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Multi-Method Analysis On Video Game Addiction And Academic Motivation Among College Student In Batam: A Case Of Genshin Impact

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Abstract

Online games are a new lifestyle for all ages. The presence of online games is now possible with the many internet cafes (warnet) in cities and rural areas. There is a fairly large community for the Genshin Impact game itself. Factors contributing to this explosion of the global video game community of games. Some claim that the main reason Genshin Impact is so famous is its open-world RPG style of play, which allows players to explore Teyvat (the world in Genshin Impact) freely without worrying about running out of locations to explore. This research was conducted with the aim of knowing the impact of Genshin Addiction on motivation, social anxiety, loneliness among students in the city of Batam. The method in this study uses quantitative and qualitative with techniques for distributing questionnaires from Google Forms to Batam city students and interviews also data analysis using IBM SPSS Statistics 25 and SmartPLS. The results of the quantitative research show that the variables of social anxiety and loneliness have a positive effect on genshin addiction. The qualitative results show that some respondents still feel anxious and lonely when playing genshin games. From this study, genshin addiction does not have a significant relationship with motivation. Meanwhile, genshin addiction has a significant relationship with social anxiety and loneliness. Therefore, from these findings it is suggested to reduce or limit playing Genshin Impact and try to do positive activities.

Keywords: Genshin Impact, Mobile Game Addiction, Motivation, Social Anxiety, Loneliness

Introduction

Online gaming is a new lifestyle for individuals of all ages. Nowadays, internet cafes (warnet) are common in both cities and rural areas, and they help make online gaming a reality. High-spec personal computers (PCs) are more expensive than standard computers with minimal specifications, but can be used for any purpose. In addition, online games require a strong internet connection. However, one's intention to play online games is not affected by these circumstances. This is evident in internet cafes (internet cafes) which are

not always empty of customers. Apart from meeting people who are already working and supporting themselves, we can also meet children who are still in elementary school at internet cafes (Yulianti et al., 2020).

The open-world video game Genshin Impact (GI) published by miHoYo on September 28 2020 has earned USD 2 billion or around IDR 28.6 trillion. According to App Store and Google Play statistics, this game is the third most popular mobile title in the world. GI competes directly with PUBG Mobile in second place and Honor of Kings at #1. Until the end of last March, GI had raised USD 1 billion or around IDR 14.3 trillion, making it the fastest mobile game to do so. Pokemon Go took nine months to create the same number, therefore this number trumps it. Genshin Impact is one of the most popular games in Indonesia and has a fairly large community. elements that led to the explosion of the game's global video game community. Some claim that the main reason Genshin Impact is so famous is its open-world RPG style of play, which allows players to explore Teyvat (the world in Genshin Impact) freely without worrying about running out of locations to explore. Some believe that Genshin Impact's main selling point is its cast of characters, each of whom have different backgrounds, looks, and skills (Saputro Panji, 2021).

Sociological research shows that those who are fascinated by online games are often selfish and value individuality. This poses a risk to the social life of these people as it causes them to withdraw from their environment and gives them the opportunity to believe that their social environment is only for the purpose of playing games. Many of them are middle class, upper middle class, or lower middle class, ranging from elementary school children to university students. With the development of online game addiction in our culture, especially in Indonesia, the problem of student motivation is becoming increasingly complex. From the perspective of student success and cognitive, both elementary school students and college students, the perceived incentives to learn can be observed. The desire to learn is largely unaffected by the current situation. It is customary to include everyone's lifestyle when assessing their desire to learn, as well as their age and social status. The goal of developing technology is to assist and inspire students to acquire the cognitive and psychomotor skills necessary for success in the contemporary world. But actually the technical progress and availability of online games has caused a backlash, which has reduced the desire of most online game addicts to learn (Yulianti et al., 2020).

This study researched by the author is research that was done by Jin-Liang Wang, Jia-Rong Sheng and Hai-Zhen Wang. The results of previous studies revealed that male teenagers tend to feel more anxious when using mobile games in an addictive manner. Dissemination of data using a questionnaire applied by previous researchers concluded that mobile games greatly affect depression, social anxiety, and loneliness (Wang et al., 2019).

