

Effect Online Game Addiction In Study Grades Among University Students

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Abstract: *This study is about the effect of playing various types of video games on the Universiti Malaysia Sabah students include Universiti Malaysia Sabah (UMS) Kota Kinabalu, Sandakan, and Labuan. This study used a quantitative method with 180 respondents with a few variables such as hours spend, changes of daily routine, types of games, and the changes in their grade. To collect the data sample, this study used online forms to create surveys for the UMS students to answer all the questions provided based on their experience in either video, computer, or mobile games. The data reported that respondents spent more than four hours a week playing video games in which they spent more than half an hour each day playing video games. The data also reported that most students spent more than four hours a week to study. This means for each hour they played the reprimand themselves by studying or for each hour they studied, they rewarded themselves by playing video games. Any which is remarkable as most students can score a 3.00 and higher for their current CGPA even they are playing video games every day. Following this study, we determined that there are no negative effects of gaming and changes in a daily routine on the student's study grades, but it has been shown that games do have effects on the student's grades throughout the semester. From all the existing studies on this field, the impact of video games on the grades of the students cannot be ignored.*

Keywords: *playing; undergraduate; mobile; video; CGPA.*

1. INTRODUCTION

Currently, the whole world now starts to develop new technology in all aspects of life, and without we realize, these technologies have become something significant in our daily lives. One of the most important technologies is the new media, which produce a huge impact on our daily lives. Video games are an example of this new media. They are generally known as interactive electronic games which aim primarily to entertain players. Video games enable players to access fun virtual environments, in 2D or 3D, within specific rules and conditions which make it more challenging.

In the early 1970s, there are many gaming platforms introduced to the public [1]. For example, gaming consoles such as the Atari Home Pong and many other home computer games. It was during this time when video games started to reach massive popularity

worldwide. Now, it has been a few decades since the first release of public video gaming consoles, and the number of gamers worldwide continues to increase. According to an online site, the number of video gamers worldwide were almost 1.82 million in 2014 and expected to increase to a whopping 2.7 billion gamers by 2021 [2]. Moreover, in our country, the numbers of gamers reach a whopping 20.1 million in 2019 [3]. In those numbers, almost 55% is aged from 18 – 25 years old [4] which is the age where a lot of teenagers and young adults attends university or college.

Besides, in university, a lot of the students needs to spend and manage their time wisely. Attending classes, reviewing topics, and finishing all the assignments given require a lot of focus and more importantly time. According to the statistics given, a lot of gamers in Malaysia is most likely a student attending either high schools or university. Because of that, a lot of their time might be spent playing video games. The impact of gaming on school grade has been debated for quite a long time already. For example, a decade ago, a study found that video games can affect school grade negatively [5]. However, a few years back, a study by The Guardian shows a positive link between playing video games and academic performances [6].

Due to that, this paper presents the effect of playing a various type of video games brings to a student grade, especially in Malaysia. Our group used online form of 180 respondents to gain a much clearer insight about this problem. We manipulate our form by giving a few variables such as hours spend, changes of daily routine, types of games, and the changes of their grade. By looking at the result, more than half of the respondents have quite a good CGPA with just a little below half spend more than 4 hours playing games in a week.

2. METHODOLOGY

This study is to investigate gaming activity effects on students study progress, either it affected students grade negatively or positively. After we discussed this matter among the group member, we decided that our subject would be students and the variable is their current grade (CGPA) and how frequent they spend their time on gaming. Participants were random students, strictly from University Malaysia Sabah, as they need to be studying in one of the faculty in University Malaysia Sabah. The expected participants are students studying in different faculty and come from a different type of surrounding. Basic lifestyle activities were also observed since they may come from the different family background. Lastly, their interest in video games is also included in our research.

To gather data for our case study, we surveyed online form consisting of several questions for the respondents. An online survey is more convenient and it costs us little time and money to reach more respondents [7][8]. We made this questionnaire by using Google Form and distributed the form by sharing the link via social media applications such as Whatsapp and Instagram, directing to the form. The questionnaire consists of multiple-choice questions which require participants to choose only one answer for each question that fits them. The questionnaire consists of 2 parts. The first parts consist of questions asking their age group, gender, faculty, surrounding status, who they are living with and basic lifestyle activities. While part 2 asking about their interest in video games, type of games they played, reasons for playing games, where they played video games, do they find times to play video games during busy times, their thought either video games is educational or not, reasons if they do not like video games, availability of computer at home, how often they played video games and study in a week and their latest CGPA.

