The perspective of six Malaysian students on playing video games: Beneficial or detrimental?

Roselan Baki, Eow Yee Leng, Wan Zah Wan Ali, Rosnaini Mahmud, Mohd. Sahandri Gani Hamzah
(Faculty of Educational Studies, University Putra Malaysia, Selangor 43400, Malaysia)

Abstract: This study provides a glimpse into understanding the potential benefits as well as harm of playing video games from the perspective of six Malaysian secondary school students, aged 16-17 years old. The rationale of the study is to enable parents, educators, administrators and policy makers to develop a sound understanding on the impact of playing video games before making any judgment on the contemporary youth culture. Thus, further decision on the acceptance of video games as a new innovation in school or at home could be considered. Although this study is not very extensive, the findings suggest that playing video games contributes to cognitive, social, motivational and emotional development. However, potential harms do exist. Parents play an important role in guiding their children either directly or indirectly, as indicated by the respective students. Caution is advised in the interpretation of the study's findings as it is solely based on the perspectives of the students, as the first person's views. Nevertheless, each student has their very own perspective on the impact of video games on them.

Key words: video games; positive effects; negative effects; qualitative study; students' behavior; individualistic

1. Introduction

Computers and internet are a part of their life; staying connected through technology is essential; multitasking is natural; and doing is more important than knowing. These are the characteristics of the younger generation compared to the older generation as identified by Frand (2000). With these characteristics, it is not surprising the younger generation does not respond to traditional teaching approaches such as chalk and talk or lecture anymore (Prensky, 2001). Gee (2003) points out that video games match the characteristics of the younger generation who grew up playing them. In order to get connected to the younger generation, video game is a potential tool to be integrated into classroom learning. In his recent book, *What Video Games have to Teach Us about Learning and Literacy*, Gee (2003) states that, "when kids play videogames they experience a much more

Roselan Baki, Ph.D., senior lecturer, head of Department of Language and Humanities Education, Faculty of Educational Studies, University Putra Malaysia; research fields: alternative pedagogy, quality teaching, classroom research.
Eow Yee Leng, Med., Faculty of Educational Studies, University Putra Malaysia; research field: educational technology.
Wan Zah Wan Ali, Ph.D., associate professor, Faculty of Educational Studies, University Putra Malaysia; research fields: testing and evaluation, quantitative research method.
Rosnaini Mahmud, Ph.D., senior lecturer, Faculty of Educational Studies, University Putra Malaysia; research fields: educational technology and CALL.
Mohd. Sahandri Gani Hamzah, Ph.D., associate professor, Faculty of Educational Studies, University Putra Malaysia; research fields: testing and evaluation, quantitative research method.

powerful form of learning than when they are in the classroom". In this study, video games refer to both computer games and games on platforms, such as Playstation 2 and Playstation 3, Xbox and Nintendo Game Cube.

It is becoming increasingly difficult to ignore the fact of video games as the contemporary culture of today's youth. As such, the study of computer games, or game players, cannot be categorized into one research discipline (Kirriemuir & McFarlane, 2004). Relevant areas of study include, but are not limited to, computer science, education, psychology, youth, media, and cultural studies. As a result, aspects of investigation into games and game players can be very multidisciplinary.

It is predicted that the shared graphical worlds is the learning environment of the future (Foreman, 2003). In a recent study of 30,000 players, on average youth spent 22 hours of games usage per week and, 70% of them spent at least 10 continuous hours in a virtual world at one sitting (Yee, 2006). It is not simply a pastime for teenagers anymore, but a valuable platform for millions of users to interact and collaborate using real-time 3D avatars on a daily basis. There has been a growing body of work which makes more positive claims about the educational benefits of games. Among others video games enhance computer literacy (Benedict, 1990), visual attention (Bavelier & Green, 2003), problem solving (Blumberg, Rosenthal & Randall, 2007) and reaction time (Orosy-Fildes & Allan, 1989).