Therefore, based on the studies described above, the authors will conduct research on the influence of addiction to playing genshin impact games on student learning motivation in the city of Batam entitled "multi-method analysis on video game addiction and academic motivation among college students in Batam: a case of genshin impact" which aims to find out whether Genshin Addiction really influences Motivation, Social Anxiety, and Loneliness.

Literature Review

From the research of [1] a test was carried out on the effect of Mobile Game Addiction on the impact of Depression, Social Anxiety and Loneliness among junior high school (SMP) level youth in Guizhou province using a questionnaire distribution technique with a Likert scale point 1 (disagree) up to point 5 (strongly agree). The variables in this study are Mobile Game Addiction, Depression, Social Anxiety, and Loneliness. The results of the research conducted showed that Mobile Game Addiction had a significant impact on Depression compared to Social Anxiety and Loneliness, besides that it was also found that male adolescents had a more significant Social Anxiety impact than Depression and Loneliness.

From the research of [2] examined the relationship between the duration of playing online games and the level of pressure (stress). The object of research was 148 students of SMPN 03 Kecamatan Sungai Raya. This cross-sectional approach was tested with the Spearman correlation test. The results of this study have a significant impact that the longer you play online games, the higher your stress level will be.

From a study by [3] tested the effect of online game addiction on depression levels. This study used high school students in the city of Bandar Lampung as research objects. This study used a cross-sectional approach and involved 546 respondents from 19 schools in the city of Bandar Lampung, the data collected using a questionnaire was tested using the Spearman correlation test. The results of this study prove that addiction in playing online games has a significant impact on depression.

From research [4] tested whether video games caused motivation levels using the Qualtrics Survey software in participants enrolled in English courses at the Institutional Review Board (IRB). This study used a cross sectional approach and involved 95 respondents. The results of this study prove that addiction in playing online games has a significant impact on motivation.

From research [5] examining the relationship between online game addiction to Loneliness with the research object being junior high school (SMP) students. This study involved 553 respondents in filling out the questionnaires that had been distributed. The results of this study prove that addiction to playing online games has a significant impact on loneliness in adolescents. The following is a summary of the five journals used by the author as a literature review in this study, which can be seen in Table below

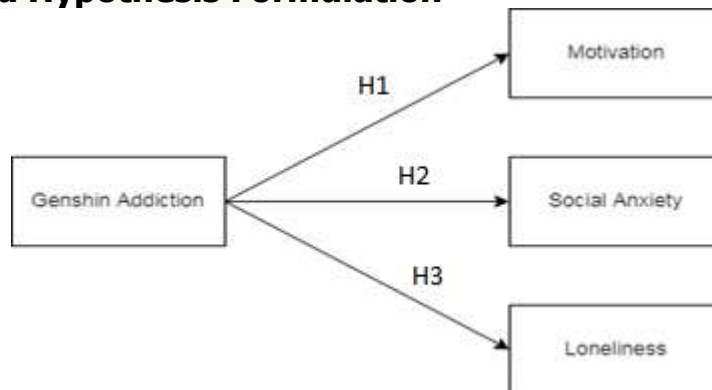
Table 1. Literature Review

| Researcher | Year | Research Conclusions |
|---|-------------|---|
| Jin-Liang Wang, Jia-Rong Sheng, dan Hai-Zhen Wang | 2019 | <i>Mobile Game Addiction affects Depression, Social Anxiety, dan Loneliness</i> |
| Wahyuningsih | 2019 | The duration of playing online games has a significant impact on high stress levels |
| Zaelani, Setiawati, dan Lestari | 2019 | Addiction in playing online games has a significant impact on depression |

| | | |
|--|------|---|
| Papia Bawa, Sunnie Lee Watson, dan William Watson | 2018 | Addiction in playing online games has a significant impact on motivation. |
| Yanhua Wang | 2021 | Addiction to playing online games has a significant impact on Loneliness |

Research Methods

Research Model and Hypothesis Formulation



Picture 1 Research Model by (Wang, Sheng, & Wang, 2019).

- H1: Genshin Addiction has a significant effect on Motivation
- H2: Genshin Addiction has a significant effect on Social Anxiety
- H3: Genshin Addiction has a significant effect on Loneliness

Population and Sample

Population is a target that refers to a group of people to be studied. The population of this study were students in Batam City, totaling 35,091 in 2020. The sample is part of the population with similar characteristics that will become research respondents. Sampling used a random sampling method with respondents playing the Genshin Impact game The research sample was determined based on the following Slovin formula.

