

**HOW ADULT GAMERS PERCEIVE THEIR LEARNING WHEN PLAYING VIDEO
GAMES FOR ENJOYMENT: A NARRATIVE INQUIRY**

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Abstract

The value of video games in education has been displayed in more than one field (Gee, 2007; Devlin, 2011). The possible effects of using video games as a learning tool have been studied in numerous academic situations: with young students ranging from elementary to secondary levels (Barab et al., 2009; Cipollone, 2015; Kellert, 2018; Seidel et al., 2019; Sherry et al., 2019; Tüzün et al., 2019), with postsecondary students (Mahood & Hanus, 2017; Smith et al., 2020; Vásquez & Ovalle, 2019), and with educators employing video games in the classroom (Bell & Gresalfi, 2017). The purpose of this study was to investigate how adult gamers perceive their learning when playing video games for enjoyment. To conduct this study, Barbara Rogoff's interpretation of sociocultural theory (2003) was adopted, which offers a closer look on the influences of cultural communities. This study recruited a sample size of 6 adult gamers and adopted a narrative inquiry model, allowing participants to share their lived experiences about video game play and everything related to it. The results indicate that what participants were learning during their video game play could fall under one or more of these four themes: wellbeing, problem-solving, transferable skills, and multimedia literacy. By understanding how video games function as an inherent learning tool, this study helps create a foundation for future research in the field.

Keywords: video games, learning, adult learning

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Chapter 1: Introduction

The purpose of this study is to explore the perceptions of adult gamers of their learning when playing video games for enjoyment. This is an important area of study because research has demonstrated the value of video games within varying fields (Gee, 2007; Devlin, 2011). However, much of this research examined the use of video games in either an academic or a work environment (Griffiths, 2002; Barab, Gresalfi & Arici, 2009; Bell & Gresalfi, 2017). Little has been explored regarding learning when playing video games outside of these environments. Playing video games for enjoyment provides players experience in understanding what is going on in the game. In addition, according to Gee (2005), when playing video games “skills, knowledge, and values are distributed between the virtual characters and the real-world player in a way that allows the player to experience first-hand how members of that profession think, behave, and solve problems”. This goes beyond skills that are important to the game itself.

This research topic is of personal importance to me because of the impact video games had on my life. In fact, much of the early learning I did on socialization with my peers was through video games. As an avid gamer, whenever I played a role-playing game (RPG), the different characters acted as different role models with separate traits that I could choose to imitate, push away, or disregard altogether, depending on what went on in the game’s plot. Action platformers taught me, on the one hand, how to be persistent in any task that I tackled. On the other hand, this genre also broadened my scope in showing me different ways to think creatively. Thinking creatively could also be practiced when playing adventure and puzzle games, where some reflection is needed to solve intricate problems and progress in the game. Not to mention, in the case where the obstacles in the game were too difficult to surpass, I was able to learn how to search for solutions, finding ways to assess which websites were more reliable and how to connect respectfully with others in a community. In summary, video games

have directly and indirectly helped me develop a wide array of skills and understandings that I continue to use presently.

From my experiences as a gamer and learner, and what I have learned through the research, the term *learning* takes on a broad definition in this study. Any lived or perceived experience can be a part of learning, just as any process of thought or reflection a person can have. For example, spending time with your friends may lead to learning. As such, for this study, learning is the acquisition or development of capacities based on unique experiences an individual perceives. Learning is also a complex, multimodal set of connections made, where one experience can lead to different kinds of learning and several experiences can support the learning of a specific capacity. The intricate nature of learning in this study cannot be qualified as morally good or bad. It can only take into consideration that, when there is a shift in a person's capacities, regardless of the consequences of that shift, there is learning.

As these are among the understandings I feel I have acquired because of video games and lived experiences, I believe that other gamers who play for enjoyment also learn and develop in multiple ways. Therefore, in order to consider this more fully, this study proposes to explore the perceptions of adult gamers of their learning when playing video games for enjoyment.

Chapter 2: Literature Review

In this review of the literature, I focus on a selection of research pertaining to education and video games in order to situate my work. There has been considerable research on the educational value of video games. I begin with sharing the work of two well-known researchers in the field of education, James Gee (2007) and Keith Devlin (2011). Then, I cover the different academic and workplace subjects that have been shown to be facilitated by video games. Afterwards, I move onto the possible contributions of video games in the development of emotional aptitudes and wellbeing. Finally, I cover what the research indicates is the best way for educators to apply video games in their classrooms to support student learning.

Argument for Educational Value

Two acclaimed educational researchers, James Gee (2007) and Keith Devlin (2011), argued the potential of video games as educational tools. Interestingly, the specialty of each researcher is vastly different, with Gee being a specialist in language literacy and Devlin, in mathematics.

Gee wrote *What Video Games Have to Teach Us About Learning and Literacy* (2007) to explain his stance on video games: the experience of active, critical learning that video games offer was valuable to gamers, as this helped them master the skills and understanding needed to complete the games. The logical consequence of gaining mastery of these skills allowed gamers access to a “semiotic domain,” or a set of meanings and capacities, that could overlap onto varying situations and be used in different contexts. Framing the acquisition of capacities in these semiotic domains, Gee expressed that video games “situate meaning in a multimodal space through embodied experiences to solve problems and reflected on the intricacies of the design of imagined worlds and the design of both real and imagined social relationships and identities in

the modern world” (p. 40-41). This set the tone for the rest of Gee’s work: The value in these video games was the capacities that gamers could acquire while playing them in a positively stimulating and encouraging environment. Among the points given regarding the value of video games were possibilities of adopting multiple identities, balancing morality, identifying cultural stereotypes, and participating in a community.

Another researcher who supported the educational value of video games was Devlin, who studied their use in the classroom as a supplementary teaching and learning tool for basic mathematical thinking in *Mathematics education for a new era: Video Games as a medium for learning* (2011). Devlin made the distinction between the academic mathematic processes that students must learn as a part of the curriculum, and the abilities people used outside of the academic context, when motivated and needing to do mathematics. Essentially, this was the difference between being taught skills without a foundation and learning capacities through contextual use, such as when comparing prices at a grocery store. Based on this, Devlin highlighted the importance of mathematics taught within a less abstract setting. In the case of video games, the tangible context did not need to have a real-world application. Instead, the context for the mathematics used in the game could have properties that were solely important within the game’s world (p. 175). Therefore, it was possible to believe that any subject, like geography or science, could be taught within a simulation with its unique, self-contained world rules.

In summary, the work of both Gee and Devlin highlighted that the value of video games in learning was the ability to live and experience different materials in a multimodal, interactive perspective. Gee (2007) stated that “when young people [were] interacting with video games [...] they [were] learning, and learning in deep ways” (p. 215). Devlin described an ideal

environment where young people could learn and develop a mathematically competent persona.

The reasonings of two researchers from entirely separate fields coincided when the topic of video games and their usefulness as learning tools was brought up.

Academic and Workplace Value

Griffiths (2002) indicated that early studies on video games had shown how playing them “produced reductions in reaction times, improved hand-eye co-ordination, and raised players’ self-esteem” (p. 47). However, the potential educational value of video games easily went beyond this fact. Starting within Language Studies, Vásquez and Ovalle (2019) researched the role that video games could have in vocabulary acquisition among 15 students at the University of Tolima. They found an increased retention of the vocabulary learned, that the students used the video game context for practice, and “appeared to show confidence and previous experience at the time of sharing the vocabulary” (p. 186). In this context, the use of video games helped reinforce learning using a fabricated situation in which the students were able to put into practice what they had been previously shown. Similarly, Sherry and Lawrence (2019) also wrote about using video games to learn the process of argument writing within the classroom. Having a fundamental understanding of the educational potential of video games as learning tools, they stated how “serious [games] [might have] help[ed] students begin to take action by imagining the consequences of arguments about high-stakes social issues” (p. 75). This highlighted the idea of video games being used as simulations with in-world or real-world contexts to help develop capacities within individuals that could be applied in different circumstances.

To further the understanding of students’ learning elements of Geography, Seidel, Bettinger and Budke (2019) used qualitative methods of selected game analyses and interviews with participants. They also focused on the representation of geographic borders in video games,

specifically Civilization V, Starcraft 2, and Total War: Warhammer. The goal of the study was to see how the players, secondary students aged 17 to 19, perceived and reflected on those borders within the games. Their discovery could be summarized as that boundaries were clearly represented, reflecting what the player specifically had control over within the game. However, even with the educational potential of these video games, the researchers stated that these games needed an educator to facilitate the learning and reflection of the students who played them (p. 17). Moving onto the subject of Mathematics, Kellert (2018) studied the use of *Minecraft*, a popular and creative LEGO-like video game, in extracurricular Mathematics workshops. She used qualitative methods to conduct this study, with a group of 16 students in either third or fourth grade. Just as the previously mentioned study highlighted the need for guidance and reflection when using video games, Kellert drew attention to the different layers of engagement students experienced when interacting with *Minecraft*.

Another researcher who wrote on a similar focus was Arias (2014). She reviewed the literature on the use of video games in education and found that “there [was] some support amongst scholars for using video games in educational contexts” (p. 49), outlining the cognitive benefits provided by such games when they are used in the subjects of social studies, math, science, language learning, and physical education. Furthermore, Smith et al. (2020) studied the implementation of simulations when trying to recreate work-integrated learning experiences for students in construction management and nursing. Using a digital building, students of the construction management program were tasked with building inspections, while the nursing students were focused on procedures during a virtual fire drill (p. 193). The findings from this study suggested that the simulated context allowed for better contextualization of the theory studied previously (p.193).

In an article published in the September 2009 issue of *Educational Leadership*, Barab, Gresalfi, and Arici summarized the transformative power of video games as changing a player from recipient to actor, changing the information to be remembered into a tool to be used, and changing the context from an abstract idea that what was learned might be relevant later to a concrete need to use the information in the present (p. 78). From this perspective, it could be said that the video games in these studies contextualized information from various subjects in ways that students could more readily access and interact with them, allowing for a more substantial, interactive learning for the students.