Meanwhile, video games, either played on personal computers, consoles or arcades have created lots of debates and controversies over the years. For example, Grand Theft Auto: Vice City sparked controversy for their violent scenes and subject matter (Saulter, 2007). Of late, violent games currently available to most children and adolescents include games to train players in how to conduct terrorist attacks, how to lead an antiterrorist assault team, how to fly modern fighter aircraft, and how to plot assassinations (Anderson, 2003). Rainbow Six for example provides the players with training to lead a unit of secret U.S. government anti terrorist team through a series of scenarios like real-life combat action. Meanwhile, one of the main goals in Carmageddon is to run over as many pedestrians as possible. One gets extra points for a particularly spectacular kill. These types of games can cause sleepless nights for parents and policy-makers with regard to the possible negative consequences in the future. In this context, Anderson (2003) gives the example of Columbine High School's tragic incident. Eric Harris and Dylan Kiebold, the youngsters who did the shooting enjoyed the bloody video game Doom. The modus operandi of the unfortunate incident by the two was similar to the customized version of Doom and they reportedly played the game before the shooting. Therefore, it is not unreasonable for parents and all parties concerned to voice up their worries.

2. Purpose

The main goal of this study is to understand the effect of video games on six Malaysian upper secondary students. In other words, it is their perspective about video games that is sought in the study. The findings are their personal views on how the video games they played have affected them directly or indirectly. However, most reported studies are foreign based, mainly from developed Western countries. Generally speaking, many parents, educators, administrators and policy makers in Malaysia are not fully aware of the learning potential of video games. More often than not, they tend to associate video games with negative connotation. As a result, video games always become the culprit of misbehaviour and discipline related problems among students. Consequently, this study is to enable parents, educators, administrators and policy makers to develop a better understanding of

the effect of video games on students before making any unjustified judgment on this contemporary youth culture. Thus, rational and justified decision on the acceptance of video games as a new innovation in school could be considered. Since local study in this area is still lacking, it is crucial to address the issue of how video games affect the lives of Malaysian students in general. Specifically, this study tries to address the positive effects and the negative effects of playing video games from the participants' perspectives.

3. Methodology

This study employs a qualitative research method with in-depth interview as the main data collection technique. This is to ensure rich first person view as the main data of the study (Frankenburg, 1993; Ibanez, 1994; Lee, 2004; Roy, Tubbs & Barton, 2004). In the process, students can express their feelings, opinions, views, experience and thoughts freely. At the same time, immediate follow-up and clarification can be done if the need arise. The interview is audio taped and it is much less distracting than taking notes with verbatim record of the responses (Ary, et al., 2006). Telephone interview are carried out in order to clarify students' statements when necessary, and to collect additional data that could shed some lights on the emerging themes. Interviews are transcribed and analyzed looking for categories, themes that emerge from the categories, and finally concluded and reported.

Participants are selected by purposive sampling among students who have been playing video games for at least an hour per day for the past one-year in whatever platforms available. The six students participating in the study also represent diverse family socio-economic status, academic performance, and gender to provide a wider level of representation. Although the number of participants is typically small but it is believed to be sufficient in providing maximum insight and understanding (Ary, Jacobs, Razavieh & Sorensen, 2006; Taylor & Bogdan, 1998; Glaser & Strauss, 1967; Ary, et. al., 2006). Although this is a single case-single site study, it is sufficient for it has the ability to develop an understanding of something that is not fully understood before (Glaser & Strauss, 1967; Taylor & Bogdan, 1998). Validity and reliability is determined by gradually building rapport with the participants over a couple of months. During that time the researchers gain excess to the school and begin making friends with the students. Many students volunteered to take part in the study. However, only six students were chosen and they. were allowed to withdraw if they want to. Draft report of findings was given to the participants to read and if they do not agree with any part of the report, that part will be omitted.

4. The effects of playing video games

It is obvious that playing video games has both positive and negative effects on the students. Positive effects generally are quite similar among the participants. But negative impacts seem to be more individually specific in nature.

