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Gaming among College Youth in  
Malaysia**

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Dr. Gregory T. Papanikos  
President  
Athens Institute for Education and Research

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## **Internet Addiction of Online Gaming among College Youth in Malaysia**

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### **Abstract**

This study investigated the level of internet addiction among college youth in Malaysia and the factors contributing to the addiction of online gaming. Furthermore, it evaluated the importance of satisfaction and loyalty toward online games and determined if online games influenced the youth's lifestyle. The methodology approaches implemented were both quantitative and qualitative methods. A questionnaire and a focus group interview were used to collect data. Surveys were distributed to 156 youth using stratified random sampling and the focus group comprised five youth.

The findings indicated that there is a fair level of internet addiction towards online games among Malaysian youth. It was found that gender, age, and educational levels have a significant relationship with internet addiction of online games. The experience of playing online games does not have a significant relationship with internet addiction of online games among Malaysian youth. The youth have some awareness of internet addiction and its influence, and they do exercise some control when playing online games. However, loyalty is not an important element that influences the level of online games addiction. There are other reasons attracting Malaysian youth to play online games.

The social implications of this study is that online games have become popular among college youth in Malaysia and there is a need to further understand the factors that affect Malaysian youth's attitude toward online games and its effects on their lifestyle. This study has important practical implications for further studies concerning the need and the development of treatment approaches for internet addiction.

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## **Introduction**

The widespread availability of internet content and services is an inevitable part of modern life. Online tools and applications usage is prevalent among tech-savvy college youths. However, when play becomes extreme, the obsession can be detrimental to the development and well-being of the individual. A survey in Taiwan revealed that online gaming is the foremost entertainment application in terms of the number of people playing, their willingness to pay, and their intention to use these applications in the future. The survey also found that online gamers displayed high levels of loyalty toward online games (Lu & Wang, 2008).

Online recreation such as playing online games has become the most popular online activity as players not only play with the computer but with other players who link to the internet (Gorriz & Medina, 2000). Multiplayer online role-playing games such as *Prius online*, *World of Warcraft* and many others are popular online games among college youth. The main intention of people playing online games is to seek pleasure and entertainment (Sweetser & Wyeth, 2005).

Internet addiction is brought about by highly interactive applications like online chatting, dating and online gaming (Lu & Wang, 2008). Bellamy and Hanewicz (2001) suggested that the criteria in determining internet addiction are when users feel preoccupied with the internet and have the need to use the internet with increasing amounts of time in order to achieve satisfaction. Further, they lack control on when to access the internet and feel irritable, restless, or depressed when offline. In addition, they remain online longer than intended all the time. In severe cases, they even jeopardize losing significant relationships, their education and career opportunity. Sometimes they lie to family members, friends or therapists to conceal the extent of their involvement with the internet.

Given the propensity of concerns with internet addiction, the purpose of this study is to investigate the level of internet addiction among college youth in Malaysia and the perceptual factors contributing to the level of addiction of online gaming. This study also assesses the factors contributing to addiction of online gaming among college youth and evaluates the importance of loyalty and satisfaction toward online games.

## **Theoretical Framework**

The primary theoretical foundations of this study are the Media Dependency Theory and the Theory of Planned Behavior.

According to Ball-Rokeach and DeFleur (1976), media dependency refers to the importance of media toward the public. People use the media to meet different needs and goals. The Media Dependency Theory purports that the degree of media dependency is influenced by the social system and the media system. The more a person becomes dependent on the media to satisfy their

needs, the media increasingly becomes more vital to that individual and will have influence and power over that individual.

Online games are being developed rapidly and there is a variety of games designed to suit all kinds of audience. The more a person plays online games, they become more attracted to it and experience more gratification. This leads gamers to become addicted to online games as the degree of media dependency gets higher.

According to Ajzen (1985), the Theory of Planned Behavior proposes that only specific attitudes toward the behavior in question can be expected to predict the behavior. This theory also incorporates the concept of perceived behavioral control.

This theory is used to understand the behavioral intention to play online games which are the behavioural beliefs, normative beliefs and control beliefs. These three components are used to explain internet addiction towards online games.

Firstly, the behavioral beliefs or specific attitudes such as perceived enjoyment and happiness can influence the intention to play online games. As long as a person believes that the online games can provide them enjoyment and happiness, their intention to play online games will increase.

Secondly, the subjective norms which are people's beliefs about how other people they care about will view the behaviour in question can influence one's attitudes toward the behaviour. Therefore, if a person's friends play online games, this can easily influence the belief that what their friends are doing must be interesting.

