

# Learning by Playing: A Phenomenological Study on the Influence of Video Games to the Senior High School Students of Philippine School Doha

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**Abstract— Background.** Video games have always incurred mixed reactions. While many people, parents and teachers alike, would see them as mere distractions and even harmful, it may not always be the case. **Method:** The study is qualitative in nature and follows the IMRAD format. A phenomenological design was utilized to capture the lived experiences of Senior High School student gamers of Philippine School Doha. The accumulated verbalizations of the participants are relative to the study's central question: How do video games influence the academic and lifestyle of Senior High School Students? A semi-structured interview was conducted to gather data. An inductive approach was used to create the themes for the simulacrum and the data obtained was analyzed using document analysis. **Findings:** The verbal musings of the participants showed that video games, though they may have negative effects, are mostly beneficial. Three themes were created: (1) Growth Mindset which includes prudential development and self-control; (2) Academic Mindset which incorporates acquired knowledge and ingenuity; and (3) Practical Mindset which highlights self-satisfaction and social interaction. **Conclusion:** It can be surmised that the student participants learn by playing. Through video games, they are able to learn life skills that transcend mobile, television, and computer screens. They become better decision-makers and are able to imbibe the value of moderation. They become more creative and learn many pieces of information. At the same time, gaming relaxes them and nurtures their interpersonal skills.

**Index Terms— Academic Mindset, Growth Mindset, Practical Mindset, Video Games.**

## I. INTRODUCTION

Video gaming has risen to prominence over the last few decades. "In recent years, they have rapidly become many individuals' favorite pastime and the global gaming industry has grown at a quick pace (Griffiths, Yilmaz, & Yel, 2018, 148)." The unrelenting progress in gaming designs, mechanics, and story-telling and the strides in gaming

consoles and platforms have undoubtedly garnered the attention of people from all walks of life. It has become a global attraction that has connected generations together.

"The rising popularity of video games has instigated a debate among parents, researchers, video game producers, and policymakers concerning the potential harmful and helpful effects of video games on children (Prot, et. al., 2012, 647)." In this regard, the world still has its suspicions on gaming. "Although some accept video games, the majority express deep concern, and some reject them outright, blaming them for the growth of a culture of violence (Aguilera & Mendiz, 2003, 1)." This apocalyptic stance, however, remains inconclusive. It is not anymore an issue whether games are good or bad. This false dichotomy is obsolete insofar as the focus now is how to exacerbate the benefits and limit its harmful effects. Since this technology is not going away for the foreseeable future, it is then better to magnify its advantages.

Despite the criticisms hurled against video games, however, their popularity did not wane. "Video games constitute a powerful cultural industry that is constantly evolving technological applications; it is a symbolic universe frequented by millions of citizens, especially younger people (Aguilera & Mendiz, 2003, 2)." With the prevalent usage of this kind of technology, education is now incorporating it in the teaching and learning process. The idea here is to use mechanisms which the students are familiar with. Unless a relevant kind of teaching pedagogy is utilized, in-depth learning can never be achieved.

Advocates of the learning experience afforded by modern video games include Thomas and Brown (2011), who describe a new "disposition" towards learning that games exemplify, requiring players to be both adaptable ("thrive on change") and resourceful ("marshal all their available resources and experiment with them to find multiple ways of accomplishing a task"). Gee (2007) identifies a range of learning principles present in video game design that encourage, for example, critical thinking and reflective learning, which are also commonly cited as desirable attributes in graduates. There are indications that playing video games may be associated with positive cognitive and social effects (Granic, Lobel, & Engels, 2014).

A study conducted by Nardi and Harris (2006) showed that video games players collaborated with each other in different ways. Playing action video games has been shown to increase

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attention skills (Dye & Bavelier, 2010; Dye, Green, & Bavelier). Finally, cooperation and coordination are other skills that video games help players to develop (Ducheneaut and Moore, 2005).

The present research tries to capture the lived experiences of SHS student gamers of Philippine School Doha. Based on the transcribed responses, 3 themes were formed that would elucidate their phenomenological experiences. The theme (1) Growth Mindset refers to the maturation benefits that gaming induces. This includes the ability to make prudent choices and exhibit the virtue of self-control. The theme (2) Academic Mindset explains the honing of cognitive abilities incurred from gaming. It underscores how the student gamers acquire knowledge and spur creativity. The final theme (3) Practical Mindset highlights the practical advantages of games which includes the fun and enjoyment while playing, combined with enhanced interpersonal and social skills.

In a nutshell, the student participants are stern in believing that gaming is beneficial to their lives. While they acknowledge the fact that gaming may have its own various disadvantages, these are mitigated by the benefits it reaps. The themes formulated accentuate what gaming means for them. The simulacrum captures their lived experiences; that holistic learning by playing is achieved through video games and other related platforms.

### **I. METHODS**

The method of gathering the required data was accomplished through interviews and the voluntary participation of the student participants. The central question was asked first followed by multiple follow-up questions found in the interview guide. The verbalizations of the participants became the basis of the simulacrum.

#### **Study Design**

The study used a qualitative design following the IMRAD format. According to several prominent scholars (Denzin & Lincoln, 1995; Pope & Mays, 1995; Creswell, 2002), qualitative research is intended to deeply explore, understand and interpret social phenomena within its natural setting. By using a qualitative research methodology, the researchers want to collect richer information and get a more detailed picture of issues, cases or events (Arora & Stoner, 2009). Through the use of the phenomenological approach, the study wanted to explore the lived experiences of senior high school student gamers of Philippine School Doha. The aim is to create recurring themes based on their verbalizations.

#### **Research Locus and Sample**

The study highlighted the responses of 7 student participants. Key informant interviewing was done for all purposely chosen students. The selection of participants was based on the following criteria: (1) bona fide SHS student of Philippine School Doha; (2) participated in (online or offline) gaming tournaments at least 3x a year; and (3) plays a minimum of 20 hours a week. The participants were privately interviewed following the agreed schedule. The researchers display extensive interviewing skills in order to unravel a broader perspective on their experiences.