4.1 Positive effects of playing video games

In the earlier part of the interviews, students could not identify any positive impact of playing video games, except for the fun of playing the games. When they were requested to reflect and imagine of the time they were playing recently, then they could see the point. Alex, Betty and Carol involve with online games such as Risk Your Life 2, Regnarok, Maple Story and RuneScape. While talking about the games they played recently, they began to

realize the positive values the games have given them.

Firstly, the video games give them the opportunity for virtual socializing. Through the video game they develop the skills necessary for the process. As to date, Alex has been interacting with players from Singapore, Brazil and Canada while Carol met online players from America, Australia, Singapore and Iran. Betty only socialized with local players. In Betty's case, the language limits her socializing opportunity and scope. Her English proficiency in English is not good. Therefore, she chose to "communicate" and "mingle" with the locals. On the other hand, Alex is no better than Betty in terms of the command of the language. Interestingly he has a wider circle of virtual friends. He is able to communicate and trades with international players. It seems self-confidence and self-esteem play an important role in helping a person socializes in a broader dimension. Or, does gender make a difference? Further research need to be carried out in order to address this question. As a conclusion, video games function as a communication tool between players from all over the world without having to meet face to face.

The second positive effect of video games is the opportunity of learning about the cultures and lifestyles of other players from different parts of the world. Thus, video games enable learning to take place outside the classroom setting. Carol for example, likes to "play around". According to Carol that "playing around' means exploring around the game environment, such as in RuneScape. It is not winning that matters to Carol. She was more interested in meeting with new virtual friends while playing online game. The game empowers her to do so.

Besides, video games also provide Alex and Carol the opportunity to learn how to trade with others through the games. They also learn how to negotiate when trading money and weapons. In this context, Carol reminds everyone to "be careful when you are negotiating with other players. They tend to cheat you of your money and weapons". According to her, she "has the experience of being cheated" on a number of occasions before she became quite "mature" in the gaming process. Cheating in the game refers to the effort of a player to win by maximizing knowledge and property gap in comparison with their counterparts (Gazit, 2006). As a result, Alex and Carol for example are becoming more "street smart" as well as being more able to negotiate in trading. For Carol video game world is full of tricks. She clearly is able to make connection between the nature of the video game world and the real world. She believes one could learn from the surviving skills in certain video games in order to get smarter in real life. Since video games provide so much of "cheating elements", players need to be alert, suspicious and act smart all the times. She perceives players have to learn to be street smart in order not to lose repeatedly in the game, and to be more cautious in real life. These skills are not readily available in the classroom. Thus, playing video game is entertaining, challenging and educating for Carol.

The fourth positive effect that emerges is the opportunities to learn management skills. For instance, Calvin and Carol love to play strategy games. Calvin claims that he learned how to control a government and its economy in The Rome Empire game. Meanwhile, Carol manages finances, resources and human management in The Sims. This is a great opportunity for a sixteen year-old student to have the chance of controlling an empire, a country or a company. This is almost impossible in normal real life situation. It definitely is a great feeling to have the opportunity, even in a video game. At the same time, the players were experiencing the three big H, Hands-on, Head-on and Heart-on. Video games offer them the opportunity to "walk in the shoes" of experts. The players get to learn how experts approach problems. They are learning about decision making and the concept of cause and effects right before their own eyes. Right there and then, they are able to find out how certain decisions would

affect the outcomes. In real life, the outcomes would sometimes take a long time to take effect after a decision is made. However, in video games, players get to see the outcomes immediately.

The fifth positive theme emerged is the potential of video games in encouraging players to engage actively in the high-order thinking skill. According to Calvin and Carol, they needed to think strategically about their position, analyze their opponents' strengths and weakness before executing their own plans. The action of planning how to achieve the game goals is a high-order thinking skill (Federation of American Scientist, 2006). Strategy games offer players the opportunity to engage actively in high-order thinking skill. It is important to note that both Calvin and Carol are high achievers in terms of academic achievement because they passed the National Lower Secondary School Examination with honors. It seems video game helps to develop high-order thinking skill for these two students.