Emotional Aptitudes and Wellbeing

This section is dedicated to the breadth of the influence video games can have on the socioemotional development and wellbeing of players. Wood and Szymanski (2020) explored the literature on the use of avatars, personas within the game's world, by gifted adolescents, and synthesized it to show how these teenagers used video games to explore different identities and perspectives, while also developing their skills in communication and problem-solving (p. 132). Similarly, a quantitative study by Mahood and Hanus (2017) featured 184 undergraduate students around the age of 20, and focused on the emotional influences of narrative-rich video games such as role-playing games (RPGs). Essentially, different tests that players completed after gameplay were used; participants experienced guilt and shame when forced into committing cruel and immoral actions, "especially if they felt transported or "wrapped-up" in the narrative" (p. 61). It was this emotional engagement these simulations offered that gave room for growth for gamers within the video game context.

Moreover, Tüzün, Barab and Thomas (2019) used ethnographic methods such as interviews, field work, and participant observation with over 300 participants aged between 9

and 12 years. Their study highlighted the different intrinsic and extrinsic motivations that existed within video game play. They noted several additional sources of motivation not present in previous research, including social relations, achievement, creativity, and context of support (p. 129), and concluded that both intrinsic and extrinsic motivators could simultaneously fuel students into engaging with the game and material (p. 152). Matijević and Topolovčan (2019) also conducted a study on the positive effects of video games on teen development and on teenagers' informal learning. They found how certain characteristics in video games were included, such as taking responsibility, teamwork, creativity, emotion management, and professional orientation (p. 1). Gilbert (2017) expressed how these qualities could also be seen within *Minecraft*, a very simplistic yet expansive game, with complex structures and worlds created by collaborations between people. As such, these research studies highlighted how video games could be used as both a medium for self-exploration and a tool for socializing in the current technological age, developing different skills such as creativity and teamwork.

Educator Support and Application

In this section, I consider how educators can use video games in their classroom to support learning. A qualitative study that delved into this topic from the teacher's perspective through analysis of student-teacher interactions and transcript coding was conducted by Bell and Gresalfi (2017) over the course of two years, focusing on a 7th grade mathematics classroom. With the first year having 29 students and the second, 32 students, the results showed that students were generally more engaged in year 2, due to the educator's familiarity with the video game used in the lessons. In fact, by the second year, the educator was able to better support student learning during play, while also making connections with in-game contexts (p.524). The familiarity with the game allowed the teacher to give students more agency to engage with the

material and solve the problems in the simulation. This deeper understanding from the teacher led students to better engage with the material, actively solving the problems in the simulation, which opened the idea that educators also needed a level of flexibility to learn and understand the tools they were using to better support their students in their learning. Though this was said for *Minecraft* specifically, it could be applied to any video game used as an educational tool:

Educators do not need mastery of the games they use. However, “[t]eacher organization and facilitation [were] vital to all problem-based learning approaches” (McCreery-Kellert & Smith, 2017).

In summary, what we saw from the review of the literature was how much of the previous research focused on the use of video games as a medium to educate in either an academic setting or a work environment. Furthermore, the studies were designed with the idea of exposing individuals to video games as the main educational tool, regardless of previous experience with video games in general. Whether it was how *Minecraft* taught through play, creation and information sharing (Nebel, Schneider & Rey, 2016), or how a review of several studies consolidated the notion of augmented reality games having positive effects on student learning and participation (Koutromanos, Sofos & Avraamidou, 2016), the focus generally fell on students in a controlled environment such as a classroom. Little was explored regarding video games as a learning medium outside of a controlled milieu. In fact, other than the lack of research done on the educational value of video games outside of the classroom context, there was also an absence of research on the perspectives of gamers on video games’ educational value.

Rationale

To understand how this research was conducted begins with examining the discrepancies in current research regarding the educational use of video games. In many of the previously examined papers in the field, the sample population studied were generally young students ranging from elementary to secondary levels (Barab et al., 2009; Cipollone, 2015; Kellert, 2018; Seidel et al., 2019; Sherry et al., 2019; Tüzün et al., 2019). If the focus was not centered on children or teens in school, then it was placed on either postsecondary students (Mahood & Hanus, 2017; Smith et al., 2020; Vásquez & Ovalle, 2019) or on educators who attempted to employ video games in the classroom (Bell & Gresalfi, 2017). Thus, the population that received less attention in literature was the adult gamer in informal settings, such as at home or among friends.

Considering the above, the goal of this research is to understand the perceived learning of adult gamers from their interactions with video games. These interactions encompass playing video games, communicating with other individuals who play video games, and all other activities that are part of the video gaming semiotic domain.

Research Question

How do gamers perceive their learning when playing video games? Specifically, what values, in terms of their growth as individuals, do adult gamers attach to the process of playing and immersing themselves in a video game? Furthermore, does this growth extend outside of play?

Chapter 3: Theoretical Framework

To conduct this study, I adopted Barbara Rogoff's interpretation of sociocultural theory (2003). Sociocultural theory, which was originally formulated by Lev Vygotsky (1978), emphasized the social and cultural contexts within childhood development, interconnecting the two, and claiming cognitive development was melded into social, cultural, and historical contexts. It was with different cultural tools, such as language and mathematics, that individuals developed their ability to think (Rogoff, 2003). Traditionally, sociocultural theory was targeted towards children, where they would learn how to use these cultural tools by communicating with experts, normally elders, within their cultural sphere. These more skilled members were called the more knowledgeable other (McLeod, 2020), and could be found within any semiotic domain. As such, any individual who was less experienced within a social circle could communicate with more knowledgeable others in their group and expand their understanding.

Rogoff (2003) offered a closer look on cultural communities in her perspective. She outlined two basic processes of guided participation that were key aspects of how people develop. By communicating and coordinating with other members of the community, individuals learned, developed, and reshaped their community and themselves. This perspective also took into consideration both the environment of the participants and their proximity to different people, to help understand the processes that were being put into action. The first process outlined the importance of bridging the different perspectives of participants in a shared endeavour through mutually available cultural tools. The second involved participants organizing their different roles within a collaborative endeavour, where mutual structuring took place based on the choice of activities and the interactions between participants. It was these two processes of Rogoff's perspective that were valuable for my proposed research since it allowed the researcher to contextualize the narrative within the reality of the narrator. The current culture within video

gaming is populated with many different circumstances in which gamers interact with one another. There are massively multiplayer online role-playing games which allow players from all over the world to interact with each other, forums and websites for different opportunities to discuss the content and context of the media, and real-life events like conventions where players can meet with each other physically, among some instances of community interactions. As such, I used Rogoff's theory as the lens through which this study interpreted its findings. With a more community-angled approach, aspects of video gaming as an experience shared by a community can be taken into consideration during the interpretation.

Chapter 4: Methodology and Method

Methodology

This study adopted a narrative inquiry model to listen to the lived experiences of individuals who played video games regularly. As defined by Gudmundsdottir (2001), narrative research is the qualitative study of experiences collected in story form by researchers (as cited in Moen, 2006, p. 56). In fact, narrative inquiry is not like traditional research methods that place the researcher as sole specialist in the study. When adopting a narrative inquiry model, researchers collaborate with their participants as equals on the research topic in data recording and interpretation (Moen, 2006). This is because humans are natural-born storytellers and live storied lives, regardless of whether the context of the story is within an individual or within a group (Connelly & Clandinin, 1990). Because of the flexible nature of narrative inquiry, the data that is collected can be in various forms, such as field notes, interview transcripts, noted observations and autobiographical writing. Moen (2006) also adds the possibility of collecting data via video recordings. Regardless of the format, the important aspect of the data collection is the collaboration between researcher and participant (p. 61).

There have been plenty of researchers that have adapted narrative inquiry for their respective studies (Bruner, 1991; Connelly & Clandinin, 1990; Polkinghorne, 1995; Riessman, 2005). For the purpose of this study, I adopted the approach that Clandinin (2006) used, giving a brief description of the approach and explaining my reasoning.

One researcher who promoted the role of narrative inquiry in research is Riessman (2005). She elaborated on the different types of narrative analysis, making four different categories. These categories were thematic, structural, interactional, and performative analyses. Riessman described thematic analysis as focusing on what was being told by the participant, rather than how it was spoken. This meant that, for thematic analysis, language was only a

vehicle for meaning, nothing more. Structural analysis shifted its focus on both what was told and how it was told when examining a narrative, giving language a more prominent role in the analysis. Interactional analysis emphasized the dialogue between interviewer and participant, still incorporating thematic and structural analyses but also treating the narrative as a collaborative construction of meaning between speaker and listener. Finally, performative analysis took into consideration all the aforementioned details within thematic, structural, and interactional analyses, while also incorporating another layer of action and gestures into the construction of meaning in the narrative.

Another narrative researcher is Clandinin (2006), who portrayed narrative inquiry as a figurative space with three dimensions. These three dimensions were the interactions, the continuity in terms of time, and the place. She highlighted how narrative inquiries took place in this kind of specific space, where a story needed to take into consideration the three dimensions and how they interacted when interpreting the meaning behind shared stories. According to Clandinin, an important trait of narrative inquiry that researchers needed to keep in mind was how they were equally a part of this narrative space in which the participants told their story, holding just as much influence on the story shared as any other object and person. It was by seeing narrative research as a collaboration between researcher and participant that a clearer picture of the content could be presented within the interpretation. This included the presence of the researcher within the narration, the current social climate in which the story was being told, and the relations present within the story shared by the participant.

As stated above, this study drew upon Clandinin's approach in applying narrative inquiry. Essentially, this study aimed to adopt the narrative inquiry model to understand the lived experiences told by gamers, using the research questions as guidelines in this inquiry. The

audience during the storytelling was the researcher being spoken to. Due to the reality that the current sociocultural climate had an influence on the narratives shared by participants and that the researcher was equally a part of this landscape, Clandinin (2006) was the approach I chose to adopt in this study. It was through understanding what was being said within current contexts that a more holistic analysis of collected data could happen.

Research Method

Participants

For this study, I recruited participants who have self-reported being avid video game players and enjoyers, or simply gamers. All participants were 18 years or older, and all but one of them have been playing video games since they were children. When referring to video games in the context of this study, it relates to any genre of game played on an electronic platform. To put restrictions on what can be considered a worthwhile game limits the value of what people may learn from such a game. Individuals who feel confident enough to report themselves as gamers would at least understand the language needed to play and enjoy video games. As for the age restriction, I wished to minimize the potential power dynamic that could happen during the interviews. Although narrative inquiry sees both researcher and participant as equal within the research, there was still a risk that the participant would have the preconceived notion that researchers were the specialists. If we added another power dynamic of adult versus minor into the interaction, the participant would have had a greater chance to try to form their story in a way that they believed was what the researcher would want. For this study, it was simpler to focus on populations that are above the age of majority, with a possible extension of this study to reach into individuals under 18 years of age in the future.