We then use the obtained answers from respondents to construct graphs and pie charts to get a greater view based on respondents answers. According to Lynette Wofford charts and graphs helps simplify information and reduce complex data to easier digestible summaries [9].

Quantitative and qualitative data needed were then gained from the graphs and pie charts to be compared with our initial hypothesis.

3. RESULTS AND FINDINGS

Based on Figure 1, the majority of the respondents, which is students from Universiti Malaysia Sabah (84.4%) were around 21 to 23 years old. Range 18 to 20 years old were only 10% out of 180 respondents. 24 to 26 years old were only 4.4% which represent only eight students. Lastly, the student that range 27 to 29 and above 30 were only 0.6% (1 respondent).

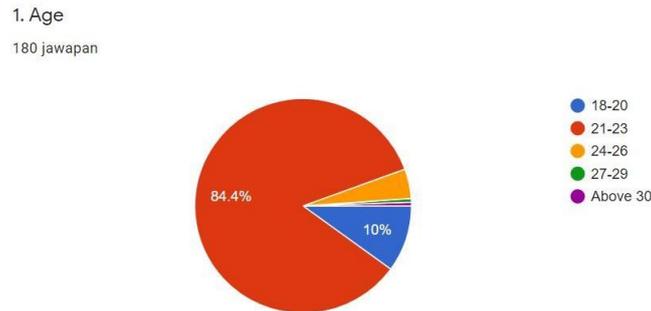


Figure 1: Respondents Age

Based on figure 2, 50% of the respondents were male and the other 50% were female.

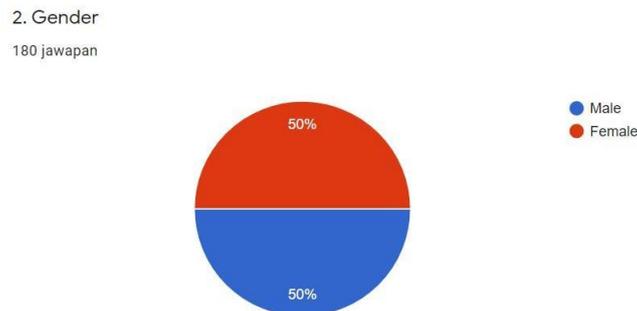


Figure 2: Respondents Gender

Based on figure 3, most respondents were from the Faculty of Engineering (27.2%) followed by the Faculty of Science and Nature, which represent 23.3% of respondents. 12.2% of respondents were from the Faculty of Medicine and Health Science followed by Faculty of Humanities, Arts and Heritages and Faculty of Computing and Informatics both represent 10.6% respondents. 5.6% were from Faculty of Bussiness, Economic and Accountancy, 5% were from Faculty Sustainable Agriculture, 3.3% from Faculty of Food Science and Nutrition, 1.7% from Faculty of Psychology and Education and lastly 0.6% from Faculty of International Finance Labuan.

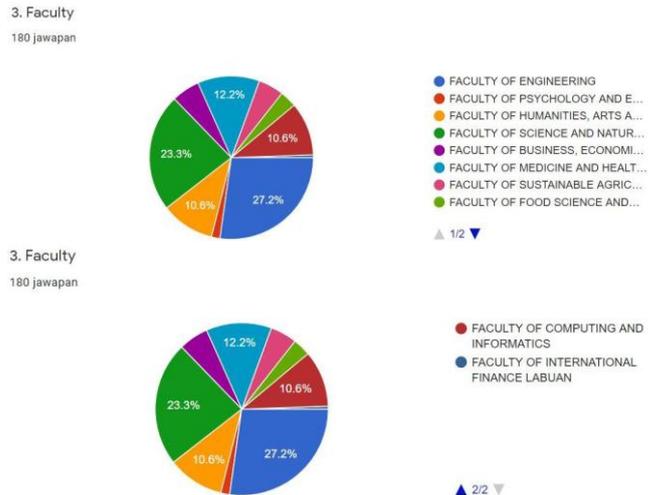


Figure 3: Respondents Faculty

Figure 4 shows there were 42.2% respondents live from urban area followed by 35% from the suburban area, and 22.8% respondents from the rural area. Overall, most of the UMS students were living in an urban area.