Video games provide a rich avenue of general knowledge. Calvin is convinced that he gathers a vast amount of general knowledge through playing Rome Total War 2. While some parents, educators or policy makers assume that playing video games is a waste of time, Calvin seems to prove them wrong. His history book is full of words about Rome Empire, Greek's history and wonders of the world. But, Rome Total War 2 gives him descriptions through graphics and animation and "It's wonderful!" Hanging Garden of Babylon in the Rome Total War "really tells about the story of the wonder. It's like…reading a story book full of graphics! Look very real. I couldn't find it anywhere or (in) any books." Meanwhile, Amy is transforming her game environment in *The Sims* into real life by trying out the furniture arrangement in her house. The general knowledge about home décor that she gathers from The Sims is put into practice, turning Amy into an emerging young interior designer. Students are not wasting their time with video games after all. Maybe they are learning more than they could find from their textbooks.

The seventh theme comes out as a sweet surprise. Video games could actually help students gain trust from their parents. In revealing his secret, Calvin says, "it is easy. Just play the types of games my parents prefer…especially those that provide general knowledge." He is not playing any nonsense games (anything with pornography elements) prohibited by his parents. Calvin believes his parents trust him 100 percent! In this case, Calvin is using video games to gain his parents' trust. The moral values he learnt through the process of gaining trust from his parents is much more than what the moral education textbook can provides. Children need to be assured of their parents' trust in order to develop positively.

Playing video games is an alternative to build positive relationship with people close to us. For example, Amy's grandmother bought a Sony Playstation 2 as a tool to encourage all her grandchildren to visit her frequently and at the same time to build positive relationships among her grandchildren. Calvin and Betty learned to be more patient and considerate with the needs of their siblings. For instance, Betty will let her younger brothers and sisters to play first. Calvin normally waits for his brother to finish his assignments before using the computer for playing games. Meanwhile, Bob is building positive relationship with his mother by asking her to help out with the educational games he is playing. The value of sharing with friends and siblings goes well for all the students' in the study.

Playing video games seem to foster a sense of belonging to a group of friends too. Alex, Bob, Betty and Carol say they seldom feel lonely because they could easily click with other players almost anytime the want to. The ability of video games in cultivating positive relationship among players is supported by a survey conducted

by Entertainment Software Association (ESA, 2007). The survey reports that 66 percent of the subjects feel playing video games has brought their families closer. On the contrary, Anderson's (2003) finds that interactions with teachers, parents and non-aggressive peers are likely to decline in frequency and quality, while interactions with "deviant" peers are likely to increase.

Apart from that, video games help players enrich their language learning opportunity. Alex, Bob and Betty are learning new English words from the games they played. For instance, Bob says he learn new English words from Titanic: The Hidden Expedition he played. For Carol she does not feel the need to learn English because her English is almost perfect. But she is taking the game as an avenue for her to learn other foreign languages, such as Japanese and French. The language game software provides the medium for her to practice what she has learned. Carol finds these games very interesting but she graded the games as very basic because of the content constraint.

The tenth theme is video games enhance motivation to learn. Alex is a below-average student and does not fare well academically. Alex feels low when he fails in almost all the subjects taken in a test. However, Alex starts feeling the opposite when he begins playing video games. His friends start to praise him for being so good in certain games. They even ask for his advice on how to do well in those games. His friends' praise and actions have brought back Alex's self-confidence. He believes he can improve in study for he is good and capable in video games. On the other hand, Betty plays video games to motivate and build up her self-confidence. "People are used to thinking girls are weak. I want to be different from other girls. I play violent video games such as shooting and fighting in order not to feel weak like other girls". Betty believes being slightly more aggressive can be an advantage for a girl, because she can defend herself when in dangerous situation.

