usually occurs in Mobile Legend such players are uttering harsh words during a losing condition in the game; this is one type of toxic behaviour. The addiction of this game generates emotions to players during the match due for numerous reasons. Mobile Legends offers chat function and voice chat feature both during and off the game, which caused the game to be chaotic and the team to lost the game. A player is displaying their aggressive behaviour by the feeling to "Attacked" other players verbally or non-verbally.

While most Generation Z enjoys playing video games and online games and seeing gaming contents on YouTube, it is natural for young people to play online games while viewing contents of the game they played. Young people's competitive scenario resulting from their addiction to online games is shaped by their idolising of content creators as their mirror inside the game.

This study is based on the problem of whether the intensity of playing Mobile Legends: Bang Bang and the intensity of accessing gaming content on YouTube have an influence on toxic in-game behaviour exhibited by students.

THEORITICAL FRAMEWORK

Research Paradigm

This research will be conducted using a quantitative-research method with positivistic paradigm to explain the casual relationship. Positivist research is concerned with the development and empirical testing of general theories that govern the natural and social world (Orlikowski & Baroudi, 1991).

This research has three variables; the free variables or the independent variables are The Intensity of Game Playing Mobile Legends Bang-Bang and The Intensity of Youtube Gaming Access while the bound variable or the dependent variable is Toxic Behavior in Game of Students.

State of The Art

Ema Putri Oktaviani and Siti Nurjanah of Universitas Muhammadiyah in 2020 lead first the research. Their research under the title "Hubungan Intensitas Bermain Game Online Terhadap Perilaku Agresivitas Pada Remaja di SMA Muhammadiyah Sokaraja" is a descriptive quantitative employing cross sectional approach. This study makes use of the Social Learning Theory, which holds that

people pick up violent behaviour among other ones by watching and copying others.

From Universitas Pahlawan Tuanku Tambuasi, Dian Febriady, Putri Hana Pebriana, Melvi Lesmana Alim, and Rizki Ananda are the second researchers working on 2022. Research under the heading "The Impact of Free Fire Online Games on Student's Social   Behaviour in Elementary School" is quantitative using an exposed factors approach. With forty samples students at SDN 004 Bangkinang, this study employs questionnaires and documentation as its data collecting methods. This study reveals that kids who spend their time on online games either four to six hours or even more a day could develop addiction to them.

Rising from University of Zaragoza, Raquel Lozano-Blasco, Pilar Latorre-Martinez, and Alejandra Cortes-Pascual produced third research titled "Analizing Teens an Analysis from the Perspective of Gamers in YouTube." By means of channel browsing and analysis, the study seeks to ascertain the knowledge of gamer behaviour in YouTube. This is qualitative semantic study applying sentiment analysis and social media analysis.

Andika Wibisono and Agus Naryoso's fourth research project, "Hubungan Antara Intensitas Bermain Game Mobile Legend dan Pengawasan Orang Tua Dengan Perilaku Agresif Verbal Pada Anak Remaja," 2019 This study intends to establish the relationships between parental supervision towards violent behaviour in teenagers and the degree of playing Mobile Legend. Using a questionnaire as their tool, this is quantitative and explanatory study whereby

they observe their population—high school pupils in Semarang. General Aggression Model (GAM) and Parental Mediation with Interaction Restrictions model are applied in this paper.

Yakobus Prismawan Jati Pamungkas of Universitas Kristen Satya Wacana in 2023 conducted last research titled "Pengaruh Terpaan Channel YouTube Oura Gaming Terhadap Perilaku Imitasi Bermain Game Mobile Legend." This study intends to investigate the effects of Oura Gaming YouTube channel on the imitation behaviour in playing Mobile Legend to high school students. With 100 respondents chosen by a purposive sample method, this is quantitative research using questionnaires as our instruments. In conclusion, from these five research that has been done, there are several factors that influence people who plays online games towards their toxic behavior, such as addiction to online games, excessive hours playing online games and the influence of YouTubers gaming. This study introduces new variables which are "The Intensity of Game Playing: Mobile Legends Bang-Bang" and "The Intensity of YouTube Gaming Access" towards "Toxic Behavior in Game Among Students".

Cultivation Theory

Developed by George Gerbner, cultivation theory investigates the relationship between media exposure especially television and people's perceptions of the world (Morgan, 2017). According to cultivation theory, television viewing over time "cultivates" viewers' perspective of reality; in the words of its early supporters, "television is the medium of the socialising of most people into standardised roles and behaviours." It

serves, in a word, enculturation (Gerbner & Gross, 1976, p. 174).

Using cultivation theory, one may better understand how regular exposure to violent or aggressive content in video games might affect players' attitudes and behaviour. The cultivation theory holds that those who spend a lot of time in violent virtual environments could finally start acting more violently. Development theory in the context of video games proposes that players' perspective on the actual world will be connected to the world of video games by constant on playing of them (Chong, Teng and Skoric, 2012).