Thirdly, control belief is the perceived behavioral control toward the intention to play online games. People perceive that they can control their own behavior and decide how much time they will spend on online games. Accordingly, when gamers feel that playing online games is completely under their control, the implication is that they are in control of deciding whether to play or not to play online games. When gamers feel they are losing control over whether or not to play online games, this may develop into internet addiction.

## **Literature Review**

According to the Center for Internet Addiction Recovery, any compulsive behavior of an individual involving the internet which interferes with normal functioning is considered addicted to the internet. Internet addiction causes stress on the addicts, their friends, families as well as their loved ones (Padwa & Cunningham, 2010). Young and Rodgers (1998) and Davis (2001) noted that internet addiction is an individual's inability to control his or her use of the internet eventually causing psychological, social, school or work difficulties in a person's life. Meanwhile, Widyanto and Griffiths (2006) defined internet addiction as the excessive use of the internet due to the attractiveness of the internet.

Online games refer to computer games which connect people who are apart at the same time through online communication networks (Kim, Park, Kim, Moon & Chun, 2002). Two important characteristics differentiate online games from conventional computer games. Firstly, users can access games immediately through a main server which update games on a real-time basis. Secondly, players can interrelate with the online games and other gamers at the same time (Lo, Wang & Fang, 2005).

According to Su and Cao (2006), although the rate of internet use among Chinese adolescents was high, the incidence rate of internet addiction was low. The study also found that more males are involved in internet addiction compared to females. The study concluded that the incidence of internet addiction is not rare in Chinese adolescents, specifically adolescent males are more likely than females to be internet addicts. As such, gender appears an important moderating variable to be studied.

Although this was an exploratory study, several hypotheses were developed and investigated. It was hypothesized that gender has a significant relationship with internet addiction toward online games among Malaysian college youth.

Chan and Wei Fang (2007) found that the internet plays a prominent role among young people in Hong Kong. In their study, a majority of respondents aged 15-24 spent one to three hours a day on the internet. The internet was the preferred media choice for information-driven activities, listening to music and for fun. The study also indicated that more males were found to use the internet more frequently for playing games and making friends than female respondents.

A survey conducted at a college in the United States by Cotten and Jelenewicz (2006) found that 97% of students reported accessing the internet several times a day. They also reported that women used the internet for communicating with others and gaining knowledge, whereas men used the internet as a source of entertainment with greater frequency than women. This study also found that college students who are around same age exhibited similar "usage levels" of the internet.

Meanwhile, another study by Hechanova and Czincz (2008) on internet addiction in Asia found that 12% of youth surveyed in China, Hong Kong, Taiwan and Korea were addicted to the internet. It was also found that addiction rates were higher among college students compared to high school students. Apart from gender, it was hypothesized in this study that age and educational level has a significant relationship with internet addiction toward online games among Malaysian college youth.

Young's (1996) findings suggest that internet addiction happens rather rapidly from one's first introduction to the service and products. This is mainly because as users became competent, this led to a feeling of happiness when their online technical mastery improved. This finding reflects the perception of satisfaction among internet users. Young also indicated that some on-line users became addicted to the internet in the same way as others became addicted to drugs, alcohol, or gambling, which resulted in educational failure, reduced

work performance, and even marital discord and separation. This proves that one can get addicted to internet applications.

As such, it was hypothesized in this study that experience does not have a significant relationship with internet addiction toward online games. Any youth, even with minimal exposure can get addicted to online games.

Kubey, Lavin & Barrows (2001) revealed that students who are “internet dependent” and who also showed evidence of “academic impairment” had the tendency to spend an inappropriate amount of time engaging in a full range of internet activities which lead to adverse educational outcomes.

Meanwhile, Lu and Wang (2008) found that perceived playfulness and satisfaction which are the perceptions of the attitudes and behaviors of significant others are positively associated with online games addiction. It was found that online games addiction contributed to loyalty, however, there was a negative relationship between satisfaction and loyalty. Lee (2009) discovered that the perceived enjoyment is related to attitude and the intention to play online games. Further, the behavioural intention to play online games is positively related to actual behaviour.

## **Methodology**

The positivist paradigm of this study focused on measuring the phenomena and analysing the quantitative research data using objective, statistical methods. The interpretive paradigm focused on examining the qualitative research data using subjective interpretive methods

A pre-test comprising a sample of 30 youths was conducted and showed high reliability. The post-test reliability showed an Alpha value of 0.880.