Other than that, playing video games help players to relax and release tension. Bob plays video games to cool down when he is angry with his mother or when he is having a bad day. Video games give him comfort and a free mind because after playing "there is no more headache and heartache". The same thing goes with Betty. She confesses that she forgets all the unhappiness by playing video games. This finding is in line with Reuters (2007). The study reports that playing video games has shown potential of satisfying deep psychological needs. In the short term, it potentially helps improve people's well being. This is in line with the study by Dr. Scott Rigby of a Florida-based virtual environment think tank, and colleagues from the University of Rochester, New York. They find that if a player's needs are fully satisfied, the better he feels after the game. Video games seem to be a soul comfort for the students interviewed in the study. Gazit's (2006) findings supported the above discussions too. In most sessions, artificial behaviors and actions perceived by kids as stupid are a powerful tool of making them laugh. Carol for instance, is always feeling tired and stress after coming back from school. In order to relax, she plays video games before she starts doing her homework. By doing so, she is able to study "more effectively and efficiently".

Video games virtually allow students to test and experience the impossible. They can perform any acts or take any action without risking injury, broken arms and limbs, or damage of equipments. According to Calvin, "what you do is what you get and yet there is no harm at all." The participants perceive video games as an avenue to expand their creativity and imagination especially in doing their "no fear" thrills.

Nevertheless, the study also reveals that video games also pose negative impact onto the participants. The participants do realize that video games can be detrimental to them to a certain extent.

4.2 Negative effects of playing video games

Video games have different negative effects on different students. Not all students are experiencing the same effects. In fact, the negative effects described by the students are quite obviously different from each other. From the data analyzed, the most number of negative effects in playing video games are gathered from Alex and Carol, six negative effects from each of them. The least number of negative effects come from Amy and Betty. Both Amy and Betty perceive video games as an activity that does not cause much negative effects on them.

Amy viewed playing video games as having minor negative effects on herself. When she is engrossed in playing, she tends to help her parents less in doing house chores. However, she says she will make up on other occasions when she is not playing video games. She feels bad for not helping when her parents call. But "you must finish the game first…after that only can work". This seems congruent with Anderson (2003) finding on the relatedness of playing violent games with children being less willing to be caring and helpful. Although Amy does not play much violent games, it seems non-violent games could result in the same negative effect of being less helpful to a certain extent.

Meanwhile Alex feels, video game is affecting his health negatively. He is trying hard to save money by eating bread or fried noodles only during recess in school. "I want to save (money) … (so that I get to) play video games at the cyber cafes". Alex's mother is a single parent. Alex also seems to be thinner compared to the rest of his peers. The potential negative effect on physical health is a concern in Alex's case. Alex confesses that when he is too engrossed with the games, he tends to ignore the daily requirements of normal human being. He compromises on meals, sleeps, rest and real life interactions and he delays toilet breaks too. He can actually stay awakes playing games for couple of days and nights continuously. Sometimes, he tried to get the extra playing time by doing some simple cleaning chores for the counter man without the knowledge of the cyber cafes' owner. Alex admits that he has the tendency to spend all the money he had on video games. He fails to control himself even though he realizes the need to save some money for his future usage. Alex also lies to his mother about what he does after school so that his mother does not get angry. Sometimes, he talks to friends about video games they played in class while teacher is teaching. He agrees that video games do affect him negatively on his attention in the class. He cannot help to doing it because he always think about the next action and strategy to improve his "performance in the next game".

As for Bob, he admits that he used to do illegal motorcycles racing to expand the thrill of video games into the real world. But Bob has recently stopped illegal motorcycle racing when he realizes that illegal motor racing is very dangerous. He says, "it is scary looking at badly injured and dead riders" shown on television news. However, Bob maintains that he still loves playing racing games and does not deny the possibility of involving in car racing once he gets his driving license. What pulls him is "the thrill" of real life action outside video games. Bob further admits that another negative effect of playing video games is he always forgets to do his homework. He argues that he gives priority to homework but once he gets engaged with the games "I forget everything … maybe myself too (giggle)". Besides, video games can cause the change of mood. Although video games is a tool for relaxing and releasing tension, it can also make a person's mood swing to the opposite. Bob becomes restless and hot tempered if he misses the targets right from the start. This affects his whole performance and he gets bad score. At the same time he can easily gets annoyed and angry over silly and small matters. However, if he does fine at the initial stage, a few misses and frustration after that seem to be under control because he is more composed. He is able to keep his cool and concentrate to reach the targets.

