AMA COMPUTER COLLEGE

COLLEGE OF COMPUTER STUDIES

LUCENA CITY

Effects of Virtual-Manipulated Games in General Decision Making Perceived By Senior High Students in AMA Computer College Lucena

A Case Study Presented to the **FACULTY**

of AMA Computer College, Lucena City

In Partial Fulfillment of the Requirements For

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AMA Computer College Lucena Campus	2017 - 2019 (Present)

CHAPTER I

INTRODUCTION

With the birth of the digital era, the rise of digital and electronic devices that changed the way people live their lives. One example is the internet, which lead to the creation of social media that made people stay connected and share information on a larger scale. This era also introduced us to the rise of video games.

Video games have been recognized and used as a form of entertainment in homes alike, and despite the negative reputation that video games have been receiving in news and articles, it is until recently that video games (in a form of simulations) have been made to be implemented in other aspects such as medicine and education.

As video games continue to flourish, future generations are more likely to get exposed as early as childhood, a demographic of which an individual is still at an early stage of cognitive development.

According to an article by Net Nanny (2017), Some common concerns that make parents concerned about video games are addiction, age appropriateness, safety & health. Parents worry about the potential dangers of their kids becoming overly immersed in playing games, with concern that their children may be living too much of their lives in the 3D and virtual worlds. Like movies or music, if the game contains violence, parents are concerned their child may be exposed to inappropriate language or behavior.

Parents are concerned that their children might become couch potatoes and won't get enough exercise. Anti-social concerns are also linked to this as well. With proper parental guidance and appropriate video game choice, there are also benefits that may help children throughout their cognitive development, which are most of the time overlooked by most articles and other studies.

BACKGROUND OF THE STUDY

Video Games

The study of the video games' effects on decision-making is a new research field in psychology, with a limited number of published studies; nevertheless, it can offer important clues for understanding risks and potentialities. Research on decision-making bias found that interactive training exercises using video games actually improved participants' general decision-making abilities and when used alongside other traditional training methods. The implication being that such training could reduce costly errors associated with biased judgments and decisions. The interactive games provided participants with personalized feedback about how biased they were during game play, with the opportunity to make practice decision, and to learn strategies to reduce their propensity to commit each of six well-known cognitive biases.

It has been demonstrated that exposure to racing Video Games can influence real-world decision making related to driving behavior (Fischer et al., 2009; Beullens et al., 2011). There is evidence, however, that certain types of Video Games may have differential effects on cognitive control, a set of abilities that allow the individual to maintain goal-directed information processing (Basak et al., 2008; Bailey et al., 2010). For example, in a study focused on individual differences (Bailey et al., 2010) it has been reported that experience with First Person Shooter (FPS) video games was correlated with a reduction in proactive control (active, sustained maintenance of goal-relevant information) and was not correlated with reactive control (just-in-time mobilization of control after the conflict is detected; Braver, 2012). Furthermore, Swing (2012) demonstrated that 10 hs of FPS experience resulted in a reduction in the use of proactive control in a training study. These findings may indicate that FPS gamers may be more likely to make their decisions immediately rather than after thoughtful deliberation, a

tendency that could indicate a preference for immediate rewards rather than long-term assessment of the risks and benefits (Bailey et al., 2013).

Statement of the Problem

Students choosing/prioritizing video games over academics is the main problem of the study.

This study cast about the data to the following:

1. Determine the demographic profile of a video gamer in terms of:
    - Age
    - Gender
    - Video games commonly played
2. What specific video game/s exercise decision-making skills of an individual?
3. What aspects in real life would benefit from emphasizing good decision making skills and good prioritization? In contrast, what aspects in real life will be affected with bad decision making skills and prioritization in relationship to video games?

Objective of the Study

The study will tell readers what video games do to a person's general decision making, especially students who are actively studying. The researchers aim to give awareness the advantages and disadvantages of having video games as a part of a student's routine, and may consider their priorities.

Specific Objectives of the Study

Specifically, the study dissects the main objective into parts:

1. Determine the age and sex of players, and range of time spent in playing virtual games.

2. Identify the practices maximizing and limiting the use of video games in decision-making of an individual in terms of :

    2.1 Attitudes about risk and uncertainty

    2.2 Personal Habits

    2.3 Cognitive Biases

    2.4 Age

3. Recommend the better way of maximizing the use of virtual manipulated games by means of:

    3.1 Utilizing games as an educational platform

    3.2 Setting a limit and keeping track of your usage of video games

    3.3 Choose what kind of games to play that can benefit your cognitive and possibly academic aspects in terms of decision-making.