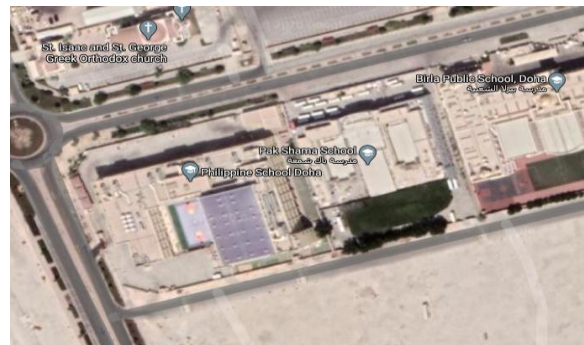
#### **Data Collection and Ethical Consideration**

The researchers conducted a semi-structured interview to unravel the participants' lived experiences. According to

Adams (2015), the semi-structured interview (SSI) employs a blend of closed- and open-ended questions, often accompanied by follow-up why or how questions. The researchers used a predetermined interview guide, stemming from the central question, to successfully gather data from the student participants. The aforementioned guide was validated by the chosen SHS teachers.

The interview guide consisted of 25 questions which tried to capture the verbalizations of the participants' experiences. A letter was sent to the student participants and their parents to ask for their approval to participate in the study. During the interview, cellphone recording was used to keep tabs of the data incurred. The researchers made sure that the data gathered is kept confidential and only the researchers will have access to it. It was also ensured that the students have partaken in the study out of their own volition.

The research procedure is empirically observed using the



following steps in data analysis: (1) transcription of data; (2) emic to etic transcription; (3) cool to warm analysis; (4) identifying and analyzing themes; (5) and creation of the simulacrum.

### **II. RESULTS**

Video games are one of the many sources of entertainment. They have grown in popularity from simple games such as



Pong to story-based games that can be played among a hundred or more players. Due to the availability and enjoyment of video games in the 21<sup>st</sup> century, the industry has seen an increase in the number of players in various communities over the course of many years. Consequently, with the growing popularity of video games, the demand of

devices such as PCs, gaming consoles, and portable gaming devices has risen and continue to rise.

Being widely available and popular, video games are readily accessible to people ranging from children to senior citizens. With this in mind, the study aims to know the effects of gaming to PSD's senior high school students in both their academic and personal lives.

Through the voluntary participation of the participants and verbalization of their thoughts, three themes were created to further explore their understanding of the phenomenon at hand. These are (1) Growth Mindset, which includes Prudential development and Self Control; (2) Academic Mindset, which includes Acquired Knowledge and Ingenuity; and; (3) Practical Mindset, which includes Social Interaction and Self-Satisfaction.

Below is the simulacrum formed from the participants' lived experiences.



### Growth Mindset

Growth mindset in playing video games allows students to improve their ability to analyze different situations and make informed decisions about them. This is because video games create a sense of discovery, creativity and testing. Without a doubt, playing video games spur growth and development. Although most people see it as something of a distraction to school (in particular) and life (in general), it should be noted, however, that immersion in video games can train students to make good choices in life. At the same time, playing video games hone the virtue of self-control; that no matter how enjoyable playing is, they must stop for other things to accomplish. Hence, the student participants are honed covertly and overtly to make prudential decisions while imbibing the value of game moderation.

Prudential development is key to growth mindset. This refers to the participants' ability to make quick and rational decisions in the nick of time; grace under pressure so to speak. As what they have shared,

*"It helped me analyze more and find the best choice for a certain problem (P1)."*

*"By the years of my experience in playing, I was able to learn decision-making skills in games (P6)."*

*"I believe that it enables me to make quick decisions and choices. For example, in tactical games, you can die when*

*making a wrong choice but through that it made me a better decision maker." (P2)*

*"Video Games make me think faster and that skill helped me in my school activities. In video games you are forced to think faster and be vigilant (P2)."*

*"Many would say that gaming hinders your academics, but I personally think that it helped me a lot since I learned to think and act quickly (P5)."*

*"Video games enable me to think of the consequences of my actions; that whatever I choose will affect the outcome of the game (P3)."*

Prudential development is one of the benefits of playing games. With the immersive gaming platforms readily available nowadays and with the more complex mechanism of contemporary games, players are not only enjoying, but actually learning how to make quick decisions. At the same, though deciding under time constraint, they still choose the best option knowing that their choices will have a long lasting impact on the outcome of the game. Since most video games rely on quick, but wise decision making skills, the student participants have noticed growth prudentially.

Admittedly, video games help students be more aware of how they decide and how effective their decisions are. The different gaming genres enhance this. Puzzle or strategy games, for instance, encourage them to think thoroughly of their choices to get past the level or see the bigger picture. Story-based action role-playing games, in addition, allows players to make in-games choices which will define the path they are taking to get the outcome of the game. First person shooter games employ a fast paced playstyle and have many different images popping in and out of the screen. Due to the mechanics of the game, students need to think fast and play smart.

Moreover, prudential development in gaming translates to reality. Good decision making skills is not only applicable to games, but to life per se. The student participants learned that the decision-making skill learned and enhanced by playing video games can be of great importance to what and how they decide in real life. As the participants mentioned,

*"Games helped me in making decisions in real life. When we decide, there are consequences. That is why when you play games, your wrong decisions have bad consequences. In real life, we need to pick the one that rewards you with something that might be beneficial to you and others (P7)."*

*"From playing video games, I became more rational and reflective when it comes to decision making, I believe that the ends justify the means and I would measure my decisions by its benefits and its setbacks (P4)."*

*"It forces me to be smart when making decisions and that carries on to me when planning for an event. I must also be wary of the consequences of the decision I make (P2)."*

*“It helped me improve my decision making which allowed me to make the correct decisions in school (P6).”*

*“It helps me in improving the way I learn, focus and multitask in a short period of time because anything can happen in a short amount of time. It influenced me in being good at time management and critical analysis (P3).”*