Recruitment

The number of adult gamers recruited for this study was 7 participants. To gather the participants for this study, I asked among different adult online communities I was a part of and that were centered around gaming, on the messaging program Discord. Through word of mouth, several confirmed adult gamers from other communities contacted me through the program, and I accepted the first 7 that approached me. During each initial interaction, I answered any questions the participant had and sent them the consent form to peruse at their leisure. Once they fully understood the consent form and confirmed their desire to participate in the study, I asked about their time availabilities to schedule the interviews. At the beginning of an interview, I read through the consent form with them and asked for their verbal consent, all while giving room for any more questions before properly starting with the interview.

Data Collection

Each interview took the form of an in-depth conversation, as the participants relayed stories of their experiences playing video games. These sessions between the researcher and participant were each approximately one-hour long. They were done online, via either a Zoom meeting or a Discord call. If Zoom was used, then the interview was recorded through the built-in recording function. If the participant preferred using Discord, then the program Camtasia 9 was used to record the audio of the interview. Before the beginning of the interview, it was clearly established that any participant who had given their consent to being recorded could choose to opt out of the research whenever they so desired. Participant comfort was also a priority, and every participant was calling from a location where they felt comfortable talking about the topic of the study.

During the conversation, initial questions like “What is your favourite genre of video game?” or “What do you like most about video games?” were asked to naturally open the conversation and develop rapport between the researcher and the participant. This eventually led the conversation to organically connect to their learning when playing video games, with participants being given ample room to share their anecdotes and thoughts. In most cases, participants were eager to share their perspectives with little guidance from the researcher.

No second interviews were ever needed during the data collection of this study. The recordings that were acquired from these interviews were transcribed verbatim in a Microsoft Word document, and two copies of the transcriptions were stored offline for safekeeping. One copy was on the researcher’s personal laptop, and the other, on a USB stick. There was one interview that was dropped, due to the quality of the audio of the participant being too poor to understand. In future narrative research, I will specify the need for participants to own a separate microphone with decent sound quality to avoid this issue.

Data Analysis

Drawing upon Clandinin (2006) and her narrative inquiry approach, the idea behind the analysis of each story was to take into consideration the three dimensions of the interactions between the researcher and the participant, the passage of time within the story and in real time, and both the physical place that each member of the conversation is in as well as the virtual space that is the Zoom meeting. Once the interview was transcribed on a separate copy, analyzing was done by examining the story and highlighting the different elements of time, place, and socialization within the transcription, to show how video games could be used as an educational support for players.

Returning to Gee (2007), the concept of semiotic domains was important in the analysis. As previously mentioned, semiotic domains are sets of meanings and skills that apply and can be applied to varying, but relatively similar, situations. These sets can come in the form of different symbolic systems, such as pictures, words and actions, and require a certain level of mastery to be able to navigate and learn through them. This acquisition of a certain level of mastery can be done, regardless of being alone or with other members of the community centered around the semiotic domain.

To indicate an acquisition of knowledge or skill, there were different details of the content of the narration explored, such as different important events and turning points to the narrative. In essence, the main aspects that were examined included the problems faced by the participants, the strategies the participants used to get to the solutions needed to advance in the game, and how that shaped their perception of the games moving forward. The act of learning went beyond doing an action. Having a minor shift in how someone approached a problem was one example of learning that could potentially be seen in people who played video games. Fundamentally, what was highlighted was evidence that the participants, through their video game playing, gained a greater understanding and embodiment of the semiotic domain that they partook in.

With this in mind, the three dimensions were not isolated categories. As such, other details that were taken into consideration included the language used by the participant and when it was used within the story, the contextual specifics that helped explain certain statements or events that happened in the narrative, and the overall messages that were drawn upon based on what was stated. My role as researcher was taken into consideration during analysis as well, as my presence could impact what information was shared and how it was shared.

Chapter 5: Results - Stories

The results presented were split into two sections: the stories of the participants and the themes present in the stories. To understand why and how each theme connected to learning, I chose to present a summary of the stories of each participant first. This way, I was able to respectfully present them as individuals with valuable lived experiences, and to show respect to each participant as specialists in this field of study. This presentation of the results should help better represent the connections between the lived experiences shared by the participants and the themes pulled from these experiences.

Keith

The first franchise Keith mentioned was *Pokémon*. This was one of the franchises that introduced him to gaming. The games in the main series of *Pokémon* fell in the category of Role-Playing Games (RPGs) because of the turn-based nature of the gameplay, and the different statistics and variables a player had to take into consideration when playing. *Pokémon* focuses on capturing and training different creatures known as “Pokémon”, with the ultimate goal being to obtain at least one of every species of Pokémon in the series. To play this game, the player would have to learn about varying strategies within the game’s context. There are the different kinds and types of Pokémon, the strengths and weaknesses of each type, which moves to teach each Pokémon, which Pokémon to have on your team, and so on. Along with that, each Pokémon of the same “type” will have different strengths and weaknesses. These strengths and weaknesses are based on other differing variables, like the size of the Pokémon and the kind of attacks it can learn, which also influences what each Pokémon can and cannot do in battle. In short, players need to learn how to assess every aspect of different Pokémon and decide how to best raise them in order to beat the game.

Because of his fondness for *Pokémon*, he eventually picked up the spinoff mobile application called *Pokémon Go*. This game/phone application works differently from regular *Pokémon*: Where the main games focus on a plot and role-playing elements, *Pokémon Go* uses a GPS to track your movement in real-time. It generates Pokémon in the game for you to catch, and you can walk to different landmarks in real life for further rewards. The core element of the game is to walk and move to reach achievements and progress. Along with the need to move outside of a vehicle (on foot, by bicycle, etc.), the game does require you to look at the simplified statistics of each Pokémon as well, capturing the same kind of Pokémon only to give most of them to a character called Professor Birch. The point of this would be to receive materials to strengthen your chosen Pokémon, enabling the player to use them in battle with other players around the world in a randomized battling system. Essentially, you need some analytical skills when choosing which Pokémon to keep and power up, all while moving around to collect different materials that can help you improve your captured partners.

Keith revealed that he struggled with being outside of his house. By playing *Pokémon Go*, Keith believed it helped motivate him to go outside on walks. The achievement system and daily quests helped give him goals to accomplish while outside, while different rewards received when accomplishing those tasks reinforced that push. He also stated that he had difficulty going outside without the support of the application, but hoped that eventually, he would not need the application to go out.

Animal Crossing is another game franchise that Keith mentioned. This franchise focuses on the player character (PC), who is represented as the sole human of the game, moving to a new location to start a new life. The PC acts as an avatar for the player, who has recently moved into a new house and can interact with other neighbours and establishments in the area. From there,

the game can be open-ended: You can choose to focus on befriending your neighbours, who are anthropomorphic animals that also move into the community; pay off and expand your house; collect bugs, birds and fossils for the neighbourhood museum; or even loiter around and keep everything as it is. In the end, the decisions the player makes on how to spend their day in the game will ultimately determine how fast the community develops, be it a village, a city, or an island. Someone who plays games from this series would need to properly manage their time if they wanted to play it efficiently. However, they could also play it casually, which does not require any particular set of skills, aside from basic reading skills, to play.

When Keith spoke about *Animal Crossing*, he compared it to *Pokémon Go*, as both have an achievement system. However, *Animal Crossing* also comes with this feeling of responsibility to complete the different daily tasks that push him to start his day, since there are different daily events each day in the game. This game helped Keith maintain a daily routine due to the emotional support it provided him. The different animal characters that players interacted with also played a role in emotional support and growth, as Keith shared that the game reminded him that he “also had to reach out to [...] friends and family.” The animals ended up being a simpler but effective reflection of relationships for Keith, at least in how their interactions worked.

A third game mentioned is significantly newer: *Genshin Impact*. It is an open world adventure game that updates with new content bi-monthly. In this game, people can explore a vast world with different landscapes that are inspired by real-world places. There are enemies scattered throughout the world that the player needs to fight in real time, and treasure chests that can be found from either looking around or completing puzzles of varying difficulty. There is also a great breadth of lore about the world that some players may choose to analyze, a main plot to follow, side stories, plenty of different characters that can be collected via using in-game

currency or real money, different minigames that appear for limited times, and harder fighting challenges that can give greater rewards. In the end, there is a minimal level of understanding one needs to get into this game, but how you delve in deeper depends on your interests, whether it may be one form of data analysis in regards to each character's statistics and the number of materials needed to strengthen them, or another form of literary analysis when inspecting different plot and lore points in the game's canon.

When asked about what *Genshin Impact* offered him, Keith talked about how the game gave him a sense of fulfillment, as it allowed him to collect and hoard large amounts of items in-game. This game also gave him both a comfortable level of predictability, as a space with many repetitive events, and a sense of responsibility when dealing with daily quests and the previously mentioned item-gathering. Keith has also described how he got attached to certain characters that he could relate to, which deeply helped him cope with his lived experiences. These characters tended to be resilient, despite any negative events that they lived through in their backstory. A common theme in the characters he described was loss, where each character had experienced the death of a loved one. This had a particular meaning to him, as he had openly stated that he had lost his mother. However, Keith latched onto these characters for emotional support, explaining how "seeing these characters, being able to cope with those emotions and that loss, and then getting stronger because of it, just [made him] feel that [he] could do that too." Once he found characters that fit his tastes, he kept track of them throughout the game and plot, motivating him to move forward in the game's plot instead of stagnating.

The tactic of finding something within a task as motivation is a mindset that Keith used for non-videogaming activities. Two examples he gave were cooking and drawing. For the former, he admitted that "[f]or the longest time, [he] felt uncomfortable about cooking."

However, by focusing on certain food that he liked, Keith pushed himself to try and learn how to cook. With drawing, it was as simple as finding the subject that inspired him to draw. The trend of drawing characters that he liked started in the *Sonic the Hedgehog* franchise. Drawing became so interesting to him that he “looked even further into it and wanted to learn how to make those drawings come to life.” He described drawing and animating as a lifestyle, learning from varying different animations and gaining inspiration from what media he consumed. It was through video games and internalizing the motivation to pursue something that interested him that he ended up immersed in the arts.

