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Innovation of Businesses, and Digitalization during Covid-19 Pandemic

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The Causation of Online Game Addiction Among University Student

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Abstract This research aims to identify the causation of online game addiction among university student. This study tested three hypotheses, namely (1) Relationship between psychological factor and online game addiction, (2) Relationship between technological factor and online game addiction, (3) Relationship between media factor and online game addiction. This study obtained a sample of university students, using a questionnaire survey was conducted on 105 samples. The factors are developed from justice theory. The quantitative methodology is adopted for this study and the result shows that all the variables are supported by the carried out the analysis.

Keywords Justice · Psychological factor · Technological factor · Media factor

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1 Introduction

1.1 Background of Study

Nowadays, the majority of people use technology. When technology advances, it grows by simply clicking to make things simpler for individuals. Even the Internet is very open for individuals. The Internet is the largest medium we use to connect around the world today. Playing online games is one of these things. It is a type of indoor gaming that is normally used on a computer or mobile device. Offline games are commonly played in single games, whereas online games require the internet to link players around the world or communicate. The online gaming that the Internet offers. As a result, online games are extremely popular for individuals, especially students, because they can easily access the internet and are downloaded free of charge (Iowa State University 2011).

1.2 Problem Statement

Online games are meant to draw students for hours on end. When they play sports, most students experience a sense of strength and accomplishment. They have little financial freedom in the modern world and are trapped in the uncomfortable void between infancy and adulthood. Playing an online game offers an escape from life for them.

Online games offer a sense of excitement to sedentary students. When they are facing a new challenge in a game, some students get an addictive adrenaline rush. Most games often have different levels of ability that work to draw the gamer in. The gamer earns a reward and feels a sense of satisfaction with each new level reached. Games such as massive online role- playing multiplayer games (MMORPG) are highly addictive. In order to progress, these types of games force the player to perform tasks, and sometimes players must work together in an online forum as teams. The more time students spend in front of a computer or mobile screen, the less time they have to deal with their assignments or socialize with peers. They are more sedentary as well, which can lead to health issues.

When a student starts playing the game online more often and longer, it can have some lasting impact on their lives. Students have spotted failure in education achievement and relationship due to their online game addiction.

1.3 Objective

This research is carried out with the primary goals of understanding the causation of online game addiction among university student. This research specifically aims to; (1) to investigate the relationship between the psychological factor and online game

addiction among university student. (2) to identify the technology variables that lead to addiction to online game among university student. (3) to analyzing whether media factors can trigger online gaming addiction among university student.

1.4 Scope of Study

Online game addiction research is still a fairly recent condition. There are not many researchers doing this study about how to formulate any preventions, especially for students. Since excessive online game addiction is the problem, it can have a serious unforeseen effect on both the gamer and the people around them. Moreover, this research focus on the causation of online game addiction among university students.

This study offers solutions to the problem and thus help to find ways to eventually avoid and prevent it from being addictive. Moreover, with the information collected, some students could find solutions for online gaming addiction to improve their academic performance.

2 Literature Review

2.1 Psychological Factor

This research focuses on researching the potential causation of online game addiction among university students. Unlike drug abuse, the biological aspect of video game addiction is unknown. Study shows that gambling raises dopamine, but there is more to addiction than brain chemistry (Aminova and Marchi 2021; Rooij 2010). The addict is suffering from a psychological aspect of the addiction. Online gaming helps a person to escape the real world and shift the sense of self-esteem (Rooij 2010). An addiction to an online game is not so far removed from opioid addiction. Virtual life becomes more enticing than real life. Compared to the risks of a drug overdose, too much gaming may seem relatively harmless, but experts warn video game addiction can destroy lives. Students who play four to five hours per day have no time for socializing, doing assignments, or playing sports leaving little time for normal social development. According to Lan Ying Huang (2011), players of online games can also see the games as a source of diversion and filling time by playing the online game features. It seems that students who play games to get away from their lives or pretend to be other individuals are most at risk of being part of a vicious circle. These players escape their issues by playing games, which in turn interfere with their lives because they're too busy playing games.