Furthermore, part of growth mindset is self-control. Self-control, as defined by the participants, comes in two directions. The first one is the ability to control oneself from playing more hours than needed. The participants believed that time management is key here. When one is able to manage his/her time well, a time for everything is given. As the participants mentioned,

*“Gaming helps me plan my strategy on deciding which activity I should do first and it depends on the activity if I would prioritize it or not. I look at the pros and cons of my actions of how it will affect my future if I do these activities (P6).”*

*“I make sure that I just play for a couple of hours because I have other things to do (P1).”*

*I remind myself that playing has its limitations. I plan my day so that I can still play after I have done household and academic stuff (P2).”*

Another definition of self-control is the ability to regulate emotion while playing games. It is not letting anger or fear affect the game performance. Moreover, when emotions are not regularly checked, the gamers can become a threat not only to their teammates, but unto themselves as well. As the participants mentioned,

*“There are many people who trash talk while playing. Sometimes, it affects my mood, but I always say to myself that I should not listen to them (P3).”*

*“There are many trash talkers online. I try to control my emotions and not let them get to me (P5).”*

*“Gaming makes me feel a lot of emotions. I have observed that players sometimes get angry and lash out on their teammates. It makes a stressful day more stressful (P2).”*

*“The gaming world can sometimes be a toxic place. That is why I need to control my emotions and be more matured (P4).”*

Gaming can itself be the self-control. Players are able to maintain emotions in check when they are playing. As such, they remain calm and unperturbed even under pressure. In real life, they do not get anxious or jumpy easily. Gaming has taught them stoic control of emotion; to maintain peace amidst chaos.

In summary, “Growth Mindset” is the mental process or state of an individual to grow through any means, may it be

through the platform of video games. The subtheme, “Prudential Development” discusses the forethought of the decisions made by the participant. Moreover, the subtheme “Self-control” describes the regulation in terms of the number of hours utilized for playing and the maintaining a calm demeanor throughout those hours and even in real life.

#### **Academic Mindset**

Academic Mindset refers to the psycho-social attitudes or beliefs one has about oneself in relation to academic work. Positive academic mindsets motivate students to persist at schoolwork (i.e., they give rise to academic perseverance), which manifests itself through better academic behaviors. While games are abundant these days, still many people think video games hinder a student’s academic performance. This is probably because to them, the problem of addiction overshadows all the benefits that video games have. Parents and teachers do not support video games since it is an unconventional way of teaching gamers, even though they make learning more fun and exciting.

In this study, academic mindset refers to the learning process while playing games. It has been well-known that playing is not only a source of fun, but of knowledge as well. It has provided the student participants a plethora of opportunities to learn many things, explore worlds beyond their wildest imaginations, think and create strategies, and acquire new words and ideas. There is really no doubt that gamers learn from videogames especially nowadays that games are massive and explorative in nature. More so, games are also used in teaching; teaching through playing. Games now include a lot of problem solving schema and puzzles of different varieties. This is because game developers know that gamers are always trying to capture knowledge and skills while playing. A gamer with this mindset is always motivated to capture new skills and general knowledge that the game offers. As what the participants said,

*“Most of the parents think of video games as a negative influence to kids. What they don’t know is that it also gives positive feedback to the kids because it develops their skills in certain tasks (P7).”*

*“Before, my parents think that it is a waste of time and the main reason for my failing grades, but now they became less hostile towards gaming as I have proven that gaming helps my academics instead of harming them (P5).”*

*“The main positive outcome that I got from playing video games is my cognition; I became much more interested in mathematical and scientific topics (P5).”*

Acquired knowledge, as a component of the theme academic mindset, is the knowledge gained from playing video games. There are a lot of video games that are trivial and educational. These types of video games test the gamer’s knowledge and even teach them things, from mathematics, science, geography, history, and many more. Some even competitive games teach gamers about the importance of communication. Communicating with other gamers around the world has also taught the participants a lot about those people’s culture and

traditions. As the participants mentioned, *“Gaming helped me in analyzing math problems and grammar structures and helped me understand better(P1).”*

*“Video games actually helped me become more intellectual and socially capable in understanding people’s problems because it’s all about brain power and how your memory capabilities work. My grammar skills have also improved by conversing with players who are actually good in English(P7).”*

*“Video games are based on certain myths, cultures, and traditions. Playing makes you know and understand these things(P2).”*

*“The games nowadays are very engaging and immersive. They show you a new world. You learn new words and explore cultures. They also encourage me to think critically of my strategies and actions (P2).”*

*“Video Games make me think faster and that skill helped me in my school activities. In video games you are forced to think faster and be vigilant(P2).”*

Part of academic mindset is ingenuity. Playing games has taught the participants resourcefulness and creativity. The student participants have imbibed ingenuity, for games improve their cognitive and problem solving skills, concentration, imagination, communication, and teamwork. It also helps them develop and nurture their talent and abilities. More so, they learn from the people they play with; to have a sense of social connection with other gamers other than going out to meet others or hanging out with friends. Ingenuity is often forced upon players, because there are games that motivate players to think outside the box. For instance, there are a lot of video games that are heavy on puzzles. Puzzle-type games force gamers to think hard; to analyze how parts are related. As the participants have construed,

*“Just like in video games, I would think out of the box so that I can be creative on how I answer questions (P5).”*

*“There are games where rules are not strict. You are free to explore the game setting and do things you like (P7).”*

*“I use the designs of video games on creative works such as projects (P6).”*

*“My creativity has improved since when I play video games, I also have to be creative and imaginative when it comes to plays in order to win (P5).”*

In summary, the theme “Academic Mindset” is the ability of people to imbibe and acquire knowledge and ideas through any form of medium, in this case; video games. Through the knowledge attained, the gamers themselves perform better in school and their academic standing improves. Gaming, in a way, is not really an academic hindrance or a distraction. It

actually gets the gamers motivated. The subtheme “acquired knowledge” enhances the argument. Through video games, the student gamers are able to expand their horizon and acquire knowledge from this source. The subtheme “Ingenuity” allows their creative juices to flow, for gaming enhances their imagination. Inventiveness and novelty can be harnessed and put to good use.