The methodology approaches implemented were both quantitative and qualitative methods. A self-administered questionnaire and a focus group interview were used to collect data at a university in Nilai, Malaysia. Surveys were distributed to 156 Malaysian youths between the ages of 18 to 24 using stratified random sampling and the focus group comprised five youths within the same age range.

The questionnaire consisted of 7 sections and a total of 30 questions. The 7 sections comprised perceived behavioral control, descriptive norms, perceived playfulness, online game addiction, satisfaction and loyalty. In addition, a focus group interview was conducted to obtain an in-depth understanding of the use of the internet. Five participants were chosen for the qualitative part of this research.

## **Results**

The sample comprised 63% female and 37% male. Also, 55.8% of respondents were in Foundation/A-levels programs and 44.2% were in undergraduate programs. It was found that 60% of the respondents had 6 months to 1 year experience playing online games, 14% had 1-2 years

experience, 6% had 2-3 years experience, and 20% of respondents had more than 3 years experience.

*Perceived Behavioral Control*

**Table 1. Perceived Control over Playing Online Games**

	Perceived Control	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I believe that I am in control of to play or not to play online games.	35.3%	42.9%	12.2%	3.2%	6.4%
2	I believe I have complete control over whether I do or do not play online games.	25%	39.1%	23.1%	12.8%	0%
3	I spend more time playing online games than originally intended.	7.1%	21.1%	28.8%	29.5%	12.8%

To assess if college youths are able to control themselves to play or not to play online games, the first two statements in Table 1 were assessed. Approximately 78.0% believe that they are in control of whether to play or not to play online games. Meanwhile, almost 10.0% believe that they do not have such control and 12.2% were neutral.

The results also indicated that 64.0% of the respondents agreed that they had complete control over whether to play or not to play online games while almost 13.0% of the respondents indicated that they did not have control. Meanwhile, almost 30.0% agreed that they spend more time on playing online games than originally intended.

*Descriptive Norms and Perceived Playfulness*

**Table 2. Playfulness Levels of Online Games**

	Perceived Playfulness	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Most of the people I know best are playing online games.	7.1%	28.2%	32.1%	21.8%	10.9%
2	Most of the people I know best believe that online gaming is playfulness.	3.8%	24.4%	34%	32.7%	5.1%
3	The process of playing online games is enjoyable and pleasurable.	8.3%	37.2%	38.5%	12.2%	3.8%

Table 2 assessed if gamers' friends played online games and if their friends perceived online gaming as playful. A total of 35.3% indicated that most of the people they know best are playing online games. Also, 28.2% felt that most of the people they know best believe that online game is playful, however, 37.8% did not think so. Results indicated that 45.5% perceived the

process of playing online games as enjoyable and pleasurable and 38.5% remained neutral.

*Online Game Addiction*

**Table 3. Attitude towards Online Games Addiction**

	Attitudes	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Do you feel the need to play the online games with increasing amounts of time in order to achieve satisfaction?	5.8%	19.9%	34.6%	28.8%	10.9%
2	Do you feel preoccupied with the Internet (think about it when off line or anticipate your next online session)?	3.8%	25%	41.7%	21.8%	7.7%
3	Have you lied to friends or family members to conceal the extent of your online gaming?	1.9%	17.3%	19.9%	32.1%	28.8%
4	Do you feel restless, moody, depressed, or irritable when attempting to cut down or stop online gaming?	3.2%	17.9%	29.5%	29.5%	19.9%
5	Have you repeatedly made unsuccessful efforts to control, cut back, or stop online gaming?	4.5%	13.5%	31.4%	30.8%	19.9%

A fairly high percentage of youth were neutral in answering the first two questions in Table 3. Nevertheless, 39.7% disagreed with question one and 29.5% disagreed with question 2. Meanwhile, 19.2% agreed to having lied or concealed the extent of online gaming and 21.1% indicated that they have the mentioned symptoms in question 4. Also, 18.0% of respondents indicated that they were unsuccessful in their efforts to control, cut back or stop online gaming.

*Satisfaction Levels*

**Table 4. Satisfaction with Online Games**

	Satisfaction	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I like the game content of online games.	3.8 %	23.7%	39.1%	26.3%	7.1%
2	I am pleased with the services provided by online gaming vendors.	1.9%	21.2%	50.0%	17.3%	9.6%
3	I am pleased with the networking quality provided by online gaming vendors.	3.2%	21.8%	42.9%	24.4%	7.7%

4	Overall, I am satisfied with online games.	4.5%	28.2%	34.0%	25.0%	8.3%
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Table 4 indicated a fairly high percentage of respondents were neutral in all questions concerning satisfaction levels. In terms of game content, 27.5% liked it. Meanwhile, 23.1% were pleased with the services of gaming vendors and 25.0% were pleased with the networking quality vendors provided. In fact, almost 33% of respondents indicated that they were overall satisfied with online games.