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{35.091}{1 + 35.091(0,05)^2}$$

$$n = \frac{35.091}{88,7275}$$

n = 395,49 (rounded down to 395)

Information :

n = Number of Samples

N = Total Population

e = Margin Error

Variable Operational Definitions

Genshin Impact

Genshin Impact is an online game with the MMROPG genre which stands for Massively Multiplayer Role-Playing Game Online, meaning that online games are played by many organic (non-computer/AI) players simultaneously. This game just turned 1 year old in September 2021. This game itself has been downloaded by more than 10 million players from around the world and was voted the best game in the MMROPG Genre in October 2021 (Seventilofa, 2022).

| Variable | Indicator | Source |
|-------------------|--|----------------------|
| Genshin Addiction | I once felt tense and uneasy when I couldn't play genshin impact | (Sheng & Wang, 2019) |
| | I have never felt frustrated or angry when playing the Genshin Impact game | |
| | because of the genshin impact, I experienced a decrease in performance at work | |
| | I once felt sad when I couldn't play Genshin Impact | |
| | I once felt stressed when I couldn't play genshin impact | |
| | I play genshin impact to relieve stress | |
| | i play genshin impact to feel better | |
| | I play genshin impact to get rid of negative feelings | |
| | I play genshin impact to forget for a moment the problems I'm facing | |
| | I once played genshin impact all night | |
| | because of the genshin impact, i spend less time with friends, partner or family | |

Picture 2. Genshin Addiction Variable Operational Definition

Motivation

Motivation itself is a motive that refers to the power of the person in himself, and becomes the reason for action. Motivation is the encouragement and strength in a person to carry out certain goals he wants to achieve.9 While Mc. Donald, as quoted from Sardiman in

his book states that "motivation is a change in energy that exists within the individual which is the subject of "feelings" which are preceded by a response to a goal" (Lubis et al., 2021).

Problems in learning motivation in this digital era are very sad, some are using it well, some are using it badly, including addiction to playing online games which is growing very rapidly in society, especially in Indonesia. Learning motivation can be seen from an achievement and cognitive perspective of students. Both elementary school and tertiary students make a lot of differences in learning motivation. This becomes a tendency that awareness of learning motivation is not only seen from age and educational status.

| Variable | Indicator | Source |
|------------|---|--|
| Motivation | have options related to classwork that are useful to me | (Bawa, P., Watson, S. L., & Watson, W., 2018) |
| | i like that given a few different games to choose from | |
| | i love having the option to actually play the game and not play the game. | |
| | I chose the option because I felt less stressed | |

Picture 3. Motivation Variable Operational Definition

Social Anxiety

Social anxiety disorder is a debilitating condition that is experienced by approximately 13% of the population at some point in their life. He is characterized by overestimation of probabilities and negative social consequence evaluations, which often results in avoidance of feared social situations.

| Variable | Indicator | Source |
|----------------|--|------------------------|
| Social Anxiety | i worry about what people say or think about me in playing genshin impact game | (Wang et al., 2019) |
| | I'm worried that other people don't like me playing genshin games | |
| | I feel people make fun of me when I play the genshin impact game | |

Picture 4. Social Anxiety Variable Operational Definition

Loneliness

Loneliness or loneliness is an individual's emotional and cognitive response to having little social contact and not meeting their expectations. When social relations deteriorate in quality and quantity, a person feels lonely (Diana Savitri Hidayati, 2018).

| Variable | Indicator | Source |
|------------|--|---------------------|
| Loneliness | I feel abandoned by friends when playing the Genshin Impact game | (Wang Yanhua, 2021) |
| | I often feel that I have no friends in genshin impact | |
| | i feel a lot of friends | |

Picture 5. Loneliness Variable Operational Definition

Results and Discussion

| Independent Variable | N | Minimum | Maximum | Average | Standard Deviation | Range |
|----------------------|-----|---------|---------|---------|--------------------|-------|
| Social Anxiety | 395 | 6 | 25 | 23.70 | 2.180 | 17 |
| Motivation | 395 | 5 | 20 | 10.40 | 1.890 | 12 |
| Loneliness | 395 | 5 | 20 | 17.85 | 2.600 | 14 |

Table 2. Descriptive Statistic Test

Based on the data above, it can be concluded that Social Anxiety has the lowest score of 6 and the highest total score of 25. In this case, one can certainly prove that social anxiety either strongly agrees or disagrees strongly with influencing Genshin Addiction. By having an average of social anxiety of 23.70.