### **Practical Mindset**

Practical mindset deals with applying theoretical knowledge gained from games to one’s own personal life. It is a frame of mind that allows the translation of ideas to praxis. It also refers to the way new knowledge is used for the benefit of oneself and that of others. Gaining knowledge is not only limited to the four-walls of the classroom or through cognitive means such as reading books or answering modules. The process of teaching and learning now is being redefined by gaming, for the influences of gaming is considered far-reaching and long lasting.

Video games have been conceived as a new way to learn profound skills that benefits one’s life. In fact, the academe is now recognizing the palpable importance of gaming in the education process. It is practical, so to speak. Gaming’s practicality resides on the fact that it brings about self-satisfaction while enabling the student participants to nurture their social skills.

On one hand, gaming leads to self-satisfaction. In fact, it is one of the greatest sources of joy and pleasure. This may be the reason why the student participants usually spend more time in playing, for it brings about a certain level of exuberance. As the participants asserted,

*“I feel happy when I play. I really enjoy (P1).”*

*“Gaming is one of my hobbies. It really makes me forget my problems (P4).”*

*“When I go home and after I do my school work, I usually play games. It is my form of relaxation (P5).”*

Moreover, playing is a great stress reliever. The student gamers play to keep their mind off of other priorities or to keep them busy. Gaming is actually one of the best ways to reduce weariness and anxieties after a hard day’s work. As the participants shared,

*“Playing helps me release stress and it makes me feel good (P6).”*

*“I feel happiness and a sense of confidence. It relieves my stress (P5).”*

*“I feel fulfilled when I play video games (P3).”*

*“I find satisfaction when I play games. I enjoy the game regardless of the end result (P5).”*

On the other hand, practical mindset is not only about self-satisfaction. More so, it also explores the importance of

interpersonal skills in the world of gamers. While the prevailing norm is that gamers are socially-eccentric people, this is not always the case. One of the best manifestations of practical mindset is being able to hone the gamer's social skills. As the technology behind video games continues to improve, more players are becoming invested; creating a huge number of following. Hence, practicality wise, the student participants do not only play games for fun, but hone their interpersonal skills. They use the platforms to interact with others, make friends, and build connections. Through gaming, the students are able to meet people from the other side of the world. Socialization becomes a desired outcome of gaming as these participants become part of a particular gaming community.

Social interaction is key to practical mindset. The student gamers are able to virtually interact with others. They are not loners per se, but are members of gaming communities. They have found their clique with people who they share the same passion with. They become more sociable in a way. Playing video games has made socializing with other people easier and manageable. Indeed, video games are not only sources of fun and entertainment. They enhance interpersonal skills and strengthen the bond between friends and foes alike. As mentioned by the participants,

*"Gaming helped my social life because when I came to PSD, I was somewhat of a loner. I did not have a social group to fit in, but once people found out that I play games they started inviting me. They started talking to me and I started to get more confident in myself. I started asking people if they also play the same game so I can invite them into these groups and then suddenly, I wasn't a lonely person anymore. My confidence was boosted (P6)."*

*"I gained many friends through playing games (P1)."*

*"It made it easier for me to socialize and have better ties with people (P2)."*

*"Gaming enabled me to know many people coming from different countries. It expanded my network (P5)."*

*"I have many virtual groups, depending on the game I choose to play (P6)."*

In summary, video games are a great influence to students; from the way they think to the way they see life. While there are still people cynical with regard to the benefits of games, more people nowadays are witnessing the potent power of playing in human beings' growth and maturation as active members of society. It should be noted that the study is not downplaying the potential dangers of gaming insofar as gaming in itself is not evil. When put to good use, it can reap benefits that can greatly strengthen the teaching and learning process.

Through the verbalizations of the students, it was found out that learning by playing has academic, growth, and practical nuances. Academic mindset refers to the cognitive abilities and ingenuity the participants have imbibed through gaming. Growth mindset shows how gaming can spur development in terms of decision-making skills and self-control. And, practical mindset discusses how gaming can lead to total enjoyment and build and maintain interpersonal

relationships.

### III. ANALYSIS & DISCUSSION

Innovations and facilities that technology has added to our lives are at an undeniable level (Okur & Aygenc, 2017, 977)." There has never been a change so permeating and unraveling as the one spearheaded by technology. Without exaggeration, the new platforms ushered by technology changed the way people do things, have made life easier and more comfortable, and made information as fluid as ever. In truth, people are now living and breathing technology.

Technological advancements brought video games into the world. Gone are the days when physical and contact sports were considered the norm. Today's generation is more exposed to the digital world. "School-aged children worldwide are growing up immersed in a media-rich, ubiquitous, always connected world (McClarty, et. al., 2012, 3)." The number of hours spent in the virtual world is a proof of that.

Video games have inspired people in many different ways. This specific technology has altered paradigms and brought in unprecedented growth and development. "The video game industry has continued to grow dramatically over the past decade, cutting into mainstream media in participation and revenues as it becomes part of mainstream media culture (Williams, 2009)." It has now become a multimillion dollar enterprise which has changed perspectives and has ushered in a new era of entertainment that spans across various media and platforms. "Now just over thirty years old, video games have quickly become one of the most pervasive, profitable, and influential forms of entertainment in the United States and across the world (Squire, 2003)." As the years continue on, more users, players, and consumers from diverse cultures join hands to celebrate the unity fostered by games.

The rapid advancements in technology has made games more complex than ever. From the simplest of games to the more complicated ones released now, games have been constantly improving since their inception. The astonishing designs, graphics, and gameplay that games offer have really caught the attention of the world in general. Gaming, without a doubt, has "provided interests in new domains and inspired design (Squire, 2011)." It has come a "long way since the first ever computer game, Spacewar, was developed at MIT in 1962 using technology developed to further man's attempts at space travel. In the last ten years, games have developed rapidly to become one of the most profitable entertainment sectors in the world, giving rise to a billion-dollar creative industry (King, 2002)."