Because of the media exposure an individual gets, cultivation theory will help one develop on a long-term effect. Long-term media exposure can progressively alter people's perceptions of the world and attitudes about specific behaviour, claims cultivation theory (Anderson & Dill, 2000).

One kind of media exposure that could form a perspective in which anger or violence is seen as suitable response to conflict is violent video games. Playing violent video games repeatedly could cause one to internalise ever more hostile attitudes and behaviours (Anderson & Dill, 2000).

RESEARCH METHOD

This study uses a quantitative explanatory approach, aiming to explain the causal relationship between the intensity of playing Mobile Legends and the intensity of YouTube gaming access on toxic behavior in game among students. Students who have been exposed on playing Mobile Legends and watching YouTube gaming contents make up the population of this study. Non-probability sampling, which

was used in this study, means that not every component or member of the population has an equal chance of being chosen as a sample. This study uses a survey approach as its data collection tool to gather data in the field. The data are the main information used to address the study objectives. For the method of gathering data, which takes the shape of a questionnaire (Leslie & Earl, 2003).

FINDINGS AND DISCUSSION

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5716,162	2	2858,081	117,566	,000[a]
	Residual	2795,703	115	24,310		
	Total	8511,864	117			

a. Predictors: (Constant), Intensity of YouTube Gaming Access, Intensity of Game Playing Mobile Legends

b. Dependent Variable: Toxic Behavior

Based on the table above, it can be seen that the significance value has a value of 0,000 (Sig <0,05) means that the independent variables has simultaneously effects on the dependent variable. Thus, the intensity of game playing Mobile Legends and the intensity of YouTube gaming access affects toxic behavior.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,819[a]	,672	,666	4,931

a. Predictors: (Constant), Intensity of YouTube Gaming Access, Intensity of Game Playing Mobile Legends

From the graph above, it shows that the adjusted R square is 0,666 or 66.6%, this shows that the intensity of game playing Mobile Legends and the intensity of YouTube gaming access have 66.6% of toxic behavior and only 33.3% of the toxic behavior is explained by variables outside the independent variables in this research.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,984	2,092		,948	,345
	Intensity of Game Playing Mobile Legends	,446	,120	,361	3,710	,000
	Intensity of YouTube Gaming Access	,480	,095	,493	5,066	,000

a. Dependent Variable: Toxic Behavior

The constant value of 1.984 indicates that if the intensity of game playing Mobile Legends and the intensity of YouTube gaming access has a value of 0 and the toxic behavior has a value of 1,984.

Based on the coefficient value of the intensity of game playing Mobile Legends (B) is 0,446, it means that there is a positive influence between X1 and Y. Thus, every time game playing Mobile Legends increases, toxic behavior increases by 0,446.

The coefficient value of intensity of YouTube gaming access (B) shows 0,480), means it has positive influence between X2 towards Y where every time there is an increase of YouTube gaming access, there is an increase of 0,480 of toxic behavior.

Cultivation theory has been used to comprehend how players' attitudes and behaviours can be influenced by frequent exposure to violent or aggressive content in video games. According to the cultivation idea, players who spend a lot of time in violent virtual environments may eventually start acting more aggressively. In video games concepts, cultivation theory suggests that through continuously on playing video games, the view of players on the real world will be related to the world of video games (Chong, Teng and Skoric, 2012). Cultivation theory states that regular exposure to competitive and possibly hostile gaming environments, such as the fast-paced game Mobile Legends, might normalize or reinforce harmful habits. High engagement players could start to see such conduct as normal or acceptable, particularly if they see it in others or themselves during games. From YouTube gaming, even if the viewer is not actively playing, they may develop attitudes and actions that resemble what they see when they watch YouTube gaming material, especially that which displays or condones toxic conduct.

CONCLUSION

Based on the results of this study, it can be concluded that both the intensity of playing Mobile Legends and the intensity of YouTube gaming access have a significant and positive influence on toxic behavior in games among students.

The regression analysis showed a significance value (p-value) of 0.000 for both independent variables, indicating that they each have a statistically significant influence on toxic behavior. The R Square value of 0.666 implies that 66.6% of the variation in toxic behavior can be explained by the two independent variables studied, while the remaining 33.4% is influenced by other factors not examined in this research.

RECOMMENDATION

For the future researchers, it is hope that this research can be used as a data source or reference for future research that will be conducted based on more complete and broader information.

The findings showed that the intensity of game playing Mobile Legends and the intensity of YouTube gaming access tend to be high. This study also provides further knowledge on the intensity of game playing Mobile Legends and the intensity of YouTube gaming access towards toxic

behavior among students. This evidence could be a resource for further research on related subjects.

The finding of this research showed what factors can influence toxic behavior among students. This evidence is important as the reference in developing campaign and good behavior among Mobile Legends player to be aware of toxic behavior.

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