Significance of the Study

This study will serve as a useful reference for parents and video gamers alike. This would also shed light on the stereotypes and misconceptions that are spreading throughout mass media about video games in general.

Parents. This research will help informing parents in deciding whether to let their children play video games beforehand.

Video Gamers. To inform them of the effects of playing video games and to help re-evaluate the opinions received by video gamers in mainstream media.

Scope and Limitations

This study is focused on understanding video games and its effects on decision-making. This study was conducted by the researchers which started in July 2018 in AMA Computer College Lucena in the school year of 2018-2019. Senior High students of AMA Computer College Lucena from an age ranging from 16 - 18 were asked to be the respondents of the study.

Definition of Terms

For clarity of the study to guide and enlighten the readers, the following terms are utilized and defined clearly for the better understanding of the readers.

Virtual Manipulated Games - any of various interactive games played using a specialized electronic gaming device or a computer or mobile device and a television or other display screen, along with a means to control graphic images. (https://www.dictionary.com/browse/video-game)

Cognitive Development - is the construction of thought processes, including remembering, problem solving, and decision-making, from childhood through adolescence to childhood. (http://www.healthofchildren.com/C/Cognitive-Development.html)

Decision-Making - The action or process of making decisions, especially important ones. (https://en.oxforddictionaries.com/definition/us/decision-making)

Dilemmas - A situation in which a difficult choice has to be made between two or more alternatives, especially equally undesirable ones. (https://en.oxforddictionaries.com/definition/dilemma)

Susceptibility - The state or fact of being likely or liable to be influenced or harmed by a particular thing. (https://en.oxforddictionaries.com/definition/susceptibility)

Stimulations - encouragement of something to make it develop or become more active. The action of arousing interest, enthusiasm, or excitement in something. (https://en.oxforddictionaries.com/definition/stimulation)

Chapter II

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter includes the review of related literature and studies which the researchers have pursued to shed light on the topic under study.

Research Studies About Video Games' Effects on Decision Making

Research on decision-making bias found that interactive training exercises using video games actually improved participants' general decision-making abilities and when used alongside other traditional training methods. The implication being that such training could reduce costly errors associated with biased judgments and decisions.

Dr Scopelliti said, "Whereas these methods only affect specific decisions, and do not change the decision-makers' ability to make less biased decisions in other unrelated situations, the interactive games we tested can extend their effects to different contexts because they affect the decision-maker rather than a specific decision. "We found that playing the interactive games reduced susceptibility to biases by more than 31% in immediate tests, and that two to three months after participants played the games, the reduction in the incidence of bias was still larger than 23%."

Researchers in recent years have exhaustively catalogued and chronicled the biases that affect our decisions. We all know the havoc that biased decisions can wreak. From misguided beliefs about the side effects of vaccinating our children, to failures in analysis by our intelligence community, biases in decision making contribute to problems in business, public policy, medicine, law, education, and private life.

Researchers have also long searched for ways to train people to reduce bias and improve their general decision making ability – with little success. Traditional training, designed to debias and improve decision-making, is

effective in specific domains such as firefighting, chess, or weather forecasting. But even experts in such areas fail to apply what they've learned to new areas. Weather forecasters, for instance, are highly accurate when predicting the chance of rain, but they are just as likely as untrained novices to show bias when making other kinds of probability estimates, such as estimating how many of their answers to basic trivia questions are correct.

Video Games

Contrary to the traditional belief that gaming is merely an addictive source of entertainment and diversion, recent research has proved that gaming has numerous benefits and key among them, is the development of cognitive skills in both children and adults. Just as physical exercise helps in improving and strengthening your muscles, cognitive games help to indulge one's brain in constant stimulation, thus improving the brain's performance. The following are some of the cognitive benefits of playing video games.

When an adult or child is playing a video game, he or she is not only staring at the computer inactively. The activities and actions on the screen provide a lot of mental stimulation. For one to play, he or she will need to coordinate their visual, audial and physical movement.

Video games involve certain rules. This means that the player has to think carefully before making any move to ensure that they stay within the required rules of that particular game. The player needs to make split- second decisions that will determine whether or not he or she will advance to the next level.

Playing your favorite video game may require both visual and auditory memory. The player is required to read or listen to the instructions which might only be provided at the beginning of the game, thus the need to remember them throughout the entire game. Mastery of the keys on your keyboard helps you

easily move your characters in the game. This helps improve your memory, whether short-term or long-term.