With gaming being a staple to people's lives, it becomes necessary to explore its effects to human flourishing. As this industry gains a huge audience and following, different sectors of society have started to utilize the benefits of gaming to achieve their goals and vision. This is specifically true to education. In fact, it could be said that "video games and similar applications emerged as a popular topic in education today (Okur & Aygenc, 2017, 977)." "The rapid penetration of increasingly sophisticated technologies into every facet of society is causing significant shifts in how, when, and where we work, how individuals, companies, and even nations understand and organize themselves, and how

educational systems should be structured to prepare students effectively for life in the 21st century (McClarty, et. al., 2012, 3)."

In today's world, the traditional classroom has become obsolete. "The challenges imposed by the rapid rate of technological change on society are significant, as the skills and knowledge imparted by a classical education are no longer seen as adequate preparation for success in life (McClarty, et. al., 2012, 3)." In a globalized world, archaic classroom instruction becomes haphazard to the 21<sup>st</sup> century context. Simply mastering traditional reading, writing, speaking, and arithmetic will become futile to a technological world characterized by problem solving, critical thinking, and globalized communication. Students expect a kind of education that meets where they are; learning and teaching from and through technology.

In this regard, the present research is centered on the lived experiences of Senior High School student gamers of Philippine School Doha. It tries to explain, from the primary sources incurred, how immersion in technology (i.e. gaming) affected their personal and student life. It tries to capture their worldview with regard to being student gamers per. Based on the verbalizations of the participants, 3 themes were created to further extrapolate their phenomenological experiences. These are (1) growth mindset which includes prudential development and self-control; (2) academic mindset which highlights acquired knowledge and ingenuity; and (3) practical mindset which emphasizes self-satisfaction and social interaction.

### **Growth Mindset**

"Typical impressions regarding video games, the effects of playing video games, and of gamers themselves, are largely negative (Passmore, H. & Holder, 2014, 2)." These impressions, however, show narrowmindedness and shallowness brought about by negative media portrayal. Today's gaming mechanics has transcended the confines of enjoyment. It has been shown that "the effects of learning to play at least some types of video games extend well beyond the market confines of commercial entertainment (Eichenbaum, Bavelier, & Green, 2014, 54)." To say actually that gaming is beneficial is an understatement.

Growth mindset discusses the way gaming catalyzes the process of maturation and development. Through being immersed in gaming platforms, the student participants became more acquainted with new-found skills not only to help them excel in games, but also to foster new skills that are useful in real-life setting. In a way, it is not all fun and pleasure, but a process wherein the participants imbibed the behavioral attitude of self-control and the virtue of prudence.

Part of growth mindset is prudential development. Based on the participants' lived experiences, gaming has enabled them to imbibe the virtue of prudence. Prudential development then is being cautious in the decisions which precede actions. As Turnage (2020) asserted, "a prudent person foresees danger and takes precautions." It is the ability to make good choices insofar as the consequences have been weighed to achieve the best result.

In the context of the study, the subtheme refers to the ability to make quick and precise decisions in gaming. It also

refers to the ways the skills learned are used and applied to real life situation. "The pleasure associated with gaming was occasionally instrumentalized as a mechanism for ensuring prudent life choices (Pickersgill et al., 2017)." While relationship "between video games and decision-making has received relatively little attention, its potential to impact the real-world behavior of video game players (Gentile & Gentile; Beullens, Roe, & Van den Bulck, 2011)" should never be taken for granted.

Video games have always incorporated the idea of decision making. In fact, players are given the freedom to make choices in games and be responsible for those choices. Particularly in modern titles, critical-thinking has been incorporated in most multiplayer, as well as story-telling games. Prudence is fostered as the decisions made by the player affects the outcome of the game.

Prudential development does not only treat games as works of art. More than that, they are mirrors of life per se. What happens inside games may be parallel to what transpires outside the virtual world. In today's more immersive world, philosophies and ethics are being presented to gamers. Most games involve complex stories with characters who can make moral choices. "As we become agents within complex narrative arcs, we can develop skills of moral perception and decision-making (Moore, 2011, 74)." Video games, then, offer a new mode of involvement and decision-making not only as preparation for real life, but as reflection of it.

Through prudential development, the student participants grow and mature in making decisions. They begin to realize that real-life choices have real-life consequences just like what happens in games. As they become decision-makers, they start choosing decisions for the common good. Playing games help them imbibe this skill. "The right sorts of games provide opportunities for significant artistic expression and meaningful engagement of the intellect and will (Moore, 2011, 76)."

Furthermore, self-control as a subtheme, is the ability to regulate one's emotions, thoughts, and behavior in the face of temptations and impulses. It also refers to the regulation of gaming time and having a limit or a curfew. It refers to "the mental processes that allow people to override thoughts and emotions, thus enabling behavior to vary adaptively from moment to moment (Inzlicht, Schmeichel, & Macrae, 2014)." In the context of the study, self-control is interpreted in two ways. The verbalizations of the participants revealed that self-control refers to time management. "The most likely reason that people play video games excessively is due to ineffective time management skills (R. Wood, 2007)." The student participants firmly held that they must be aware of the time they have spent playing a game for it may cause health issues or affect one's personal and social life. "An increase of time spent on a leisure activity, such as video games could result in problematic consequences in other areas (Weaver et al., 2013)." Anand (2007) mentioned that "the amount of time a student spends playing video games has a negative correlation with their GPA and SAT scores. As video game usage increases, GPA and SAT scores decrease." As construed by the participants, the more hours spent playing, the more negative effects incurred. Since there is a direct

relationship between number of hours and negative outcome, self-control is then necessary to further harness the benefits of such technology. A growth mindset is realized when the students are able to control the time spent in games no matter how engaging or fun they are.