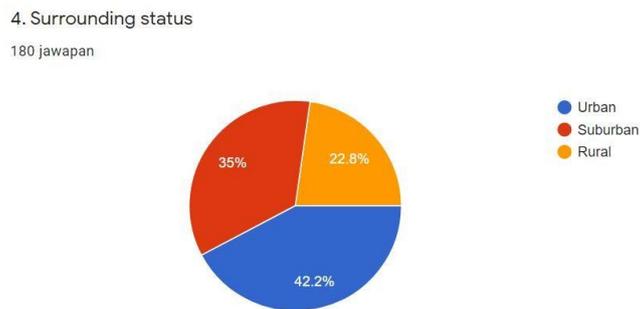


Figure 4: Surrounding status

Based on Figure 5, majority UMS students (87.8%) that fill in the form were live with their family followed by 10% respondents that live with their friends, and the rest 2.2% students live alone.

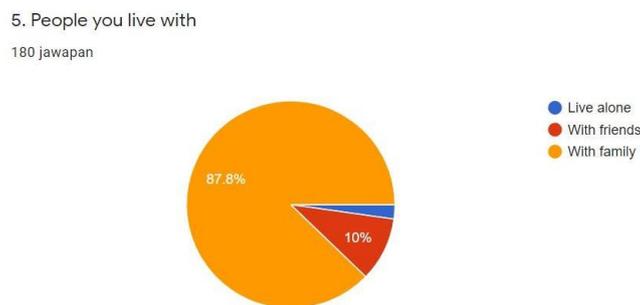


Figure 5: People you live with

Mode of the time for students to wake up were around 8 am to 10 am which represent 38.9% of the students followed by 33.9% of the students wake up on 6 am to 8 am. 13.9% students were wake around up on 10 am and above while the rest 13.3% of the students wake up around 4 am to 6 am.

6. What time you wake up in the morning?
180 jawapan

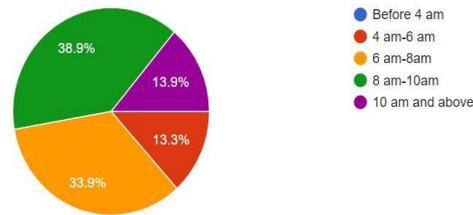


Figure 6: Time for students to wake up

Figure 7 shows that 39.4% of students breakfast everyday in a week. 13.3% of students breakfast three times a week, followed by 12.8% of students take breakfast five times in a week. The rest 11.1% of the students take breakfast four times a week, 10.6% just only take breakfast two times in a week. Out of 180 students, only 2.2% of students take breakfast six times in a week and 1.7% take only 1-time breakfast in a week.

7. How many times you take your breakfast in a week?
180 jawapan

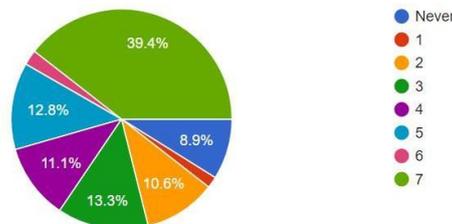


Figure 7: Time for students to breakfast in a week

Figure 8 shows that 75% of students lunch everyday in a week. 7.2% of students lunch five times a week, followed by 5.6% of students take lunch four times a week. The rest 4.4% of the students take lunch six times a week, 3.9% just only take breakfast three times in a week. Out of 180 students, only 2.2% of students take breakfast two times in a week 1.1% take only one-time breakfast in a week, and 0.6% student never lunch in a week.

8. How many times you take your lunch in a week?
180 jawapan

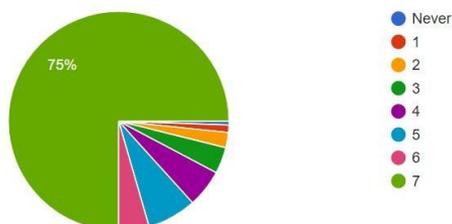


Figure 8: Time for students to lunch in a week

Based on Figure 9, there were 61.1% of students dinner everyday in a week. 11.1% of students dinner five times a week, followed by 10.6% of students take dinner six times a week. The rest 5.6% of the students take dinner both 2 and 4 times a week, 2.2% take dinner both four times and never in a week. Out of 180 students, only 1.7% of students take breakfast one times in a week.