When reviewing what has been said in the interview, we can see that Keith has used video games primarily as a tool for emotional support and growth. In essence, he is a young man who fell in love with gaming because of the different stimuli and supports that it gave him. Currently, he is pursuing a career in the animation field.

Dan

Dan began by focusing on the benefits of different genres of games and video games in general, rather than individual games from different franchises. The first genre of games he mentioned was massively multiplayer online role-playing games (MMORPGs or MMOs). Role-playing games (RPGs) are characterized by the different statistics and variables that influence overall gameplay. Through doing different tasks within the game, whether it be entering fights, completing quests or collecting various items, the player can improve their characters’ statistics and further advance in the game. Depending on the type of RPG, the skills the player needs to perform the necessary tasks can vary: Timing, coordination, and fast reflexes can help with faster-paced battles that happen in real-time, while organization, planning, and creative thinking can help with solving more complicated puzzles within the game’s world. Regardless of the kind

of RPG, there will always be a level of statistical analysis and a basic number sense that goes into playing the games in this genre. In the case of MMORPGs, which tend to be heavily reliant on the multiplayer aspect to enjoy the games, Dan shared how these games helped him to develop his communication skills, especially when playing with other gamers. He described how, in situations within the games where collaboration between players was key, it was important to quickly and efficiently transmit information to better coordinate with everyone, as “the synchronization [was] very important” to achieve success.

Dan then talked about how first-person shooters (FPSs) helped to develop his observational skills. FPSs are a type of video game where the player is given weapons, mostly long-ranged weaponry, and have the goals of subduing the enemy and accomplishing varying tasks. The perspective taken when playing these games is strictly first-person. Because of these details, your vision of your surroundings in the game is limited to the perspective of the character you play as. When taking this into consideration, the stereotype of video games helping with hand-eye coordination makes sense. These games also require the ability to quickly take note of your surroundings, as to either see the enemies around you and properly react to them, or to find key items that can help you proceed through the levels. Depending on the kind of FPS you play, you could also need some experience in creative and analytical thinking when solving some puzzles. All in all, being able to stay calm in more tense situations in the game is important.

When Dan spoke about how FPSs helped him develop his ability to be more aware of his surroundings, he shared how his mother cannot play video games due to migraines. He connected this fact with his greater ability of observation: in his anecdote, Dan was able to notice things on the road while his mother drove, like a driver that was about to turn into his mother’s lane. He continued this point by elaborating how FPSs also helped with his ability to predict

other people's movements, and how many times, he could have pointed these things for his mother had she allowed it.

Another point of interest Dan brought up was how the communities around the games he played helped him in finding accommodations in his daily life. He shared that, despite some physical limitations with his motor skills, these were not enough for him to be considered physically disabled. However, he described some difficulty with his ability to use his hands, such as dropping plates or his phone more often, because of his grip randomly loosening. He also mentioned that, as a kid, he had a form of necrosis of the hip that, although dealt with, permanently affected his ability to walk. For the former, the twitching and loosening grip affected his ability to play video games as well. It was through thinking about and sharing his problems with a community of gamers that he was able to find out and think about different possible accessibility tools that were useful to him beyond just gaming. An example of this is how he switched to a mechanical keyboard. Due to the suggestions of other gamers in the communities he frequented, he was made aware of mechanical keyboards for gaming. He later figured that, because the keyboard was so sensitive, it made pressing the buttons easier for his hands, which made writing on the computer more comfortable in general. Other instances of Dan figuring out how to better adapt to his situation because of video games included: buying a mouse with a number pad on the side, helping him with playing MMOs and allowing him to not move his hands as much when he was typing on his keyboard; figuring out what triggered his migraines based on what he saw when playing video games, and how to better avoid these triggers; and trying using a crutch for walking, suggested by other gamers during conversations on the topic of his physical limitations. In essence, because of his interactions and experiences

with games and the communities around them, Dan believed that it helped push his ability to self-reflect on how to better adapt to his current limitations and needs.

Dan then made a connection to representation and emotional attachment in video games, and how there was a necessity for a wide variety of abilities and experiences presented in them. He did this by explaining his thought process on the protagonist of the horror game *Amnesia*, his understanding of why the protagonist was disempowered in the game, and his frustrations and realization with the character's mechanics. He questioned why the character moved so slowly, only to empathize with the character because "oh yeah, no, [he thinks his] legs don't really work that well." Similarly, he told of his experiences playing *Warframe*, which fell under the action role-playing game (ARPG) and third-person shooter genres. Though the game initially seemed to have little plot, it was after delving deep into the game that Dan discovered the true background of certain elements and equipment in the game. The game had themes of abuse, with the "warframes", the machines piloted in the game, being the result of human experimentation, and the protagonist being among one of many child soldiers. The warframes were very difficult and almost impossible to pilot by most people, but it was only through the empathy the protagonist showed to the machine that they were able to pilot it. Dan continued to explain how the game left a big impact on him when he first experienced the plot, stating that many people did not expect this turn, and how rare it was to see characters in this kind of genre empowered by "the community and the cooperation and the mutual support between two victims that found strength in each other to actually stand up to their abuser." These details that helped connect the gamers to the games that they play, whether it be story or gameplay elements, helped them in their self-reflection of their past experiences to better understand and appreciate them.

Other qualities that Dan believed he refined through his exposure to video games are creative thinking and problem-solving. As video games are a form of media, the ideas and ways of approaching a problem can influence and inspire gamers in different ways. Dan used *Warframe* again as an example of this, detailing how his spouse helped him figure out some of the game's mechanics. He began to understand how to make macros within the game. Macros are shortcuts that can help make certain tasks go faster by creating customized inputs, such as the "Ctrl" and "C" keys on a keyboard being the shortcut for copying text. When he understood how macros worked within the game, Dan figured that he could bring this same tactic of creating new macros to different programs that he used at work. By doing so, he was able to improve his productivity significantly. He stated to have created other macros for his digital art programs as well. In his art, he also took inspiration from the different aesthetics and colour palettes found in video games to help himself grow as an artist. Again, citing *Warframe* as an example, Dan explained how he would watch the customized warframes of other players and take inspiration from some machines that showed interesting colour palettes for his artwork, like pink and teal. He mentioned that websites like *Pinterest* can also be very limiting in the content they can offer as references. He took inspiration from limited colour palettes found in other games, like the MMORPG *Final Fantasy XIV*, from different kinds of visuals that can be found in the game, and even whether or not the user interface of a game felt cluttered. It was through his observations of how the creators put together their games in plot and visuals that Dan found ways to enjoy and improve himself.

Dan also mentioned how city builder games helped with his ability to multitask and manage his time. City builder games, or town builder games, are a kind of simulation game where the player has to manage a community of some kind. They need to balance time,

resources, etc. within the game, with the intended goal being to help said community grow and prosper. Within the games Dan played, he talked about how he was faced with different problems within his city, such as flooding in one area and a sewage problem in another. In such situations, he figured out if it were possible to do both tasks at once and tried to solve the problems most efficiently. Connecting this to his experiences in real life, Dan shared an anecdote about one of his university classes, where the professor gave two tasks at once that needed to be completed within 30 minutes. In those instances, it was Dan and two other gamers in the course that solved those problems quickly.

When broaching the topic of games and mechanics that he did not like, Dan confessed to being affected by the fear of missing out (FOMO). This led to him talking about Blizzard's *Overwatch*, which is a multiplayer FPS, and predatory monetization. The concept of predatory monetization, as described by King and Delfabbro (2018), is the "purchasing systems that disguise or withhold the long-term cost of the activity until players are already financially and psychologically committed" (p. 1967). This means that, although a game is playable from the first time it is launched, there will be possible microtransactions that a player can pay for greater benefits and/or improved performance. As Dan shared his experience, he told of how *Overwatch* was a 60-dollar game on release, and he was willing to pay the full price to play the game. However, it was the fact that there were additional payments to be made if you wanted a specific cosmetic that bothered Dan. This was in the form of "loot crates", which were a part of "an in-game reward system that could be purchased repeatedly with real money to obtain a random selection of virtual items" (King & Delfabbro, 2018). The game itself suited Dan's aesthetics, and he enjoyed the gameplay and customization elements, but many of the customization and rewards were attainable only with those loot boxes that were scarcely given for free. In this

anecdote, Dan found he wanted a particular cosmetic appearance for a character that he regularly played in *Overwatch*. This was during a Halloween event in the game, so this cosmetic was available for a limited time. Dan played the game constantly to collect these loot boxes, and reportedly bought at least 30 extra boxes, which he admitted was a lot of money. After the experience and not getting the cosmetic, Dan reflected on how he did not enjoy any of it and why he should not continue to partake in playing a game that made him upset. Even more, he extended this thought process to his usage of Facebook, and other things that he did not enjoy. He ended up deleting *Overwatch*, and he has not regretted this decision.

Through this experience, Dan learned to better assess games, and what mechanics were used to take money from the player, such as items hidden behind randomly generated boxes. He extended this lesson to other services that he used, trying to find hidden fees that were there solely to take money from the users and ceasing his usage of more predatory websites. This also made him better appreciate games like *Warframe* and *Final Fantasy XIV* that did not use such predatory methods to make money and treated the userbase with respect. Dan also noted how the communities for these games tended to have nicer people in general, and that there was mutual support in more independent gaming communities.

With also learning about how developers can help manage toxic behaviours in a community and how these actions can influence other people's attitudes, and different perspectives through the different classes and avatars one plays in a game, it was apparent that Dan used video games as a medium to better develop his perspective, creative thinking, and sense of empathy, while also treating video games as a tool to connect with and learn from others in different communities. It was not necessarily in academic or traditional subjects that Dan found value in playing video games, but in better developing himself in ways to live a more

comfortable and happy life. He extended this thought process further by starting a new hobby that he purposely knew he was bad at, simply to have a space where he could be bad at something to relax; this hobby was playing on a digital piano. Dan believed that this hobby would never serve a grand purpose, but as long as he perceived it as benefitting him, he would continue to enjoy it.

Snappy

Snappy, one of the participants of this study, stated that she played video games for as long as she could remember, having experienced all kinds of different genres and not having a particular favourite. Snappy enjoyed exploration games because they allowed her to experience other worlds, marveling at their beauty or seeing how worn they looked. She also delved into her experience with horror games, describing how she inched into playing them because she relished in watching others play these games and seeing the stories unfold despite being afraid; she further explained that they stimulated her imagination. She moved then to farming games, such as *Stardew Valley*, a simulation role-playing farming video game, and related her fun experience building things and exploring an exciting world that was based on survival and the growth of your farm, while not as focused on combat. Snappy remarked that Gachas, games that use vending machine mechanics and in-game currency while also enticing players to spend real-world money, did not interest her at this time, but she said that they might in the future.