Another interpretation of self-control is the ability to remain calm in the face of adversity. The student participants maintained that sustaining a sense of repose especially in the face of defeat or ridicule is necessary. "Now a cultural mainstay, video games offer highly engaging and emotion-eliciting experiences (Lobel, 2016)." A growth mindset is achieved when they are able to show a stoic attitude; to not let their enemies get inside their head. "Rage certainly doesn't affect all gamers, but it can also be stirred up in players when they aren't succeeding in the outcomes they're chasing after (E. Breunlin, 2018)."

Emotional benefit is one of the top reasons why the student participants are immersed in gaming. In fact, it is a great tool to manage emotions and emotional state. "Gaming may be among the most efficient and effective means by which children and youth generate positive feelings (Granic, Lobel, & Engels, 2014, 71)." While it is true that gaming can also elicit negative emotions, including anger, frustration, and sadness, the student participants are adamant in saying playing games has enabled them to better manage these detrimental feelings. "The pretend context of video games may be real enough to make the accomplishment of goals matter but also safe enough to practice controlling, or modulating, negative emotions in the service of those goals (Granic, Lobel, & Engels, 2014, 71)."

Keeping negative emotions at bay is a crucial to gaming. Whether there is a heckler that causes distraction or a trash-talker who constantly hurls insults, one needs to focus on the goal at hand. Moreover, while some games are nerve-racking and patience-shortening, gamers are being forced to unique situations where they do not have other options but to adjust and persist. "Game playing may promote the ability to flexibly and efficiently reappraise emotional experiences, teaching players the benefits of dealing with frustration and anxiety in adaptive ways (Granic, Lobel, & Engels, 2014, 71)."

Gaming, as the participants asserted, can make people more emotionally intelligent to protect oneself and others. They "provide a valuable context for the development of healthy emotion regulation skills (Lobel, 2016, 18)." As Villani, et. al (2018) confirms "videogames should not be considered only as entertaining, interactive devices; rather, they are fully suitable to be recognized in their complexity and richness as communicational and narrative media with legitimate application in understanding and influencing emotional regulation (13)."

Emotion regulation is pivotal in real-life as well. The ability to keep feelings in-check is a skill that one needs to master in order to thrive in this world. Through gaming, the student participants are able to deliberately and naturally monitor, change, and/or sustain their affective dimensions. It could also be the reason why they are able to control the number of hours they spend in playing; for too much of everything becomes a vice. This, together with the ability to make good

choices, accounts for growth mindset. While the prevailing norm on games is that they cause addiction and hinder personal growth, the student participants would like to believe the opposite. The study is not downplaying the negative effects of gaming for they are as real as they get. However, gaming is not inherently bad. When put to good use, they can create change in the individual; driven by that growth mindset.

#### **Academic Mindset**

Another theme captured from the student gamers' verbalizations is academic mindset. This refers to their attitude, beliefs and temperaments about academics which are directly correlated to school behavior, experiences, and outcomes. Farrington et al. (2012) explained it as the "psycho-social attitudes or beliefs one has about oneself in relation to academic work. Positive academic mindsets motivate students to persist at schoolwork."

Gone are the days when parents and teachers see games as a nuisance. "It is known that game players learn and practice basic mathematical skills, reading skills and social skills, and that these skills progress even further as they play (Okur&Aygenç, 2017, 982)." In the contemporary era that students live in, not utilizing gaming as a tool for learning becomes a missed opportunity. "Contrary to conventional beliefs that playing video games is intellectually lazy and sedating, it turns out that playing these games promotes a wide range of cognitive skills (Granic, Lobel, & Engels, 2014, 68)." Video gaming's "importance and popularity in our contemporary society is a good reason to analyze its relevance of learning processes (Fabricatore, 2000)."

Academic mindset is further divided into two subthemes. On one hand, gaming enables the participants to acquire knowledge. The subtheme "Acquired knowledge" focuses on the attainment of knowledge through video games. Numerous video games nowadays are being designed to serve educational purposes. The world is now recognizing the impact of video games on child development and information retention. Yong (2017) further asserted that "game-based constructivist learning has gained considerable attention as educational institutions aim to move from traditional instructional teaching to interactive and collaborative methods." Moreover, "many teachers use games like crossword puzzles to teach spelling, shopping games to illustrate counting and arithmetic with coins, and so on. Previous research has shown that using video games into the classroom can be rewarding on many levels including academic achievement, motivation, and classroom dynamics (Lee, 2004)."

With this in mind, the academe is now slowly incorporating gamification as a way to teach students. "The commercial popularity of video games is beginning to transpose to the classroom (Annetta, 2009)." With the rise of video games in the industry, more developers are trying to make video games educational. "It is encouraging to see then that an increasing number of schools are using computer and video games in a variety of situations, many of which are imaginative, or support the learning process within a range of other tools and resources (Kirriemuir, 2003)."

Games are engaging by nature. Since games are appealing



and immersive by nature, it can hold people's attention for a longer time. "Because of the fun and excitement, they may also provide an innovative way of learning (Griffiths, 2002, 48)." Through gaming platforms, learning is evidently stimulated and knowledge is retained in a way that the traditional teaching process cannot accomplish. While the classroom teaching and learning process remains an indispensable source of knowledge, gaming can supplement and reinforce this.

The participants mentioned that through playing, they are able to be exposed to different cultures, ideas, and philosophies. Just like reading, players enter a different world that the game developers created. It is worthy to note, furthermore, that most video games, particularly role-playing games, utilize history; they take place in a specific political, social, and cultural milieu. For example, the game "Assassins' Creed" are placed in different eras; from ancient Egypt, to China, World War 2, Greece, to exploring Norse mythology. Undoubtedly, games like these educate the players with knowledge about history in a more fun and engaging way.