Motivation has the lowest score of 5 and the highest total score of 20. In this case, one can certainly prove that one strongly disagrees with motivation in influencing Genshin Addiction. By having an average motivation of 10.40.

Loneliness has the lowest score of 5 and the highest total score of 20. In this case it can of course be able to prove that not all agree with loneliness which can affect Genshin Addiction by having an average of 17.85 for loneliness.

Outer Loading

As can be seen in table below, the goal is to be able to focus on a reflective model, namely the outer loadings in the results of the outer loading test can be linked to one variable to another. Indicators or values below 0.5 are proven to be ineffective. Below is a table that is used:

| Independent Variable | Factor Loading | Conclusion |
|----------------------|----------------|----------------|
| Motivation 1 | 0.480 | <i>Invalid</i> |
| Motivation 2 | 0.730 | <i>Valid</i> |
| Motivation 3 | 0.710 | <i>Valid</i> |
| Motivation 4 | 0.750 | <i>Valid</i> |
| Social Anxiety 1 | 0.700 | <i>Valid</i> |
| Social Anxiety 2 | 0.680 | <i>Valid</i> |

| | | |
|------------------|-------|-------|
| Social Anxiety 3 | 0.840 | Valid |
| Loneliness 1 | 0.746 | Valid |
| Loneliness 2 | 0.825 | Valid |
| Loneliness 3 | 0.733 | Valid |

Table 3. Outer Loading

If it goes beyond 0.6, then the query is appropriate. This suggests that the questionnaire questions are valid and can be used as a tool to assess study variables. By using data from the outer loading, we can see that out of a total of 25 questions, 3 independent variables and 1 dependent variable have a value greater than or equal to 0.60, and 1 of these questions has a variable that is declared invalid.

Fornell-Larcker

| | Motivation | Social Anxiety | Loneliness | Genshin Addiction |
|-------------------|------------|----------------|------------|-------------------|
| Motivation | 0.680 | | | |
| Social Anxiety | 0.523 | 0.760 | | |
| Loneliness | 0.310 | 0.552 | 0.789 | |
| Genshin Addiction | 0.310 | 0.496 | 0.397 | 0.720 |

Table 4. Fornell-Larcker

It can be seen in table 4. Based on the data above, it is certainly able to prove that the dependent variable, namely Genshin Addiction, has a result that is below the standard score of 0.789, which is worth 0.720.

Heteroit Monotrait Ratio (HTMT)

As shown in table below, if the HTMT score is certainly below 0.9, you have achieved discriminant validity. In table below, all have met the requirements and are appropriate except loneliness because its above 0.9.

| | Motivation | Social Anxiety | Loneliness | Genshin Addiction |
|----------------|------------|----------------|------------|-------------------|
| Motivation | | | | |
| Social Anxiety | 0.659 | | | |

| | | | | |
|-------------------|-------|-------|-------|-------|
| Loneliness | 0.370 | 0.660 | | |
| Genshin Addiction | 0.420 | 0.703 | 1.230 | 0.610 |

Table 5. Heteroit Monotrait Ratio (HTMT)

Average Variance Extracted (AVE)

It can be seen in table 6. If you want to fulfill the Rule of Thumbs convergent validity based on the AVE value, the value must be 5. It can be seen in the table below that the results of the test. And it can be said that the criteria have met convergent validity, where the value is more than 0.5.

| <i>Variable</i> | <i>AVE (Average Variance Extracted)</i> | <i>Conclusion</i> |
|-------------------|---|-------------------|
| <i>Independen</i> | | |
| Motivation | 0.465 | Not Significant |
| Social Anxiety | 0.585 | Significant + |
| Loneliness | 0.630 | Significant + |
| Genshin Addiction | 0.520 | Significant + |