Snappy shared the story of how she was introduced to video games in her early childhood. One Christmas, she received a Nintendo 64 system as a gift from her mother. She also received her first game, the 3D arcade racing game *Mario Kart 64*. A kart racing game is a game where you participate and compete in racing competitions in go karts. These types of racing games focus less on the real-world physics of how the cars move and function and more on the

fun experience. Although the karts tend to move slower than machines in other racing games, timing is still essential in knowing when to turn and act. Different mechanics are also a part of the gameplay in these games, which include placing obstacles to slow down other players, or bypassing obstacles placed by others. In some cases, knowing when to attack other racers with items and in-game skills can also be an important part of gameplay. Overall, there is a tactical aspect of playing kart racing games, where players need to think in the moment and react quickly to what is happening in-game, with the goal of either moving up the places in the race or remaining in first place. When remembering the Christmas gifts, Snappy recalled how she and her sister were so excited when they received the console and video game, and how they played *Mario Kart* non-stop. Later, her sister received a Play Station 2, and Snappy played on that console as well. Once her sister lost interest in video games, Snappy moved the Play Station 2 system to her room. She then moved on to remember that, during elementary school, she saw playing video games as a privilege. Eventually, playing video games became “something that [she] looked for every single Friday.” Her mother used video games as an incentive for Snappy to do well in school, allowing her to rent a game or two at the end of the week. She would always look for a game she had not experienced before, one that piqued her interest in some way.

Snappy named franchises that she played from that time. Among them were *Sonic the Hedgehog*, *Mega man*, *Mario*, and *Donkey Kong*. She described playing these games as being introduced to many wonderful characters and going on many different adventures. Snappy also shared regret for not finishing some of the games she rented in her younger years, since some levels were too intimidating for her and the challenges that she needed to tackle were far too big at the time. The game she mentioned was *Donkey Kong 64*, a 3D action-adventure game. As the name would suggest, action-adventure games have elements of both genres in one game. In such

a game, players need proper reaction time to deal with the pitfalls and enemies that they would face in all the activities related to the action elements of the genre. Players would also need a greater level of curiosity and wanderlust to explore the different areas of the game and critical thinking skills to solve puzzles that are present in an adventure game. Together, they make a unique experience of fast and slow-paced gameplay, where a player's progression is based on their overall persistence to continue playing. The challenge that Snappy faced in *Donkey Kong 64* was her fear of a specific level of the game that was based around a cartoony sense of horror. In any case, as an experienced gamer today, she knows she is more than able to reach the end of those games. She went on describing today's games as being a novel creation based on old games, converging new ideas and capabilities to create a new experience while throwing back gamers to the old days with all the nostalgic memories of the past. As for the old games that she was able to beat, Snappy shared how completing these games gave her a rush and a sense of accomplishment.

She took the time to also touch on video games as a storytelling platform. Snappy stated how every video game had a story or purpose, likening them and the plot twists within them to books and movies. She acknowledged how these stories ended in a way that was either likeable or inconclusive, allowing the creators to build upon those video games for future installments in the series. She also briefly connected this train of thought to a community of gamers who appreciated the medium in the form of fanfiction, which were stories based on a series and written by the fans.

When asked about the skills she learned playing video games, Snappy named problem-solving, time management, and financial prowess. She explained that she learned to solve problems through looking at different angles or perspectives to find solutions to obstacles while

playing. She reflected on how this skill helped her in real life when she used to work in a t-shirt shop. She was tasked to rearrange the backroom in the store, having a large quantity of merchandise and a limited shelf space. She said she used her problem-solving skills and considered different viewpoints to have everything arranged in an orderly and neat fashion. As for time management, she learned this skill while playing farming games. She described how, depending on the farming situation, “[she] learn[ed] to prioritize what [was] more important at the time.” By prioritizing crops in these kinds of farming games that gave a better income for the time it took the seeds to grow and the yield of each seed, the player could maximize profit and more smoothly progress in the game. Snappy elaborated on how playing farming games consolidated her time management skills, by describing the minute details of the gameplay:

OK, it's going to take this long to grow these crops. I'm going to start them now. And then, while these are growing, I can actually go and mine these resources right quick so I can have iron and copper to build this lightning rod. So that, whenever the next storm hits, I can save up energy and I can get a battery out of it. Which will then fund a machine that switch the crops. Once I get done with mining, if I come back, the crops should be done. I can harvest them, put them in the box, and before the lady comes and picks them up. (Snappy Interview)

Snappy learned to be financially responsible from playing Gacha games. She said that they taught her to wait for sales to buy what she needed to maximize her money’s worth and to save. She explained that money became an issue for her as she was saving to buy a house. In this scope, she noted that she was prioritizing her spending, as she only got what she needed and not what she wanted. She also learned from survival games, such as *Don’t Starve*, *Minecraft*, *Subnautica*, and *Darkwood* that mere life necessities, like food and shelter, were the most

important in life, while other resources could eventually come afterwards. She remarked that this might not be the best lesson that video games taught her, but it remained in her mind as another lesson.

Racing games were also beneficial for Snappy in teaching her the importance of simply having fun. She said people did not need to be constantly working and that it was alright to have fun. As she raced in any game of the *Mario Kart* franchise, she noted that she did not worry about anything, going past many variables on the track and collecting powerups to help her go even faster. She remarked that racing in a game, like in real life, was very competitive and that it was perfectly fine to win over your friends in these kinds of games. The only requirement to keep in mind was that everyone remained pleasant afterwards. In this portion of the interview, she concluded that these kinds of games taught her how to take competition less seriously.

Platformers were also helpful in teaching Snappy that, in any frustrating situation, one should know when they needed to step back, ponder the facts, and decide how to move forward. She described how certain platformers could increase the difficulty level to extremes, and how, in certain situations, it could feel as though it was impossible to move forward in the game. In this context, Snappy learned to “deescalate the situation, so [she could] come back to it more calm.” She acknowledged that this way of dealing with frustration was very beneficial in her life, and wished she used such a lesson 2 years ago, when dealing with a toxic situation. For that instance, she took another lesson she learned from video games in general: being persistent. Through persistence, just as progressing in a game, she was able to leave and let go of a very toxic relationship, which helped her move forward.

As the interview continued, I mentioned the topic of applying learned skills and aptitudes from video games in the real world, which led to the idea of lessons learned or morality being

formed through the experiences she had in video games. Although lessons and morals learned are different from skills and other capacities that someone can acquire, they can still affect how a person acts and presents their learning to the world around them. As such, the topic of morality had Snappy cite *Skyrim*, an open-world action role-playing game. She explained how *Skyrim* used morality as a system, molding the world around the player and letting them make their own choices. She named *Heavy Rain*, an interactive drama action-adventure game where the player's decisions and actions affected the story. *Until Dawn* was mentioned and acknowledged, another interactive drama horror video game, where the player takes control of eight young people and leads them to be rescued; and *Man of Medan*, an interactive drama survival horror video game, in which a single or multiple players assume control of the game's five characters who are trapped aboard a ghost ship; it's the player/players' decisions and actions that can save the characters' lives. The lesson Snappy took from all these games came from the gameplay mechanic of choice: that actions had consequences. While some of the games reproached actions that led to bad consequences, others chose not to lay the blame on such actions, but to justify them as having done their best in such situations.

When asked if these kinds of games could help with people's growth, Snappy stated that they could help develop young players personalities, at a time where they were old enough to understand that actions had consequences that they could process, but young enough to be affected by them. However, she remarked that the possibility that the lesson from these games might not reach everyone, or that they had minimal or absolutely no effect on them, remained. For instance, Snappy presented the covid-19 pandemic and the controversy surrounding the issue of vaccination as an example of this lesson. Some people believed that covid was not real and refused to take the necessary precautions to keep themselves and others safe. Similarly, there

were those who were against the vaccine and refused getting vaccinated, causing covid cases to climb and hospitalizations to rise. Essentially, just as people did not take the pandemic seriously, there were gamers who did not take the lessons in games seriously either.

Snappy further pointed out that the moral lessons being taught in video games were not biased, because the creation of a game did not involve one person. This creation involved a team of individuals who worked together to write the story and its twists, after a long debate of various opinions, choices, and decisions. Snappy explained that if video games were biased in their moral message, “the story wouldn't be good, and people of all colors, shapes, sizes, religions, and political views wouldn't enjoy them.” The fact that there was a massive audience for these games was a proof that they were not biased, as they were not created for specific groups. It was the other way around: there were groups of people who got interested in specific types of games, rather than games being tailored to a specific group of people.

When asked what she liked most about video games, Snappy used a quote she found on Tik Tok to help her describe how she benefited from playing video games; it completely helped her manage her attention deficit hyperactivity disorder (ADHD). She asserted that video games were the only thing that made her sit for hours solving puzzles, and described how she got engrossed in them, extending her playing time until late at night. She further expressed her complete engagement in the game, narrating how she ran through the world of video games as a different person, how she was entranced by the colors, the shapes, the sounds, and how stimulating her immersion was in her chosen world. She also explained that her engagement in the game still allowed her to do other activities, such as talking to her friends or her co-players while still playing. She could avoid getting into trouble with other gamers, as she could also choose to mute herself when she needed to. She could also join one person or as many as she

liked, depending on her mood, and still enjoyed the game she was playing. It was the freedom that she experienced in choosing her way of playing that drew her to video games, as she mentioned that she could play alone or with various groups of people. Along with this, she could choose to take a break whenever she wanted to eat, relax, and get “refreshed, refueled, energized, and excited.” All of this, in her opinion, fit well with ADHD. Snappy then remarked that there existed a difference between movies, books, and video games, especially for people with ADHD, who needed to always occupy their hands. She explained that, when she watched a movie, she still needed to play a game on her phone simultaneously. As for books, Snappy related how hard it was for her to get interested in reading a book. Although her hands were occupied, there was a lack of interactivity in reading books that a video game could provide. She classified reading a book as “locked into a specific railroaded story,” where the reader could take their time reading the book, but the story was set on one course. Video games could also be guided in a similar way, but there was also the freedom to explore beyond the plot and do as you please.