Merely learning history from books is boring beyond words. While this is important, the aforementioned game can supplement knowledge learned in the classroom. Playing and experiencing the ancient world in this interactive way can be more interesting and effective. "You don't even need to be a teacher or student to appreciate this feature, think of it like an interactive history documentary (STEM minds, 2020)." In truth, "there is a wide range of video games of varying quality and effectiveness dealing with intercultural, diversity, and inclusion themes available for use in the classroom (Shliakhovchuk, 2020)."

Also part of academic mindset is ingenuity. Armstrong (2016) holds that ingenuity "means to be clever, inventive and creative." Needless to say, gaming can foster creativity and novelty. "It is the foundation of innovation, creativity and change (Arasu, 2018)." This curiosity is what makes dreamers, innovators, and inventors. Hence, "playing commercial video games can have a positive effect on communication ability, adaptability, and resourcefulness in adult learners (Barr, 2017)." "New evidence is emerging that playing any kind of video game, regardless of whether or not it is violent, enhances children's creative capacities (Granic, Lobel, & Engels, 2014, 69)."

Video games have not only been a form of entertainment, but also a form of art. They embody art themselves. In fact, what makes games unique are the graphic and art styles utilized. Melissinos (2015) argued that "as an art form that has only existed in the digital space, video games are truly a collision of art and science." In a way, creativity is fostered insofar as playing appeals to the artistic dimension of the gamers' psyche.

Furthermore, there are games that are actually based on creativity and resourcefulness. When the student participants play Minecraft for instance, they design landscapes that are virtually appealing. They are given infinite freedom to build their own structures. Gamers are provided with "blank canvas for imaginative building, cooperation, and for players to construct their own narratives and conflicts (Lobel, 2016,

24)." When they play "Grand Theft Auto V," they are exposed to a "free-for-all" virtual world to simulate acts of childlike fantasy (Lobel, 2016, 20)." It can be said therefore that creativity is enhanced when playing games like these. The fountain of creative juices begins flowing. The ingenuity of the game developers is nurturing the players' ingenuity in a way.

Moreover, video games help players imbibe 21<sup>st</sup> century skills: critical analysis, spatial skills, and attention to details. Most schools these days also prioritize creativity over other aspects, as many jobs today focus on innovation and resourcefulness. That is why it is better to train students to think outside the box, which is something that video games help with. Darvasi (2017) further elaborates that "alternate reality games can be used as an immersive learning system that combines rich narrative, digital technology, and real-world game play. Students must exercise critical thinking, resilience, and creative problem solving to succeed in an alternate reality game."

Problem-solving skills are also a crucial by-product of gaming. This seems to be central to all genres of games. Contemporary games "often provide very little instruction about how to solve in-game problems, providing players with a nearly blank palette from which to explore a huge range of possible solutions based on past experience and intuitions (Granic, Lobel, & Engels, 2014, 69)." By employing non-linear and trial-and-error methods, gamers learn from experience and solve problems inductively. Critical-thinking is fostered and ingenuity is ensured.

Gaming has certainly opened new doors to learning. "In the 21st century, traditional education and teaching processes in the public, private and businesses have begun to disappear, as this type of schooling is not sufficient for today's conditions and expectations (Okur&Aygenç, 2017, 978)." "Contemporary developments in gaming, particularly interactive stories, digital authoring tools, and collaborative worlds, suggest powerful new opportunities for educational media (Squire, 2003)." Caution must be exercised, however, to ensure the games do not replace the educational process. They must be used with learning and teaching, not instead of them.

To summarize, academic mindset refers to the skills and attitudes fostered in the student participants that can help them in their school life. Its subtheme "acquired knowledge" argues that through gaming, they have learned new pieces of information which are sometimes unavailable through conventional means. Since games nowadays also feature real-life events and culture, they become acquainted with these historical truths. Furthermore, the subtheme "ingenuity" explains how creativity is fostered through playing. Problem-solving skills and critical analysis are the by-products of gaming immersion.

#### **Practical Mindset**

Although gaming is virtual, it has a clear and concrete impact to life in general. The theme "practical mindset" underscores the pragmatic dimension of gaming. Hurst, Jackson, & Glencross (2012) state that "video games are not only a source of entertainment, but also a source of practicality." "This mindset offers a refreshingly practical blueprint for

thinking and acting in environments that are fast-paced, rapidly changing, and highly uncertain (McGrath & MacMillan, 2000)."

In the context of study, practical mindset applied to gaming, extrapolates two subthemes. The category "self-satisfaction" explores one of the initial and major reasons why people play games; for enjoyment purposes. Gaming remains one of the best ways to relax and to get one's mind off things. The pleasure gained from gaming is undeniable and is the chief reason for the creation of a global gaming community.

The student participants claim that gaming relaxes them. After a busy day, video games provide a sense of relaxation that no other platform can offer. "Increasing evidence indicates adolescents are likely to occupy their leisure time with online games thus inducing a sense of self-satisfaction with their experience (Wang et al., 2008)."

Many aspects can be a source of enjoyment and pleasure such as the game design, story or lore, community and many more. "Active video games can significantly increase energy expended during screen time (Lyons et al., 2011)." "Playing video games produces enjoyment that contributes to mental health in the form of a brief distraction from the stress of daily life, social connections with family and friends through casual gameplay, and, in some cases, a compelling reason to engage in physical activity (Shafer & Carbonara, 2015)." Moreover, when a hard game has been conquered, a new level has been unlocked, or a problematic boss has been vanquished, a sense of fulfillment is felt no matter how temporary it may be. Pride and self-confidence are also renewed through gaming success and accomplishments.

Lal (2020) further argues that "video games are engaging and enjoyable, which reduces stress. Gaming results in dopamine secretion, which makes you feel good." Pine (2020) also explains that "some studies reported a reduction in anxiety and depressive symptoms after a single session of casual video games play lasting 30 minutes." Indisputably, video games have been a major stress reliever for most teens these days. While it is true that they may cause certain negative feelings to arise, the rewards far outweigh the risks.