Video games can expose participants to pornography through other players. Some friends recommend x-rated video games to Calvin and Betty. Both of them said that their friends told them “the greatness” of the video games in detail. Calvin has also reads and sees adult games in computer magazines before. However, both of them tell that they never play the games. As for Calvin, he does not play x-rated video games “because…I don’t think its right to play those games, and if I play those games … (if) I get caught by my parents … I’m dead.” This means they “will never let me play anymore. I might get beaten … but I never play those games … It’s unethical.” Calvin seems more rationale and able to control himself from playing unethical type of video games. Although Betty has not played any x-rated video games, she does not deny the possibility of her exploring it “when the time is right.” She further explains that “the right time” means when she is much older and no longer schooling.

At one point, Calvin, Betty and Carol shared similar view about negative effect of playing video games. They claim playing video games make them more aggressive and violent than before. They realize that they get angry easily. As a result they shout, yell and scold their siblings for a small mistake they do. Betty even goes to the extent of hitting her brother from time to time. “But, it is not like so hard … not abuse”. These behaviors are in line with Anderson (2003) finding that indicates playing a lot of violent video games is related to having more aggressive thoughts, feelings, and behaviors.

Meanwhile, Calvin mentions less self-disciplined as one of the negative effects of playing video games. For instance, he always stays up till midnight just to play video games. Calvin admits feeling tired the next day, but he is confident that it won’t affect his attention in class the next day. In fact, a good self-satisfaction from the games the night before actually boosts him the whole day. Therefore, ‘‘less self-disciplined’’ in his sense means sleeping late but not putting less priority in his studies or missing lesson the next day. In fact, Calvin is a school prefect and he holds quite a number of high posts in the school clubs and societies. In terms of appearance, he looks neat, tidy and orderly.

As for Carol, she learns to cheat and lie through video games. There are short cuts or cheat codes that a player can use to do well in a game. To her, the game encourages her not to work hard and think because there are always alternative ways to overcome any problems in the game. At the same time, she admits that she starts to lie to her parents. The “feeling to play make me…just want to play”. For example, her parents do not allow her to play Grand Thief Auto 3 video game because they feel “the game has no moral value and too violent”. She keeps playing the game for three months while both of them are working. She considers Grand Thief Auto 3 as her favorite. Grand Thief Auto 3 involves actions such as snatching cars and killing people. In fact in 2000, Grand Thief Auto 3 is banned in Australia because of its graphic violence and sexual content (Media Awareness Network, 2007). Besides learning to cheat and lie, Carol also socializes less with real people. She socializes more though the online multi-player games because “it is easier to speak to people I don’t see … no time limit and they are ready when I log in”.

It is interesting to note that the two below-average students, Alex and Amy specifically believe video games have negative effect on studies. Amy says, “playing video games take so much time”. For Alex, “video games make you forget homework … forget test … because you enjoy too much with the game”. However, high and low achieving students from different socio economic background have different views. Bob argues that there are other factors affecting his studies, such as his own attitudes, teachers and friends. Betty blames the financial problems faced by her family and problems between siblings as the factors affecting her studies. Carol also did not

study seriously before the examination and her own limited effort made her unable to do well. Calvin made the decision to lay off video games two months before the examination. He believes that his inability to score excellent results has nothing to do with video games at all. It seems students with higher self-esteem and higher school achievement tend to attribute success to internal, stable, uncontrollable factors such as ability, while they contributed failure to either internal, unstable, controllable factors such as effort, or external, uncontrollable factors such as task difficulty (Weiner, 1980).