2.2   Technological Factor

According to Carme Mangiron (2021), developers and publishers have been ensuring the most of their attempts to increase the reception of online gamers. People keep track of the latest version of the game to enable them follow the pattern. Online game incentive schemes, such as achieving a high level in the game, gaining new weapons, can also inspire players to play online (Choi et al. 2007). According to Choi et al., the aspect that affects addiction is the role of satisfying interdependence. This happens because online players are drawn to the task and incentive of the game. There are a number of challenges and prizes from various types of games. The rise in this addiction is due to technology. Technologies have continued to innovate over time. Addictions to electronic devices such as online game have been referred to as 'technological addictions' (Griffiths 1995; Nassar 2018).

2.3   Media Factor

The role of the media in promoting the games also contributes to why such games would be more popular in the addicted games. Unintentional advertisement processing, unconscious learning states, and retentive exposure effects in advertisement and marketing literature remain intensely debated topics (Aminova et al. 2020; Mick 2003). In their immediate surroundings, people often do not consciously include or process any of the commercials (Bauer and Greyser 1968; Webb and Ray 1979). According to Wood (2008), media hype regarding video game addiction may encourage some of the concerned relatives to define totally natural actions as problematic. The fundamental consideration is that the influence of in-game ads relies on the respective method of processing, which is in turn influenced by factors dependent on stimuli and person thresholds (Mau and Silberer 2008).

2.4   Hypothesis Development

There are three hypotheses conducted for this study, which are:

   H1: To investigate the relationship between the psychological factor and online game addiction among university student.
   H2: To identify the technology variables that lead to addiction to online game among university student.
   H3: To analyzing whether media factors can trigger online gaming addiction among university student.

2.5   Conceptual Network

(See Fig. 1).
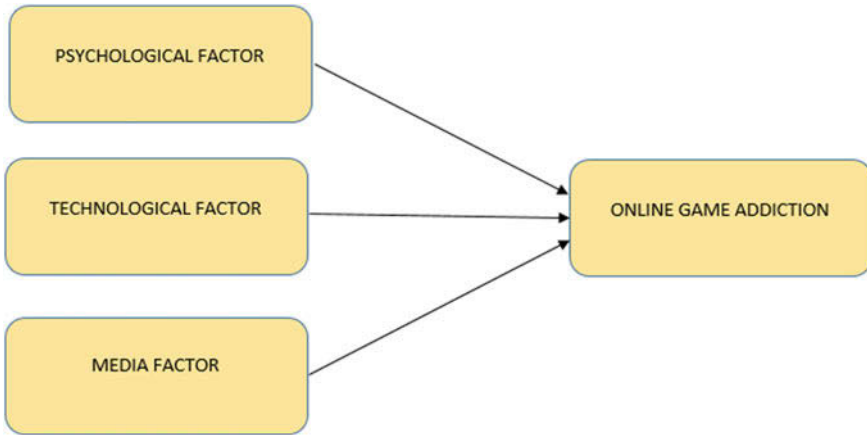
Fig.1 Conceptual framework

3 Methodology

3.1 Research Design

The purpose of the research design is to provide an appropriate framework for the study. The choice to be made regarding the research approach is a very important decision in the research design process, since it determines how the relevant information for the study obtained. In order to provide a solution, research can be described as a systematic and organized effort to investigate a particular problem (Sekaran 2000).

According to Smith et al. (2003), quantitative research employs the traditional, positivist, experimental, or empiricist method to enquire into an identified problem. Quantitative is based on the analysis of a theory, measured by numbers and analyzed using statistical techniques, and emphasizes objectivity and reproducibility in particular (Smith et al. 2003). A structure questionnaire was designed to obtain the data on the causation of online game addiction among university students. The data were then being analyzed to discover the relationship.

3.2 Data Collection

Data collection is a process of gathering information from all relevant sources to find answers to the research problem, to test the hypothesis and to evaluate the

results. Methods for data collection can be split into two categories: primary data and secondary data.

Primary Data
In this study, data collection is through primary data collection method which is a common online survey questionnaire. An online questionnaire is used to gather information from university students. Next, the SPSS and Smart PLS is used as a tool to identify and examine information on the basis of a questionnaire.