9. How many times you take your dinner in a week?

180 jawapan

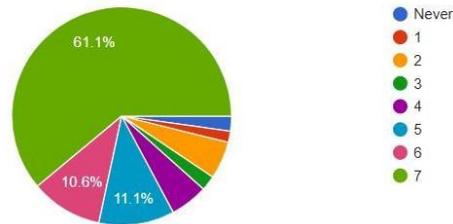


Figure 9: Time for students to dinner in a week

Based on Figure 10, there were 85.6% of students go to bed at 11 pm and above. 13.3% of students go to bed around 9 pm to 11 pm everyday, followed by 1.1% of students go to bed before 9 pm.

10. What time do you normally go to bed?

180 jawapan

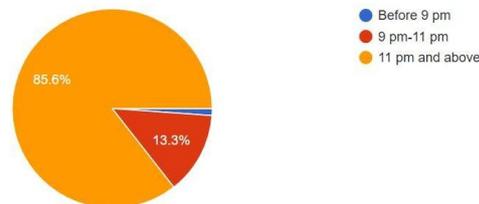


Figure 10: Time for students to go to bed

Figure 11 shows that 59.3% out of 180 UMS students very like playing either video, computer or mobile games and the rest 40.7% of students not like to play either video, computer or mobile games.

11. Do you like to play video/computer/mobile games?

177 jawapan

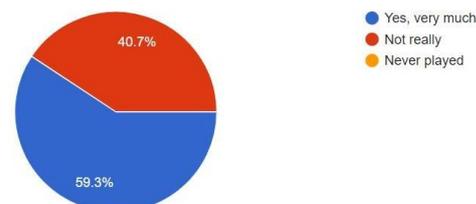


Figure 11: Interest in games

Figure 12 shows the bar graph of the type of game that students usually play. Based on the graph, most of the students like to play strategy games (61.7%) followed by action games (55%) and action-adventures games which are 44.4%. 43.3% like to play role-playing games, 41.7% usually play adventures games, 36.1 play simulation games, 30.6% play sports games, 30% like to play puzzle games and only 1.1% students like to play all games. Based on the data, some of them also like to play candy crush saga, shooting games, casual games, horror games, hentai, MOBA and FPS and these type of video games represented 0.6% each category.

12. What type of game do you usually play?

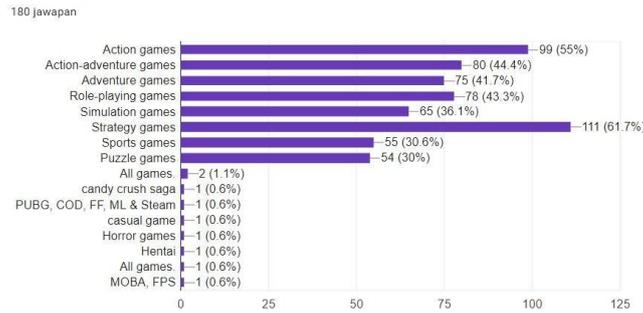


Figure 12: Type of games

Figure 13 shows the bar graph of the reason for playing games. Based on the graph, most of the students (61.7%) play video games. They were boring, followed the reason because they want to relax their mind (60.6%). 53.3% of the students said that they were playing games because they were eager to finish/master the game. 49.4% of students play the games because of high graphic video games, but 32.8% of students play video games because they want to improve their hand-eye coordination. Some response state several reasons why they play a game such as to improve thinking skill, play with a friend, want to focus on a task, highly competitive and because they have nothing to do.

13. Why do you play the games you checked above? (choose at most 3)

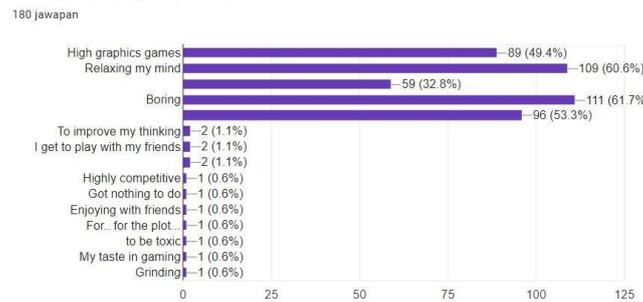


Figure 13: Reason of playing games

Based on figure 14, 89.4% of the students playing games during leisure time, followed by 46.7% of students plays video games at a hostel. 8.9% of the students play video games at the arcade while 7.2% of the play the games during class. Only 4% of the students play video games at home.