Video games especially action games, have proven to be able to capture the player's attention for the entire period of the game. This is brought about by the player's need to achieve certain objectives within the game, and be able to progress to the next level.

Gaming is not only beneficial to adults and teenagers, but to children as well. Many modern education institutions incorporate video games as a teaching methodology. This helps these children improve their academic skills by providing video games that are specifically aimed at enhancing their cognitive and creative skills.

While gaming, the brain receives multiple stimulations, both visual and auditory. According to research, individuals who play video games frequently can process these stimulators faster than others. These stimulators ensure that the brain is continuously working to interpret them.

An action game, for example, may require you to be very observant. It requires you to be able to move your joystick or keys while looking at the various features on your screen such as energy levels, oncoming adversaries, ammunitions left, available time among other factors, all which are vital to winning. This ensures that the player can observe and react accordingly to all requirements of that particular game.

Online Gaming

Online gaming enables many players to engage in a particular game simultaneously. As such, there is constant communication between the players which in turn results in the development of meaningful as well as casual relationships among them.

This helps players meet new friends while also strengthening bonds with their old friends. Though computer games might be beneficial, there is

need to play them in moderation. It is also important to pick the right game as not all of them provide the same cognitive benefits. Age should also be a factor. Small children should not be exposed to violent games. Although gaming still has some disadvantages. Today, almost everyone has their own personal computer and video consoles. Children today are more attached to games compared to television. The Internet provides them with thousands of games to choose from and can vary from educational, to developing problem solving skills, and even becoming a criminal. Although this is just a play, our children still need proper guidance when it comes to violent recreations.

Research Paradigm

This conceptual framework of the study illustrates the paradigm used using Input-Process-Output (IPO) diagram.

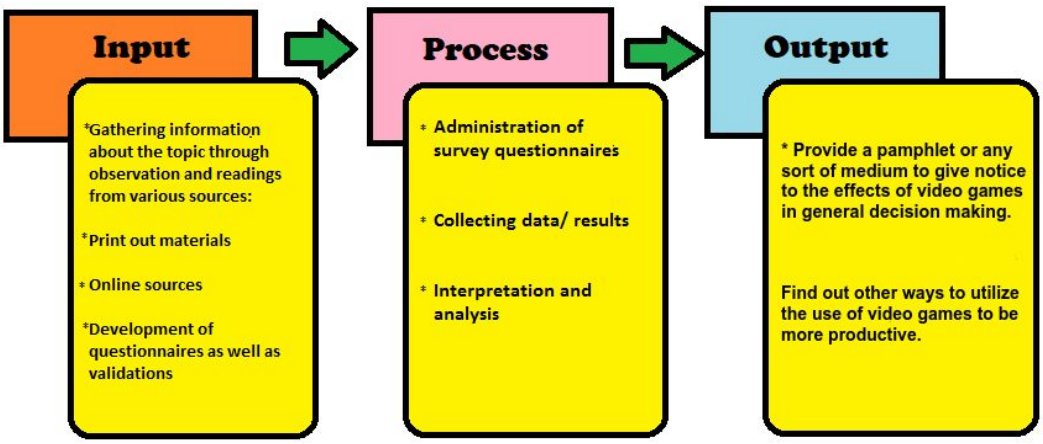

Figure 1: The IPO diagram on the Effects of Video Games in Decision-Making Perceived by Senior High Students in AMA Computer College Lucena

The figure above illustrated the process of the determining the effects of video games in decision-making in AMA Computer College.

Chapter III
METHODOLOGY

This chapter presents the research methodology used in the conduct of study. The research design, sampling procedure & technique, respondents, research locale, data gathering procedures and instruments to be used.

Research Design

The study used Descriptive-Analytical Method upon gathering and interpreting data or information.

Respondents

The study was conducted to various students in AMA Computer College Lucena City and other people who have experienced playing video games.The identities of the respondents will remain anonymous if they solemnly request.

Instrumentation

The researchers used documentary surveys coming from the students of AMA Lucena Campus. For the conduct of study to get insights regarding to the effects of video games in decision-making. The questionnaire consists of questions that must be answered by the respondents.

Data Gathering Procedure

The researcher will ask permission to AMA Senior High School to conduct the study upon the approval of questionnaires that was prepared by the researchers to the respondents in the school campus.

Statistical Analysis

The data was summarized, analyzed and interpreted. It was used to determine the effects of video games in decision-making perceived by Senior High Students in AMA Computer College, Lucena City.