*Loyalty Levels*

**Table 5. Loyalty towards Online Games**

	Loyalty	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	In comparing online games, I have a preference for certain online games.	7.1%	17.3%	37.2%	33.3%	5.1%
2	I would recommend certain online games to others.	5.1%	28.8%	32.7%	28.8%	4.5%

It appears that 38.4% of youths do not have a preference for online games while only 24.4% have certain preferences. Meanwhile, an almost equal percentage of respondents would and would not recommend certain online games.

One of the objectives of this study was to examine whether there is a significant relationship between gender and internet addiction. A total 81.1% of male respondents said that they are in control of to play or not to play online games while 76.5% of female respondents said the same. Analysis using the Spearman Correlation showed a coefficient of 0.656 at 0.0005 level.

Cross-tabulation results of gender with the statement: “While playing online games, I experience pleasure” showed that gender has a significant relationship with internet addiction towards online games among college youth. In fact, 50% of male respondents agreed that playing online games was enjoyable and pleasurable as compared to 32.6% of female respondents.

It was also found that age has a significant relationship to internet addiction towards online games among college youth. Analysis using ANOVA revealed significant values of 0.822 and 0.658 for age and amount of time spent on online games and that most of the respondents’ friends also think that online games are pleasurable.

Meanwhile, the education level also had a significant relationship with internet addiction towards online games among college youth. An ANOVA test yielded significant values of 0.875 and 0.969 when analyzing education level and the amount of pleasure derived from online games and youths’ preference for online gaming.

Analysis of data showed that experience did not have a significant relationship to internet addiction of online gaming. Using the ANOVA

technique revealed that the significant values between experience and enjoyability and pleasure are both 0.000 at 0.0005 level.

### **Qualitative Findings**

The interview comprised three males and two females ranging from 19-24 years. Following is a summary of the most pertinent questions and answers.

“What are the main factors that attract you to play online game?”

Among the reasons cited, the role of friends appeared important as four respondents said that they play online games because their friends introduced them to it. They also liked meeting new friends and having fun with them online. The respondents also played online games as it was something to fill their free time, easy accessibility of online games, they liked competing and rewards, and the interesting games.

“Do you use online gaming to help escape from everyday problems?”

One female respondent said that she did not use online gaming as a means of escapism as she does not think that it would help. Meanwhile, three respondents do use online games as escapism and admitted that it helped to relieve stress, frustration and boredom. One male respondent was neutral and felt that playing online games sometimes helped in relieving a small amount of stress but not all his stress.

“Do you have complete control over when you play online games?”

Four of the respondents said they had complete control over whether to play or not to play online games. Two of them play online games when they are free. One of them is always concerned about doing his assignments first, while another respondent will only play online games late at night for a short time as he thinks that facing the computer screen for a long period is unhealthy. Only one male respondent admitted that he is totally out of control whenever he starts to play online games as he could go on playing for a few days.

“Do you think that playing online games is a waste of time? How many days can you go not playing online games? How would you feel?”

One respondent said that playing online games is a waste of time. Two others partially agreed that it was a waste of time but added that it can relieve stress. Two respondents disagreed that playing online games is a waste time and mentioned that it was a lot of fun. Four respondents said they could go for more than one week not playing online games and only one respondent could last for 2-3 days. Three respondents said they felt no difference if they stop playing online games. However, two respondents said they would feel uncomfortable.

“Are there any specific time that you would intentionally stop playing online games?”

Four of the respondents said they will stop playing online games during the final examination period as they did not want to get poor results and did not want to be distracted from concentrating on studying. In addition, they perceived examinations as more important than playing online games.

However, one of the respondents will continue to play online games during examination time to relieve the stress of studying.

“Do you always play the same types of games or do you always try different games?”

All respondents noted that they always played different games. Reasons cited were that playing one type of game is boring and they also try new games introduced by friends.

## **Discussion**

The purpose of this exploratory study was to investigate the level of internet addiction among college youth in Malaysia and the factors contributing to the addiction of online gaming.

The role of gender is significant in many areas of one's life. For example, males and females have different personalities, behaviours and interests. Male and female college youth will perceive the playfulness of online games differently and have a different level of satisfaction from online games. Males also have a greater tendency to be addicted to online gaming compared to females. This is supported by Su and Cao's (2006) study which suggests that more males are addicted to the internet compared to females.