Snappy mentioned that it was through video games, specifically *Undertale* that she met her fiancée over six years ago. She said that, through the social platform video games offered gamers, people could find and weave long-lasting friendships, just as what happened with her. She went on to mention that video games could be more beneficial than harmful, but that all depended on the game and its fandom. A fandom is a community, generally found online, of people that appreciate a piece of media, and either discuss about this piece of media or create other works based on the original piece. Like in real life, Snappy explained that in certain online groups, there could be toxic people, or individuals who had a negative impact on your welfare. However, faced with these kinds of people, you could choose to stay or leave. She elaborated by saying that online communities were generally good because they cooperated and bonded with

each other while having fun playing video games. For instance, Snappy mentioned how online communities can cooperate to fund the production of certain games through *GoFundMe* (2010) because the creators themselves could not produce them without this funding. Another example she mentioned was people who made a career streaming and being a YouTube influencer: some of these individuals made a living by playing and recording footage of video games, putting them on streaming platforms for other people who could not afford or access these games to enjoy. She reconnected the presence of community to her current friendships and relationships: without fandoms for video games, Snappy would have never met any of her closest friends, nor her fiancée.

From this interview, Snappy seemed to use video games for two distinct, but interconnected, purposes: to satisfy her wanderlust in exploring different worlds, and for cognitive and emotional growth. Through video games, Snappy experienced plenty of different places and had control over how she experienced a game and story. Her mind has also sharpened when faced with a task that required creative and critical thinking, allowing her to take on different perspectives when faced with puzzle-like problems in real life, like organizing items in a small space. These more cognitive and exciting pursuits kept her wholly engaged, which helped manage her ADHD. She also learned valuable life lessons that she held onto to help her navigate difficult situations in her relationships, recognizing when to be persistent or when to deescalate a situation. Along with this, video games served the purpose of helping Snappy connect with other likeminded individuals, forming long-lasting bonds that could span years. Her conclusion of the interview was simple: she recommended playing video games mainly for fun, especially when people go through frustrating and hard situations.

Pilot 960

The next participant goes by Pilot 960 for this interview. He drew upon two main ideas when thinking about the lessons he took from 2 separate video games. The first game he named was *Journey*, an atmospheric, adventure game in 2.5D where you explore many different environments as a cloaked character. There was a strong focus on the game's visual and musical representations, and Pilot 960 described it as "beautiful in the way that your experience through the game ma[de] you appreciate things about life in general." Because of the lack of direct narrative and elaborate goal of the game, there was no one right way to interpret the meaning behind this game. But the meaning that Pilot 960 pulled from his experience of playing *Journey* was to appreciate the different instances in his life, rather than rush to the end of the journey right away. The abstract nature of this lesson allowed Pilot 960 to find reason to appreciate his struggles and time in schooling, and the relationships he made with different people. It was through reflecting on these experiences that Pilot 960 felt he could better learn and grow.

The second game he listed was *Celeste*, a 2D platformer known for its difficulty. A platformer is a type of action game where the goal is to cross an area that usually has different obstacles, like suspended platforms, bottomless pits, and enemies, by running and jumping. Timing and precision are key skills that are needed when playing any platformer, as well as pattern recognition when trying to avoid obstacles. Due to the higher difficulty of some platformers, players will often be faced with repeated failure and will need to persevere to overcome the difficulty. As such, qualities like persistence, patience, and concentration are cultivated through playing. Overall, platformers help create an environment that is both challenging and rewarding to the player. When Pilot 960 talked about *Celeste*, he highlighted how the game did not penalize the player for failure. When the gamer fell into a pit or hit spikes,

they immediately died in the game. However, they were allowed to continue from where they lost in the game. Pilot 960 pulled the following message from this kind of mechanic: failure was okay as long as you tried again and learned from the mistakes you made. He continued by elaborating that it was okay to take a step back and take your time when you felt frustrated with a task, because pushing through that frustration just to finish a task was the “worst think you [could] do.” He applied this way of thinking in his schooling and everyday life, stating how he put himself in a closed environments and tried to optimize himself in any scenario, having the freedom to accomplish what he wanted while enjoying himself.

When asked if he applied these lessons in his day-to-day life, Pilot 960 explained that “any form of entertainment [did not] necessarily have a direct translation to real life, but could be used as an intermediate to interpreting real life in a more enjoyable way.” In this mindset, he felt that, as long as any progress was made towards an end goal, no matter how small, then it was ultimately a good thing. He did not need to finish a big project perfectly in one breath; as long as it eventually got done – and it would get done with the effort cumulatively adding up – that, the struggle to get there and the learning that came from the struggle was what matters.

In the entirety of the interview, Pilot 960 described video games as an artform. This was one of the descriptors he used for both *Journey* and *Celeste*. He continued this train of thought when he talked about finding experiences that were meaningful when he picked a game to play. *Shadow of the Colossus* was the next title he mentioned, stating how it was a perfect example of video games as art. *Shadow of the Colossus* was an action-adventure game that was played in third-person perspective. In this game, the majority of the time was spent setting off into a vast, unpopulated land to find and kill 16 different colossi. The game forced you to use the terrain around you during each fight to help you kill each colossus, as each one had at least one weak

spot that you needed to reach to accomplish the task. As such, you needed to be resourceful and think outside of the box when playing this game. The narrative was also very ambiguous, while giving you just enough information to figure out the basis of what was going on. This would mean that, if a player wished to better understand the story, they would need to have a developed literary sense to interpret what was happening in the game's world, to fill the gaps within the narrative and get more out of the game. What Pilot 960 took from his time playing this game was that there was no challenge or task too great, that there was always a way to reach the goal. In fact, he stated how many video games were about trial and error. He connected this fact to real life, how people were afraid of failure. But, in a gaming environment, gamers forgot about this limitation. They could try again as many times as they wanted, and should apply this lesson in real life. They should not fear failure, but embrace it as long as they kept trying to “be imaginative and creative with solving.”

Then, Pilot 960 moved onto the *Dark Souls* series of games, which forced him to push past his comfort zone. Known throughout gaming communities as an extremely difficult series of games, these are a set of games that fall into the genre of action-RPG. Just as any RPG, they have a set of variables and numbers that a player can improve by collecting “souls” from defeated enemies. At specific locations, the player can use these souls as currency to either improve their statistics, to buy certain items from other non-playable characters, or use them for other benefits. The action gameplay comes from the number of enemies on the screen, and the real-time combat of using your weapons to hit the opponents while dodging their attacks on you. With keen, developed reflexes, and perseverance to try again when you lose, players also need to be strategic in how they build their character. There are different ways to play a *Dark Souls* game, from focusing on melee combat with swords, spears or bludgeoning weapons, to using

long-range weaponry like bows, to focusing on statistics and equipment suitable for various kinds of magic. The possibilities affect the gameplay, which affects how you can approach an obstacle in the game. As such, learning what statistics need to be improved to further your gameplay style requires planning and the ability to assess the different risks associated with each option. In these kinds of games, Pilot 960 took from them that, to grow as a person, people needed to force themselves out of their comfort zone. He continued by stating that video games could be a good intermediary to this concept, where the consequences were not as high if you failed at a task. Once you have strengthened that mentality, you could apply it to real life and understand that pushing past limitations was very similar to pushing past the comfort zone in video games.

Pilot 960 pulled his next moral from the game *Undertale*, which was an RPG with various endings. In this game, you have the option to either fight the enemies you encounter, or to spare them and move on. Depending on your decisions, the story and ending of the game will change. You can choose to play the game as a traditional RPG, fighting the enemies and gaining more power, you can spare everyone and try to improve the lives of the monsters you encounter, or you can do something in between. In the end, the game asks the player different questions directly and indirectly, about the morality behind the decisions the player makes. In this game, Pilot 960 drew out the importance of kindness, and how kindness given could spread and eventually create change, which he strived to do in his way of being.

From all these morals, Pilot 960 shared his understanding of the importance of video games as a multimedia tool for learning. Though not necessarily academic in nature, video games offered a medium for a more personal experience with the material presented. The gamer becomes attached to the experience lived by playing the game and can ultimately learn from that

experience. According to him, books and movies were one-sided, while video games offered direct input and interactivity to the audience. This made video games a unique piece of art that allowed the players to “interact with a set piece that the designer presented to [them].” The experience of playing a game became unique to the player, because it would be impossible to find two gamers that played a game in exactly the same way. In the end, it was the player that got to decide how the game presented itself to them.

When asked if video games could do more harm than good, Pilot 960 asserted that anything presented to someone could do either good or bad. He explained that the interactivity of video games coloured people’s perspectives of these games as more directly impactful, but, with age rankings and content warnings, adult gamers should be able to distinguish between the virtual gaming world and real life. He asserted that presenting controversial topics in video games helped people “come to terms with it and [had] a better appreciation for how it impact[ed] the real world.” He stated that problematic behaviour such as violence was part of human nature and that video games could present such subjects constructively. Essentially, he saw video games in their potential to present these kinds of topics in different, digestible ways that could help with public understanding. This was reflected in what he looked for when playing a game, being impartial to the genre of game played. It was the ability of video games that allowed them to linger in his mind that Pilot 960 searched for, whether it be in the ideas shared, the lessons learned, or the beauty of the game as art. Thus, when he looked for a video game to play, he searched for “the ones that really [had] a great impact on who [he was] and how [he lived his] life.”

Extended to relationships, Pilot 960 stated that, with his existing friends, their friendship became stronger, as he described how amazing discovering common interests between friends

was, and how it connected people strongly. In this sense, when finding friends in one friend group who were into the same game, this encouraged more time spent together. This entailed more shared experiences between friends, a chance to share the thrill of learning about the story, and emotions that were amplified because the video game was experienced as a group. What strengthened the relationships further, Pilot 960 continued, was discussing aspects of a game that gamers agreed or disagreed with. When he did this with his friends, he could learn more about them. Pilot 960 concluded his interview insisting that “games [weren't] just avoiding responsibility; they [could] be appreciating life in a new and artistic way” (p. 32). He added that the potential for video games was “a force for good” (p. 32), and learning “to implement it properly in our lives [could] make the world a better place” (p. 32).

From what was gathered, Pilot 960 seemed to use video games as a think tank of sorts, a space to explore different morality and intangible lessons, and experiences that could enrich his experiences in life. Video games, in this sense, were not a form of escape from reality, but a medium to better understand that reality and how to move forward in the most fulfilling way.