14. Where do you usually play video/computer/mobile games?

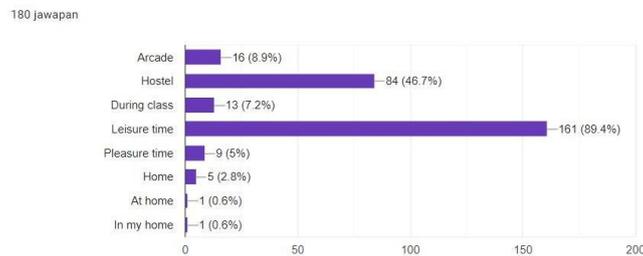


Figure 14: Place to play games

Based on the pie chart from figure 15, 63.3% of the students still find time to play even if they were busy with their class, exam or any work they do while the rest 36.7% of the students will not playing video games when they were busy.

15. Do you still find time to play when you are busy? (for example, during exam or class)
180 jawapan

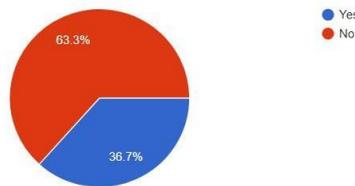


Figure 15: Find time to play

Figure 16 shows that 82.2% of the students were agreed that video games were educational, while the rest 17.8% of UMS students do not agree that video games were educational.

16. Do you think video games are educational?
180 jawapan

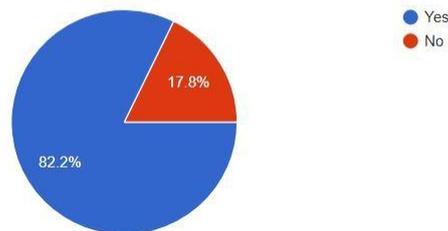


Figure 16: Respondents thought either video games are educational or not

Based on figure 17, 55.2% of respondents state that they do not like video games because it takes too much time to play. 44.3% of students state that video games cost too much money, while 42.5% of students state that video games make them frustrated. 25.9% of students do not like the games because their friend does not play the games; 23.6% of students do not like video games because there were too many rules in the game. Some said that it depends on the game itself, because of eyestrain, lack of battery, not enough storage, too many toxic players and hackers.

17. What don't you like about video games playing? (choose at most 3)
174 jawapan

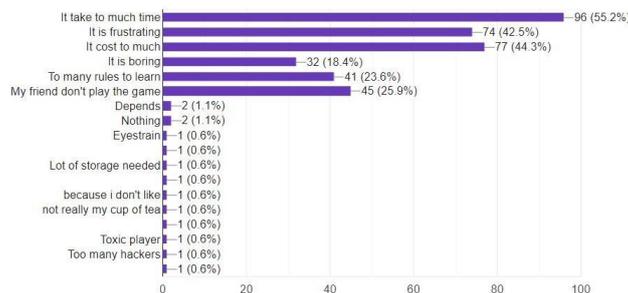


Figure 17: Reasons they do not like about video games

Figure 18 shows a pie chart representing either the students have a computer in their home or not during high school. 75.8% of the students have a computer in their home while 24.2% did not have any computer in their home during high school.

18. When you were at high school, was there a computer in your home?

178 jawapan

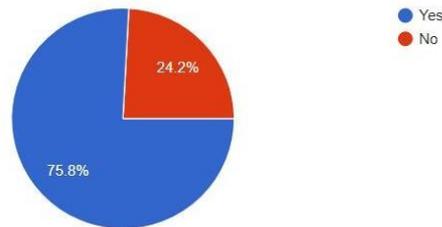


Figure 18: Computer in their home

Based on figure 19, the question ask the respondents about how often they spent their time on game in a week. 38.3% of students spent 4 hours and above on playing a game in a week followed by 16.7% of students play games for less than 1 hour. 15.6% of students play the game for more than 2 hours while 15% of students spent more than 1 hour on playing games in a week. 12.2% of the students play more than 3hours on playing games, and only 2.2% of the students never spent their time playing games.