The next detrimental effect that video games may cause is addiction. Addiction refers to a situation where a person needs more and more of a substance or behavior to keep going (Healthwatch, 2006). If a person does not get more of the substance or behavior, he becomes irritable and miserable. As playing video game meets these criteria, it can cause addiction to the players. Three out of the six students agreed that they could not live without video games. Alex will run amok if he cannot play video games for a long period. He “kick anything in the way…on the floor…furniture (too) sometimes”. As for Bob, if he is not allowed to play video games, he feels insane, lost, couldn’t think rationally, would not talk with anyone and just sit quietly at one place. Amy’s situation was not as bad as Alex and Bob. She would only felt restless but not doing anything extreme like the boys. Based on the criteria listed by Healthwatch (July 3, 2006), these students could be regarded as addicted to video games.

On the other hand, Calvin, Betty and Carol seem able to control themselves when dealing with video games. They believe there are always other alternatives in life besides playing video games. For instance, Calvin and Carol love reading. They perceive life without video games as bearable. As for Betty, she was busy working as a part-timer while juggling with her homework. Family’s financial problems and her relationship with her boyfriend made her fully occupied. Therefore, Betty did not have much time left to think of video games. When she has time she plays the game and does not think much of it when it is over.

5. Discussion

This study provides a glimpse into understanding both positive and negative effects of video games on students. Thus, this may also provides input to all parties in looking at video games in relation to students’ life. Students do gain a number of positive and negative effects out of playing the video games.

It appears the positive effects of video games covers four main domains, cognitive, motivational, emotional and social. On the other hand, the negative effects seem to be more individually specific in nature. It is obvious that different players gain different negative effects from the games they played. As a result, it is not safe to say that video games have more positive effects on the students than the negative ones. Moreover, differences between genres and, even between games within one genre can influence the way the students play and differ the potential of positive or negative effects on the students (Kirriemuir & McFarlane, 2004). On top of that different players experience different effects from the same video game. This could be due to the way they perceived the process that they are going through or the purpose of their play. If players are looking for fun and nothing else while playing video games, they do not seem to encounter much “educational” experience. Those who play and perform self-reflection on to the process are gaining more than just a play.

All the participants never or seldom reflect on their own experiences while playing video games. Although the process of gaining knowledge and skill may take place in many games, learning does not occur unless these students do some kind of reflection during the play. Therefore, in order to promote worthwhile learning through

video games, students should be encouraged to practice self-reflection on the learning experiences while or after playing video games. Henderson (2005) suggests the inclusion of recreational video games in schools for education should not be limited to formal schooling. Teachers need to acknowledge the cognitive worth of digital games to enhance cognitive abilities of the students. However, teachers need to develop ways to ensure there is a transfer of such valued skills and strategies to the students.

There are many good principles of learning built into good computer and video games (Gee, 2005). According to Gee, the principles of learning in those games can be applied to school learning of tomorrow. The current trend of skill and drill, scripted instruction and standardized multiple choice testing are not attractive to students who are the "playstation generation". Pedagogical transformation is needed in order to attract students into learning and schooling. What would be more appropriate than using the same technology to engage students into learning? Innovation needs the expertise of competent teachers who have various skills (Burden & Byrd, 2007), any skill that can ensure learning, including computer games.

To a certain extent, this study also suggests that parents should be attentive to behavior change in their children. In so doing, parents are most likely able to control their children video games activity so that it does not go beyond what is beneficial to them. This is necessary because some students do have the ability to self-control.

6. Conclusion

To summarize, video games are both beneficial and detrimental to students learning process and their development as a whole. Students are also affected in different aspects and degrees. Therefore, it would not be a fair justification to make a conclusion that video games could cause certain definite negative effects. It will be more reasonable to state video games as one of the cause of certain negative effects on certain students.

Since this area has not been extensively studied, there are vast opportunities for further study in the area of video games in education. The processes involved in playing the games that are beneficial or detrimental to students need to be researched further and over a wider and bigger population, and across various context. This will provide better understanding of the phenomenon and appropriate steps or strategies could be implemented for the betterment of teaching and learning.

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