Queuethulu

Queuethulu stated that he preferred role-playing video games (RPGs) that were story-driven. In his childhood, he played action games, but felt that they lacked a certain level of depth. They were repetitive, and the experience eventually felt unimpressive for him. As he grew older, he shifted towards what he considered as “more substantial” games. These games offered him an emotionally charged story, where he got invested in the character he was playing, and that was more satisfying for him.

Queuethulu enlarged his vocabulary from playing RPGs over the years. As someone who was born British, these games, which are story-driven with a lot of text, eased his integration into

the American society, as he learned more American English words. This made him feel more accepted in this new environment, which helped him in both his personal and professional life. The first game he mentioned is *Gran Turismo*, a game classified as racing simulation because of the realistic physics of the cars when driving them, which taught him about car engines and its related jargon. He moved to *Final Fantasy XIV*, a currently popular massively multiplayer online role-playing game, improved his social skills as it eased his participation in the conversation when he was working as bartender. For instance, when the customers could not remember certain terms, he was able to pick up on clues from the context, and that was based on what he had learned from playing those games. This allowed him to better carry conversations with patrons and keep them engaged. He also describes how games that used logic puzzles were also helpful, as they “kept his mind a little bit sharper.” He mentioned *Star Wars: Knights of the Old Republic*, another role-playing video game set in the Star Wars universe, and how it helped improve his problem-solving skills with various puzzles. Over the years of playing games with these puzzles, he drew the conclusion that these kinds of games made his personal problem-solving a lot faster.

Queuethulu noted how playing video games over the years also enticed him to read more books, as there was a lot of reading to do when playing many of his currently preferred games. He stated how it made him more curious and knowledgeable about different kinds of literature, as he used to primarily read cosmic horrors. Because of video games, he expanded his repertoire of books read to high fantasy, which ultimately made him read more. It also improved his interpersonal relationships, as he explained how he cut ties with his blood-related family for personal reasons and how, through video games, found “a better-found family that's been more supportive” in being more mindful of his needs. He related how he met his fiancée when he was

playing *World of Warcraft*, a massively multiplayer online role-playing game, as an example. He also mentioned how he made a group of friends through games like *Left for Dead*, a horror-survival, first-person shooter game, and *Final Fantasy XIV*. These games heavily needed gamers to have good communication, cooperation, and teamwork if they wished to win. These skills ultimately helped him deal with his own anxiety and eased his social participation. He expressed how, when he was younger, he was socially awkward, and unaware of certain vocal and visual cues that could help him understand the mood. Through playing these games and talking to people online, he felt that they helped him be more socially aware.

Queuethulu also shared that he played video games as his way to decompress, giving his mind something different to concentrate on. He mentioned that, while other gamers perceived video games as a form of escapism, he played to vent his frustrations. He mentioned *Dark Souls* (2011), an action role-playing game, as a game he played when he was in a bad mindset, because it forced him to focus on the gameplay mechanics. The game series was notorious for being difficult, so “you can't just go on hacking, slashing, so it gave [him something] to concentrate on when [he needed] to clear [his] head.” He explained how playing this game mitigated his panic attack, as it calmed him down and lowered his heart rate. In essence, playing video games helped him psychologically by clearing his head and letting his emotions pass. He further noted that when he was a child, he was diagnosed with Attention Deficit Disorder (ADD); however, playing video games helped him learn how to focus on things. For this instance, he mentioned the old *Super Nintendo Entertainment System* and *Genesis* game *Zombies Ate My Neighbors*, a run and gun survival horror video game that he played in childhood and still did once or twice a year. He described it as his “Mac and Cheese, because it’s like childish joy for [him], it made

[him] feel happier.” This game acted as a reminder of good memories of his childhood and, in present day, another tool for decompression.

Queuethulu took the time to remark how some video games were harmful to kids and the general public. He mentioned *Overwatch*, a team-based multiplayer first-person shooter game, and *Call of Duty*, a first-person shooter video game, as examples of bad games. They used loot box mechanics, which he highlighted is a form of gambling, since these boxes that held special kind of wanted items and loot took a long time to collect from simply playing. They were designed to tempt gamers into spending real-world currency to buy more loot boxes through a system of microtransactions. He extended his thoughts of harmful games to *Agony*, a dark fantasy survival horror video game, which he viewed as promoting hatred of women as the majority of monsters in the game appear female. With *Agony*, he felt that games could be harmful when they felt as though fueled by hatred, with plenty of murder and no real substance in the plot.

Queuethulu noted how playing video games was more impactful than watching a movie or reading a book, because of its interactive nature, as the player was the one participating instead of simply viewing. He explained how one could stop watching a movie if they got uncomfortable, whereas in video games, players kept going, regardless of the stress they sometimes experienced. He also mentioned how video games could be beneficial for people’s growth, provided they were in a headspace that was not simply “violence for violence’s sake.” In this sense, he elaborated on video games created for entertainment and relaxation purposes, and stated that those games could definitely help people ease the burdens of those who played them.

Queuethulu reiterated how story-driven games made him a better person, by helping him take the initiative when starting a conversation or interacting with others. For instance, he

described his experience playing *Final Fantasy VI*, another role-playing video game, focusing on one specific character called Locke Cole. This character had his own set of struggles in letting go of his past and the drive to bring back his dead significant other. When he finally moved past that and let go of her, Locke became stronger for it; the past no longer held him down. Queuethulu took that moral with him, trying to let go of some past grievances, and it helped him improve his overall health over time. He continued by elaborating on how learning through video games tended to be more effective than learning from any other means of teaching. He recalled when growing up, when he moved from England to America, how certain schools were using games like *The Oregon Trail* and *Number Munchers*. According to him, these games were extremely helpful in some basic learning, being both fun and educational. Queuethulu stressed that his opinion was based on his expertise as both a gamer as well as a game designer. He added how he still played *The Oregon Trail* and how it taught him about the hardships of life. He concluded that video games were much needed in education because any video game could have an educational value to it.

Queuethulu concluded that playing video games in childhood started him on the path to becoming a coder. He explained how *Commodore 64*, a home computer introduced in 1982, facilitated the beginning of his video gaming adventure, stating that “without video games in [his] life,[he] would not have gotten into computer programming.” Overall, we can see that Queuethulu used video games as a tool for self-development. They acted as a simulation to help him understand social interactions better, to cope with overwhelming emotions, and as a means to create meaningful connections with others.

Plastique

Plastique reported that the games she played were mostly in real-time and action-oriented, like shooter games, action-adventure games with puzzle game elements and platformers. When asked about what she learned when playing video games, Plastique made a distinction between games that were made for a purely educational purpose and other games that did not have a predominantly educational purpose, and spoke of the latter. One of the benefits Plastique mentioned during the interview was something that she read about in an article: Playing videogames helped surgeons keep their hands flexible. She also read articles that described how playing video games helped dementia patients by giving them a chance to keep their minds active. She mentioned not being a native English speaker. Video games did not get translated into her mother tongue, so English video games helped her learn English through exposure. She continued by pointing out how people could learn from the cultural influence of various games, stating how she knew “a bunch of like various bits and pieces of cultural and mythological stuff about Japan solely from video games”. Another example she gave of learning cultural influence was *The Witcher* series, a novel series with a set of action role-playing game (ARPG) adaption. According to Plastique, the game/series was a way to learn about Polish mythology. Then, she mentioned the power of the stories of video games, in how they could move the player. According to her, this did not translate to direct learning and require the player to reflect on the experience to draw a lesson from it.

When exploring more tangible and personal benefits to video games, Plastique admitted that she might have Attention-Deficit / Hyperactivity Disorder (ADHD), though she was not properly diagnosed by a physician as of yet. She had a hard time concentrating on different activities and said that she did not read books because of this. However, she had an easier time

engaging with video games. She highlighted the interactive nature of video games as a boon, since players had to “put in the work into the game ... in order to experience it and to have fun.” She added how it could also help people with managing their anxiety and depression, listing herself as an example of someone diagnosed with both. Then, she mentioned the possibility of video games being a form of escapism, noting it could be “a double-edged sword.”

She then explained the contents of a video she had seen, where a Buddhist monk compared playing video games to meditation: The act of putting all your focus on the game and forgetting everything around you and to be in the moment was the foundation of this comparison. She connected this finding with the struggle that those with ADHD had regarding meditation. According to her, people with ADHD could not focus on meditation very effectively, as it required the person to “clear [their] mind, clear [their] thoughts,” and people with ADHD “[could not] do that.” With video games, people could “just funnel [their] thoughts and [their] focus to whatever was the task at hand in the game.” For Plastique, this did not translate to finding tactics to increase her focus in other situations outside of video games, but it related to using video games as a relaxation aid. She then briefly highlighted the development of problem-solving skills in video games in general, and as an example, stated that strategizing could be helpful for shooter games, a genre of games that focused more on aim, the potential of stealth mechanics, and planning your path to the goal at each level. From this perspective, strategizing in this kind of gameplay felt like a skill naturally embedded in the mechanics of the game without the player being aware of this inclusion, whether they had to plan their next course of action, assess if it was beneficial to kill an enemy or not, or decide on the order of what they did in the game they are playing.

Plastique also mentioned the artistry embedded in video games, and how it taught her to be more creative and artistic. She went into detail on the attention put into designing different video game worlds, and how they could be really inspiring to the point of influencing her artwork. This led her to talk about how video games helped her connect to others. She explained the social aspect of video games, with different communities and online games, and admitted that she would not have reconnected to her best friend without the help of video games. She later talked about the nature of some gamers being socially awkward, herself included. Video games, in this sense, also helped these gamers by being a sort of catalyst for social interaction. According to Plastique, through these online communities bonding over video games, people could interact with other likeminded individuals that enjoyed similar things without “the stress [of] keeping up appearances.”

Plastique moved on to mention a specific video game that helped shaped her views: *Silent Hill*. *Silent Hill* is a survival horror game, a type of horror game where the player is stripped of a level of control, because of environmental elements like mazes and traps, of being under-armed to face enemies directly, of limitations in the gameplay to emphasize vulnerability, or of a mixture of these elements. With few characters generally present in these kinds of games, players would need to infer and analyze a lot of the plot using different items and clues in the environment, like journals, newspapers or a particularly poignant scene that is set for the player to explore. Players would also need to have critical thinking skills and a level of creativity when playing these games, as this genre utilizes puzzles as obstacles. Timing and an analytical mind are needed as well for the portions of these kinds of games that require the player to stealthily pass by enemies. These games require the player to plan when they should use their limited resources and when they can pass an obstacle by alternative means. In short, survival horror

games require the player to really assess every move they make and decide on how to best approach any situation.