Secondary Data
Secondary data is the data that has already been collected and made readily available for researchers to use for their own research through primary sources. It is a form of information that has already been gathered in the past.

3.3 Sample Size

Sample size in any statistical context is a count of individual samples or findings. The size of the sample is an essential aspect of any scientific analysis in which the aim is to draw inferences from the sample. In this research, the population from which the samples were derived conducted on the university students. The most appropriate sample size for this research is 105. There means that 105 university students were used to answer questionnaires. Hence, the questionnaires were distributed randomly for those people that can express their willingness to respond to this survey.

3.4 Sampling Techniques

Sampling technique as a method used by a researcher to determine how to choose or identify the individual survey units that would be used as study respondents. The convenience sampling was selected for the sample in this study. Convenience sampling is a form of non- probability sampling technique in which samples are chosen for the target population due to their convenient usability and accessibility to the researcher. Elements are picked for the survey depending on the convenience of the researcher in convenience sampling (Black 2011). Researchers are easier to identify the respondents among the population by selecting convenience sampling, since the respondents select based on their availability and willingness. In fact, the convenience sampling method would effectively minimize the time and expense of this research.

4 Data Analysis

4.1 Data Analysis

The SPSS and Smart PLS application were used in this chapter to evaluate the data obtained from respondents and the effects of statistical analysis. The result included demographic section such as gender, marital, age, ethnicity, type of university, education level and preferred online game, dependent variable which is online game addiction. The researcher distributed questionnaires through Google form for respondents to answer. There is a three-part data analysis used: descriptive statistics followed by Cronbach's Alpha and Frequencies Statistic. Multiple Linear Regression (MLR) is to test the strength of variables between the dependent variable and independent variables.

4.2 Findings

The reliability test was carried out on the independent variables to check the measurement instrument's internal consistency. The Cronbach's Alpha for all variables scales was in the range of 0.7 to 0.91. They were well above the minimum acceptable reliability of 0.6 as suggested by (Hulin et al. 2001). The result for the first independent variable which is psychological factor has value of 0.853. This means that the result of Cronbach's Alpha is acceptable. Next, the result of Cronbach's Alpha for technological factor has value of 0.843 which is acceptable. Moreover, the result for media factor has value of 0.917. This means that the result of Cronbach's Alpha is excellent. Thus, the actual reliability test was obtained for this study is reliable (Table 1).

Partial Least Square (PLS) Algorithm and Bootstrapping used in this study describe the relationship between the independent variables and dependent variable by using the term of beta coefficient and p-value. The result indicated that psychological factor value (β = 0.614, t-value = 6.628, p-value = 0.000), technological factor value (β = 0.436, t-value = 2.515, p-value = 0.012), and media factor value (β = 0.318, t-value = 1.854, p-value = 0.064) (Table 2).

Table 1 The result of actual reliability test for each section of questionnaire

Variable	Number of items	Cronbach's alpha	Strength of association
Online game addiction	5	0.752	Good
Psychological factor	5	0.853	Acceptable
Technological factor	5	0.843	Acceptable
Media factor	5	0.917	Excellent

Table 2 Beta coefficient, T-value and P-value among independent variables

	Beta coefficient	T statistics	P-value	Significant
Psychological factor	0.614	6.628	0.000	Significant
Technological factor	0.436	2.515	0.012	Significant
Media factor	−0.259	1.854	0.064	Not significant

5 Discussion and Conclusion

This paper conducted a questionnaire survey on studying the causation of online game addiction among university student. According to the research result, psychological factor, technological and media factor have a remarkable impact on university student. This study's significant contribution was to investigate the psychological factor, technological factor and media factor that influence to online game addiction. However, this study proposed a substantial relationship between the independent variable and the dependent variable. Therefore, the objectives of this study have been achieving. While the data analysis was vigorously conducted using SPSS tools and validated, the results are limited by the sample size. As a result, the student's perceptions identified by the study are based on perceptions from university students. The limitations of this study point towards topics to be addressed in the future. Game addiction among students in Malaysia will continue to evolve. The following are a few areas for future research; a) Malaysian university student's perception on privacy and security of gaming in-purchasing, b) Study on effect to university student's causing of game addiction.

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