19. How often do you spent on playing games in a week?

180 jawapan

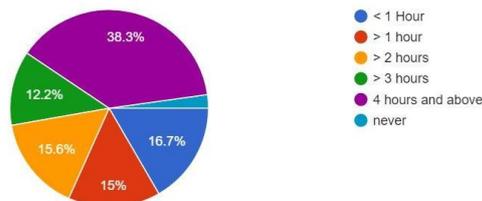


Figure 19: How often they play games in a week

Based on figure 20, the question ask the respondents about how often they spent their time on a study in a week. 41.1% of students spent 4 hours and above on study in a week followed by 18.9% of students study more than 2 hours. 17.8% of students study more than 3 hours, while 10% of students study more than 1 hour a week. 10% of the students study less than 1 hour. 2.2% of the UMS students never spent their time on a study in a week.

20. Time spent on studying in a week.

180 jawapan

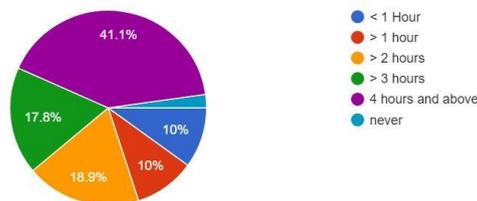


Figure 20: How often they study in a week

Figure 21 shows the CGPA of the respondent last semester. 65.6% of the students got CGPA around 3.00 to 3.67, followed by 15.6% of the students got around 2.00 to 2.99 of CGPA. Only 13.9% out of 180 students got around 3.68 to 4.00 CGPA while the rest 2.8% got around 2.33 to 2.67 CGPA. 2.2% got CGPA around 2.00 to 2.32 last semester.

21. What is your CGPA last semester?

180 jawapan

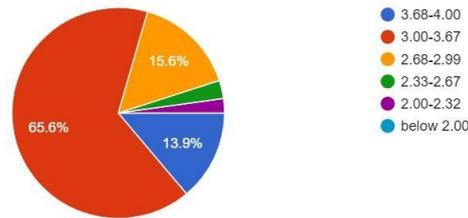


Figure 21: CGPA of last semester

4. DISCUSSION

An easy way to comply with the conference paper Online The finding for this study is both remarkable and flawed as some of the questions made were not considerate enough to make an exact result on how a lifestyle. Regardless of the result, we have is useful enough to conclude without any issue. Since the questionnaire is targeted to university students, mainly in UMS, the age group majority is 21-23 years old, which is degree students. At 84.4% this holds the highest percentage for this data. The participation in this survey is nothing less than impressive, considering the short amount of time of the survey's availability. There are 567,625 enrolment in 2019 for public universities in Malaysia while in UMS is 17,623 students [10]. This data held is to be held in our mind as this cast of respondents will try to represent the whole student body as one.

Amazingly gender respondents for this survey are split equally in half at both 90 male respondents and 90 female respondents, respectively. This enables us to create an even comparison and give much more equal footing to both genders as this show both genders are responsible for their well-being. The ratio for university students according to gender in 2018 is 1 to 1.16, male to females [9]. This ratio may seem roughly equal, but considering the faculty and graduate, it is a different story altogether. Regardless, this shows that female students also enjoy playing video games much equally to male students contrary to stereotypes where girls do not play games. It is believed that girls should only stick to "pink", shopping and cooking but as we progress and evolve the mindset of the old is slowly changing to where everyone can do whatever their heart desire. This is surprising as most women do not identify themselves as gamers due to the terms given, such as "gamer girl". The idea of being called "gamer" has this hint of sexism as the gaming culture is male dominant [11].

As for residency, majority of the respondents live with their family as this is a common practice among Malaysians. As an Asian country, we considered our parents as the most important figure in our lives and much owed them for all they sacrificed for raising us. Thus, one way to show gratitude is to live with them by taking care of their needs. Also, as a student who has no way of monetary income, the only way to find a roof to live under is by staying with their parents. Until the day they have enough money to move out, or when they get married, Asian students usually stay and live with their parents. Not it is a bad sign of dependency, but time has changed, and real estate is not something you can buy with a part-time job salary. The fact that most students are doing their studies full-time also the reason they still live with their parents.