Meanwhile, gender plays a significant role in the perceived behavioral control and satisfaction of playing online games. Female players appeared to have more perceived behavioral control. There is also a lower level of satisfaction of playing online games among the female players. Males showed a higher level of internet addiction towards online games. This was in line with previous studies by Lu and Wang (2008) and Lee (2009).

Age is an important element denoting level of maturity that can influence one's thought and behavior in everyday life. Therefore, different age groups may perceive the playful element of online games differently and their attitudes towards online games are also different. This study shows that college youth of different ages have different levels of satisfaction towards online games. This is supported by Chan and Wei Fang (2007) who found that the internet was the preferred choice of media for entertainment among young people.

It can be seen in many areas of life that the level of educational attainment can influence one's thoughts and perspectives. Therefore, education can influence one's perception and attitude towards online games, thereby, influencing one's behavior of playing online games. This study found that college youth who are at different educational levels perceive online games differently. Thereby, their behavior and attitudes towards online games are also different. This was also seen in Hechanova and Czincz's (2008) study that found that internet addiction rates were higher among college students compared to high school students.

One's experiences in life can influence one's thoughts and perceptions. Insofar as online gaming is concerned, it has commonly been noted that college youth can be addicted to playing online games and enjoy playing online games (Young, 1996). This study has proven that any college youth can become

addicted to online games irrespective of the length of time they have been playing online games. The experience of playing online games does not affect the level of internet addiction towards online games among college youth.

These results provide support for the theoretical foundations of this study. In the Media Dependency Theory, it is clear that the more a person plays online games to satisfy their needs, they become more attracted to it and experience more gratification. This can lead gamers to become addicted to online games as the degree of media dependency gets higher. In fact, this study found a fairly high percentage of youth perceived playing online games as enjoyable and pleasurable.

In summary, Malaysian college youth have different levels of addiction towards online games. Some of them perceive to have complete behavioral control when deciding whether to play or not to play online games. Nevertheless, all the youth in this study did play online games and this reflects the importance of the internet as a new media.

This study has shown that the specific attitude which is satisfaction towards online games can be used to predict behaviour. As there is a fairly high level of satisfaction towards online games, the behaviour which is frequency of playing online games can be predicted. Thereby, it can be concluded that there is a medium or fair level of internet addiction towards online games among these college youth.

The subjective norms which are college youths beliefs about how other people they care about will view the behaviour in question has influenced their attitude toward the behaviour. The most influential subjective norm in this study is that college youth always try the games that are introduced by their friends.

Finally, the perceived behavioral control can influence the intention of the college youth to play online games. These youth believe that they can control their behavior and decide how much time they will spend playing online games. Hence, they will play online games when they are free.

These findings support the Theory of Planned Behavior in understanding the behavioral intention to play online games. If a person believes that the online games can provide them enjoyment and happiness, their intention to play online games will increase. The findings also showed that when gamers perceive that playing online games is completely under their control, then they are in control of deciding whether to play or not to play online games. When gamers feel they do not have control over whether or not to play online games, this may develop into internet addiction.

## **Conclusion**

The research findings show that there is a medium or fair level of internet addiction towards online games among Malaysian college youth.

The general perception that most college youths do not have complete control and are likely addicted to online games is rejected. However, the perceived behavioural control is not an important factor that contributes to the

formation of online games addiction among college youths. Mainly most of the respondents have perceived complete control on playing online games. It appears that Malaysian college youth can stop playing online games if they choose to, for example, during the final examination period.

This research also found that loyalty is not an important element that influences the level of online games addiction among college youths. Playing a game frequently does not mean that the person will be loyal to that game. Youths perceived this to be boring and would rather play many different games.

Although there is a low level of loyalty towards online games, it does not indicate that there is no internet addiction towards online games. Malaysian college youth can be addicted to a few types of games at a same time.

In addition, college youths' levels of satisfaction of playing online games did not play an important role in online games addiction. It is one of the factors that attracted youth to play online games, but it is not the most important factor. There are other reasons attracting college youths to play online games such as killing free time, easy accessibility of online games and making friends. Besides, respondents perceived that online gaming was a way of escaping from problems or relieving feelings of helplessness, guilt, anxiety, stress and depression.

The generalizability of these results to a larger population and to other cultures should be treated with caution as the sample of youth was from a university for an exploratory study.

The results of this study have important social implications in this digital age that are to better understand the role of addictive internet content and services, and its potential effects on lifestyle. The important practical implications of this study concern the need and development of treatment approaches for internet addiction.

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