Table 6. Average Variance Extrated (AVE)

Direct Effect (Path Coeficients)

| <i>Variable</i> | <i>M</i> | <i>T-Statistics</i> | <i>P values</i> | <i>Conclusion</i> |
|-----------------|----------|---------------------|-----------------|-------------------|
| Motivation | 0.205 | 3.420 | 0.001 | Significant |
| Social Anxiety | 0.560 | 12.420 | 0.000 | Significant |
| Loneliness | 0.170 | 3.350 | 0.001 | Significant |

Table 7. Direct Effect (Path Coeficients)

It can be seen in table above. Output research, whose purpose is to see the influence of latent variables, is called Path coefficients. If the P value is less than 0.05 or the T statistic is more than 1.96, it can be seen that the variables are significant.

R Test

It can be seen in table below. The results of the R test, it can be concluded that genshin addiction can explain 65.3% and 34.7% can be obtained from other variables.

| <i>Variabel Dependen</i> | <i>Adjusted R Square</i> | <i>Persentase</i> |
|--------------------------|--------------------------|-------------------|
| Genshin Addiction | 0.653 | 65.3% |

Table 8. R Test

Results of Interview Respondents

| Variable | Question | Answer |
|-----------------------|--|---|
| Motivation | Can genshin make you more enthusiastic about learning? | From the results of the answer of several respondents that genshin can make you more enthusiastic because the genshin game is very adventurous and challenging and teaches us to focus on the game, therefore we can apply this to lessons so we can learn more enthusiastically |
| | What inspires you when playing genshin games? | The answers given by several respondents said playing the genshin game was very exciting and challenging for every player |
| Social Anxiety | How do you feel when playing genshin games? | From the results, several respondents said what they felt was happy, but sometimes they felt afraid of losing and worried that they would be ridiculed by other players |
| | Have you ever felt afraid of losing when playing genshin games? | Some of the respondents said that there were those who felt afraid, there were also some who said that it was normal when playing genshin games |
| Loneliness | Have you ever felt lonely because of playing genshin games? | Some respondents said they had felt lonely and some said they did not feel lonely |
| | Do you communicate more with online game friends or in the real world? | The results of several respondents said that they often communicate with game friends compared to the real world because some of them are very introverted and some respondents said that they communicate more often with real world friends than game friends, because for them it is easy to mingle with all of them |

Table 9. Results of Interview

Based on the AVE value, we can conclude that:

H1 is not accepted: genshin addiction does not affect motivation in students in the city of Batam

H2 is accepted: genshin addiction affects social anxiety in university students in Batam

H3 is accepted: genshin addiction affects loneliness in students in the city of Batam

Conclusions

A study was conducted to determine "multi-method analysis on video game addiction and academic motivation among college students in Batam: a case of genshin impact. The

finding of the correlation between each variable gives credence to each of these working hypotheses. The logical conclusion is as follows:

1. Hypothesis 1 is not necessarily able to be approved because motivation is not necessarily capable of having a significant relationship with Genshin Addiction due to the AVE score of motivation having a value of 0.465 and below 0.5, therefore that motivation is proven to be invalid.
2. Hypothesis 2 can certainly be approved because Social Anxiety can certainly have a significant positive relationship with Genshin Addiction because the AVE score of social anxiety has a value of 0.585 and above 0.5, therefore that social anxiety is proven valid.
3. Hypothesis 3 can certainly be approved because loneliness can certainly have a significant positive association with Genshin Addiction. Because the AVE score for loneliness has a value of 0.630 and above 0.5, it means that loneliness is proven valid.

And based on the interview it can be concluded that:

1. Motivation has no effect because most of them are more enthusiastic and exciting when playing the genshin impact game
2. Social anxiety is influential because most of them are afraid of losing because they are afraid of being ridiculed by friends/other people
3. Loneliness has an effect because most of them feel lonely and they communicate more often with online friends

Suggestion

Based on the research that the writer has done, the writer will provide some suggestions that can be used for future researchers as a reference, namely as follows:

1. It is hoped that further research can narrow the research population so that it is easy to collect data for analysis.
2. It is hoped that there will be more variants of respondents in order to get convenience in analyzing more accurate data.
3. Genshin players are expected to play less games and do more positive things

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