As we all know, time is the most valuable thing in life as the time passed is not a time one can ever get back. Thus, the daily routine of waking up is also gathered. With the vast majority waking up around 6 in the morning to 8 o'clock while going to sleep late at 11 p.m. meaning that students are not getting enough rest. This rather dangerous as this can cause cardiometabolic syndrome [12]. Students stayed up for doing their assessments and play

games, but since we did not ask regarding the topic, we do not have a definite answer. The lack and imperfection of our questionnaire is the mistake of ours. With only roughly 5 hours of sleep, a night is not enough for the body to rest itself. Sleep is one way of the body repair itself, and not having enough sleep is a recipe for not having great health in the long run. Sleep deprivation is common among university students and has been associated with poor academic performance and physical dysfunction [13].

Most students do not start gaming or other activities before having something to eat in the morning resulting In a majority votes on having their breakfast seven times a week. Having breakfast is also a sign of a healthy lifestyle in which a person is caring enough to take care of their body. People who skipped breakfast are often associated with unhealthy lifestyle and low-level education [14].

It is not surprising as lunch held the highest vote seven times a week since lunch is where most students get their energy and socialise with their peers. In which the social lifestyle of a student does not change is he or she games. The only concern regarding this issue is that what kind of lunch they are having as there was no question ask regarding it. A healthy lunch should follow the food pyramid to ensure the focus during classes. Students can follow the Mediterranean diet pyramid as they are the adult life expectancy was among the highest while the coronary heart disease was among the lowest [15].

Dinner time in most household is considerate for most Malaysian. Where dinner is usually consumed around 6 p.m. to 9 p.m, this enables most students to sit down and have their meal. But the similar issue to lunch rose as what kind of food is consumed during dinner as the food balance must be considered to go along with a healthy lifestyle. Besides, the amount of food consumed is also another issue we failed to consider as the amount a person eats consume for dinner, lunch and breakfast is different as the amount of energy needed to carry on with their day is different. For example, the amount of food needed for lunch is considerably more significant compared to dinner as the next one might do for dinner is to rest or do some light activities. In contrast, after lunch, people will carry on with their day and do their work or studies [16].

As most students enjoy some games, the majority played a strategy-based game such as MOBA, while the second-highest vote is action-based games. This genre of games is enjoyable as the mechanics of the games is much in-depth, providing much more enjoyment when mastered. This is especially true to games like RTS or FPS, where the learning is higher compared to other games. It is also stated that students play video games because they are bored for not doing anything, thus playing video games became their hobby in which they can spend their youth. Also, the data have shown that games helped students to relax from all the stress they are having in which they can enjoy the graphic of the games provided. With smaller votes, some students wanting to improve their hand-eye coordination by playing video games [17]. Evidence is continuing to accumulate that suggests both brief and extensive experience with video games can result in a broad range of cognitive enhancements [18]. While most students stopped playing games when they are busy, some still find themselves playing video games, this because video games are considered as their emotional outlet to relieve stress from the hectic life they have. Some students use their break time to play games as pent up stress can only bring harm more than goods. While most respondents agree that video games are educational, they are still people who dislike a part of video games because it is too hard. These students who do not like high learning curve games tend to play games only to relax and to be able to socialise with their friends.

The data reported that respondents spent more than four hours a week playing video games in which they spent more than half an hour each day playing video games. But it is also reported that most students spent more than four hours a week to study. This means for each hour they played the reprimand themselves by studying or for each hour they studied, they rewarded

themselves by playing video games. Any which is remarkable as most students can score a 3.00 and higher for their current CGPA. This means even video games is not the main reason a student can flunk their studies.

5. CONCLUSION

In this paper, we discussed all the studies that are related to how video games affect the study quality of students, be it positive or negative. It has been shown that games do have effects on the student's grades throughout the semester. The collected data from the students is considered the main part in analyzing the personality of the student to find the impact of the game on them. This data was collected by handing out surveys throughout the university. The majority of studies conclude that there is a relationship between video games and the student's grades. In these studies, the researchers conclude that video games have an impact on the student's personality, like emotions, reflexes, behaviours, motivations, needs, thinking way and approach internal and external situations. These impacts will be carried on into their studies and cause them to lose focus. Finally, from our point of view from all the existing research on this field, the impact of the video games on the grades of the students cannot be ignored. In addition, most of the research that denied the existence of the impact of video games relies on a small number of participants or weak evidence. So, future researches should have a larger sample size to get a better result.

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