Part of practical mindset is the social nature of games. "Perhaps the biggest difference in the characteristics of video games today, compared to their predecessors of 10 to 20 years ago, is their pervasive social nature (Granic, Lobel, & Engels, 2014, 72)." The stereotype that gamers live in attics and are always alone is a hyperbole. In fact, gaming presupposes social interaction. This subtheme determines the level of engagement of gamers. For engaged gamers, social interaction is essential in this gaming experience (Chen et al., 2006)." "Game designers have clearly expressed the intent to create games where socialization is encouraged and rewarded (Koster, 2004)." As these games have been quite successful at attracting large numbers of players (Woodcock, 2004), they could be an interesting source of design guidelines for games that purposefully seek to encourage social learning (Gee, 2003).

Most videogames nowadays encourage communication between and among players. With the social nature of games, particularly cooperative and online platforms, gamers meet all sorts of people. The participants readily held that they

were able to interact with others through playing games. "Social skills are also manifested in forms of civic engagement: the ability to organize groups and lead like-minded people in social causes (Granic, Lobel, & Engels, 2014, 73)." Video games expand perspectives and build new communities through the engagement with others they would not have interacted with if not for games. Hence, gamers are not awkward geeks. They are actually social beings capable of interacting with others virtually or otherwise.

In this way, interpersonal skills are honed through gaming. Meeting someone from the vast gaming communities existing and playing with or against friends build relationships. Playing video games can form relationships that can transcend the four sides of the screen. As Griffiths (2002) construed "video games provided an interest that was popular with other children that makes talking and playing together so much easier.

Since games are social by nature, the participants recognize the importance of others. "One aspect of many video games then is teamwork (Badatala, Leddo, Islam, Patel, Surapaneni, 2016)." Most team games played today require that all do their part in ensuring the success of the mission or achieving the desired collective goal. Coordination is key and camaraderie among teammates is vital. "Results suggest that video game playing can bolster teamwork and team performance when played cooperatively and impair teamwork and team performance when played competitively (Badatala, Leddo, Islam, Patel, Surapaneni, 2016)." As collaboration with others is fostered, the student participants are able to better cooperate with their classmates, friends, and family members to accomplish group tasks. "This suggests that virtual teamwork has a positive effect on collaborative problem-solving and group creativity in the real world (Lin, Tay, & Wu, 2009)." The practical side of gaming, therefore, lies not only in its capacity to bring enjoyment, but by also making gamers amiable.

Collaboration is an important skill in today's globalized world. Students need to be aware that accomplishing tasks becomes easier when there are more hands to help. Gaming further inculcates this skill to children. "With the rapid advance of online gaming and virtual reality technology, virtual teamwork has become increasingly popular. People spend more and more time working with others in 3D virtual environments to accomplish common goals (Lin, Tay, & Wu, 2009)."

Moreover, the student gamers communication skills are also cultivated. "The accessibility of social media and online video gaming has also made it easier than ever to interact with those from other cultures using other languages (Horowitz, 2019, 380)." Through playing, they learn new language, words, and expressions. By interacting with others, they learn to be more fluent and confident to speak their minds. The gaming mechanics and objectives are good conversation starters; so are enemies killed, experiences encountered, and difficulties bested.

Video games are a great tool for language learning and mastery. "For more than a decade, educators have viewed video games as a potential avenue for enhancing learning and

creating authentic contexts for learners (Horowitz, 2019, 385).” The gaming environment provides a casual setting where players can informally interact with others and practice their communication skills. Gaming can also serve as a great avenue to master a foreign language and be acquainted with the new world that the language carries.

In a nutshell, practical mindset refers to the pragmatic benefits of gaming. While a plethora of resources undermine gaming as something damaging and even fatal to the development of children and the cognitive reasoning of adults, this thinking cannot hold water. Moreover, while there may be studies that claim that forming relationships online makes it difficult for gamers to establish relationships in the real world and that the relationships formed are superficial, this is not the case for the participants. When kept in moderation, gaming is fortuitous. Not only does gaming bring fun and enjoyment and reduce stress, it actually makes gamers more sociable. It enhances communication and interpersonal skills as teamwork and collaboration is fostered.

#### IV. CONCLUSION

It has been well-known that video games have made an impact on this generation. They have become a cultural phenomenon that have generated millions of profit even competing with other essential commodities. With the advancements in technology, games now have become immersive binding people from all walks of life. They represent a fabric of past memories for some, a present individual and communal experience for the present generation, and new opportunities for the future. The increasing popularity of video games is still surging and will stay the same for the conceivable future.

Gaming’s influence is as pervasive and permeating as it gets. It has now gained a huge audience and following. Because of its vast audience, the education sector is now reflecting on the need to incorporate gaming in the teaching methodologies. Today more than ever, “studying games can contribute enormously in the educational pursuit of reaching the digital age student (Squire, 2013).” Although the study is not undermining the potential harms, “a more balanced perspective is needed, one that considers not only the possible negative effects but also the benefits of playing these games. Considering the potential benefits is important, in part, because the nature of these games has changed over the last decade, becoming exponentially complex, diverse, realistic, and social in nature (Granic, Lobel, & Engels, 2014).”

It has already been established that a high percentage of gamers are students. Video games have made a significant impact on students to the point that schools are forced to adapt to this new way of teaching. In this regard, the present study wanted to capture the worldview of the SHS students with regard to their gaming experiences. Through the central question, data gathered from the participants, analysis, and review of related literature and study, researchers were able to formulate the themes and subthemes. The foregoing results and discussion extrapolated the holistic effects of gaming to the personal and school life of the participants. 3 themes were created based on their verbalizations. The theme (1) Growth Mindset shows the positive perception of the students with

regard to gaming. Through playing, they are able to make good choices and imbibe the virtue of moderation. In the theme (2) Academic Mindset, the students explain that gaming helps them academically through acquiring knowledge and fostering ingenuity. The last theme (3) Practical Mindset refers to the way gaming helps them relax. This also provides an avenue to cultivate their social and interpersonal skills. For the student participants, learning is playing and playing is learning.

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