During the interview, Plastique shared her enthusiasm for *Silent Hill* and was able to tell its whole story in detail, analyzing the story's events and inferencing meaning behind them in the form of morals. Plastique was able to critically assess and appreciate the different cues and symbolism in the story. She took the information she gathered in the game and made conclusions based on them, such as the monsters being themed around different characters found in the game or inferencing the moral that letting go of people that were "stricken with really bad illness" was alright. Moreover, the moral Plastique realized from playing *Silent Hill* helped her handle an issue with a difficult relationship she had in her personal life. She described someone that was once in her life as becoming nearly unrecognizable, "almost like a monster." She did not mention many details about the person, but she had to cut ties with them. What *Silent Hill* and its protagonist, James, helped Plastique realize was that her emotions were not simple, and that leaving the other person was the better choice for her safety and mental health. This connected to a second lesson that she learned through both *Silent Hill* and her experience: perceiving people not only through their actions, but through their intentions as well.

Plastique then moved onto *Shovel Knight*, an action platformer video game, and how it helped clear her mind during a time of emotional distress. As stated with Pilot 960's experience regarding *Celeste*, platformers are video games defined by moving the player character through a series of obstacles, bottomless pits, and platforms. Generally, the skills of persistence, patience, and concentration are needed to face the repeated failures that can come from these kinds of game, along with timing, precision, and pattern recognition, to reach the goal in each level. When Plastique played *Shovel Knight*, it also had the added benefit of being "both accessible and

challenging” to her. The simplicity of the core gameplay mechanics with the physical challenge that each level offered Plastique helped her clear her mind of the stressors she was facing at the time. The fact that Plastique’s copy of *Shovel Knight* was on the portable Nintendo 3DS also helped alleviate some of the physical symptoms of anxiety she felt, as she could comfortably play on her bed and unwind. In this, Plastique used *Shovel Knight* as a “relaxation device,” in which she could disengage from daily stressors to reflect on them later.

When asked if *Shovel Knight* influenced her artistic aesthetic, she denied that it did. *Shovel Knight* was a well-designed game and had a lot of value as it mimicked early-Nintendo design choices. However, Plastique admits that there are other games “that have wowed [her], charged [her], charmed [her] a lot more”, when it came to the visual aesthetics of *Shovel Knight*. Games that she listed as being influential include *Silent Hill*, *Team Fortress 2*, *Overwatch*, *Dishonored* and *Bloodborne*. Plastique shared that, at a really young age, her mother took her to an art gallery, where her love of art started. She did not have easy access to video games at the time, but was fascinated by them and would look for opportunities to experience them, through either buying magazines or pirating a copy of a game onto her computer. These were rare occasions, as she lived in a post-Soviet country that had little access to video games in general. What attracted Plastique to video games was the artistry of these video game worlds, along with the characters and their stories. These traits encouraged her to pursue a similar artform to the darker worlds of those games. In this scope, she stated that playing video games taught her to be creative in a way that was more amusing to her.

In her concluding remarks, Plastique spoke about the general experience playing video games. She explained that video games attracted people because of how enjoyable they were. She then elaborated on the whole picture: the story, the art, the music, the gameplay, the required

skills to play various levels and reach the end, and the attempt to be the best at it. She mentioned the various aspects that made video games fun, i.e., the super skillful player at games like *Call of Duty*, a first-person shooter game; or the problem-solving player at action-puzzle games, or even the choice-driven adventure games, as she likened them to big epics.

From this interview, it seems that Plastique plays video games as a tool for emotional regulation and coping when faced with difficult situations. Video games have also acted as a learning tool for visual arts, and as a medium to facilitate social learning and growth. She is aware of benefits reported for other groups of people, but focuses more on the analytical aspects of plot and appreciates the fleshed-out world within video games as a form of art.

From these six different stories, we can see similar kinds of learning happening. The learning that was reported by the participants include social learning, multimedia literacy, and critical self-reflection. Social learning refers to the understanding and growth of individuals when related to interpersonal relationships. Many gamers used video games as a medium or catalyst for social interaction. Dan benefited from the social aspect of video game communities to improve their overall comfort. Snappy also stated that many of her current friends were with her due to the video games she enjoyed; her interactions with video game communities had even led her to her spouse. Pilot 960 used video games to further bond with his current friend group and share experiences with them that only video games could offer, while Queuethulu saw certain video games as a way to better understand social interaction in general. Four out of six participants made a connection between their time spent playing games and an improvement with something related to their social lives.

Within multimedia literacy, I include interpretive and analytical skills based on the understanding of audio, visual and text-based medias, put together within a video game form. This can range from Dan playing *Warframe* and slowly understanding the deeper meaning of the protagonist being able to connect with their machine as a parallel to abuse victims banding together to support one another, to Plastique delving into the world of *Silent Hill* and making connections between the characters found within the game and the monsters that gamers need to fight. It is through the different visual, audio, and story cues that these two are able to make such connections. However, multimedia literacy also includes an appreciation for the artform in its entirety. Pilot 960 took the time to describe video games as “a set piece that the designer presented to you” that players get to interact with. Snappy asserted how video games fully entrance her, despite her ADHD, listing the visuals, the sounds, and the stimulations as a whole, as part of immersion within a fictional world. Queuethulu also showed an understanding of meaning behind media as he described how video games can be beneficial if they are not simply in the mindset of “violence for violence's sake.” If we also consider video games as a piece of art, Keith, Dan and Plastique have outwardly spoken about how video games have influenced their art: Keith has gone into an animation career in part because of his love of video games, Dan has taken inspiration from the different colour palettes that he has seen in video games for his works, and Plastique has drawn inspiration from different horror/fantasy worlds that she sees in video games. According to these gamers, video games go beyond being empty media to consume and have deeper meanings that span past what is presented in the game at face value.

When I mention critical self-reflection, I mean the intrapersonal effects that video games have on the gamer. Specifically, it is the morals and personality growth that gamers undergo as they consume the media they enjoy. Each participant mentioned in some way how video games

contributed to their growth as individuals. Keith shared how his favorite characters were those that struggled and learned to cope with strong emotions and loss, which gave him courage to do the same. Dan spoke about how the variability of player characters in games helped him and others better understand varying perspectives and cultivate a sense of empathy. Snappy listed and explained a plethora of morals and life lessons that video games helped her embrace, mainly how each action had a consequence. Pilot 960 learned to cherish and embrace the present while accepting failure as part of learning and growth. Queuethulu looked to a specific character, *Final Fantasy VI*'s Locke Cole, as a model to help him move past old grievances for his overall health. Plastique also learned from a specific character, the protagonist of *Silent Hill*, that her emotions were not simple, and it is okay to let go of certain people in your life if you need to. Each gamer in this study pulled meaningful lessons from their experiences playing video games that helped shape who they are in the present.

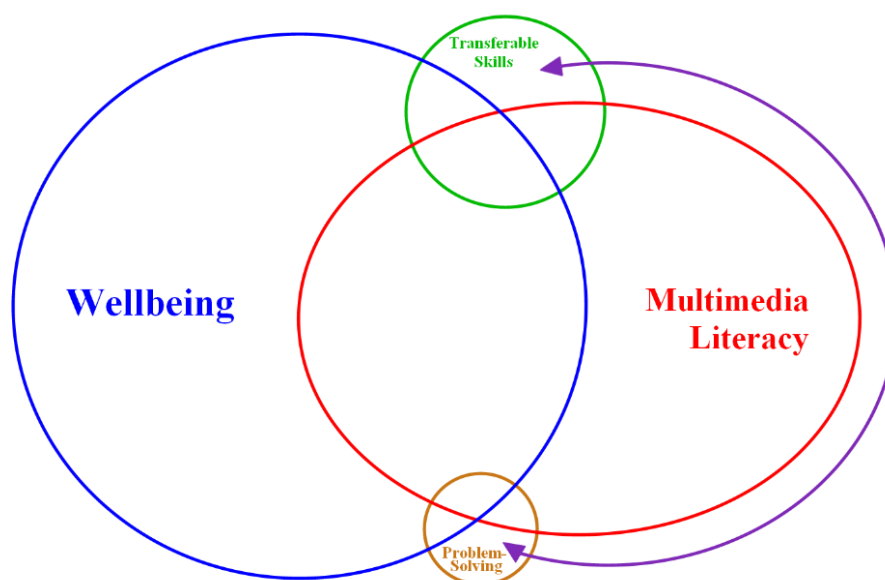
Although not mentioned earlier, video games are also used to help support the welfare of the gamers who play them. Queuethulu explained how he used the *Dark Souls* series of games to help cope with overwhelming emotions, by placing his focus on something else until he calmed down. Plastique used *Shovel Knight* to keep herself calm during a difficult time in her life, while Keith generally gravitated towards games that gave him comfort. Snappy admitted that video games helped manage her ADHD, while Dan got helpful tools and tricks through video games and their communities to support him during the day, as he had some mobility disabilities that make some tasks more difficult to do. In this sense, video games were useful in giving gamers a means to better improve their wellbeing in different ways.

Chapter 6: Results - Themes

As participants shared their narratives, they reported different skills and ideas that they acquired through video gaming. Through a process of comparing different parts of the varying stories together, four main educational themes stood out among the different stories. They were wellbeing, multimedia literacy, transferable skills, and problem-solving. These themes were chosen because of the distinct ways each form of learning presented itself in the stories. The theme of wellbeing was based on the reasons these participants played video games, while multimedia literacy pertained to how they were able to assess and infer information from what they played. As for the themes of transferable skills and problem-solving, they were chosen because they helped explain how the capacities acquired were expressed and applied in different scenarios. As such, all chosen themes were not mutually exclusive, their contents overlapping and interconnecting within the stories of each participant, as well as between the different stories. With that said, the most common and overarching theme present was wellbeing. From there, though multimedia literacy, transferable skills and problem-solving were present in some instances by themselves, the three other themes generally either overlapped between one another or with wellbeing. By taking quotes from participants that fit into the different themes and connecting these quotes to different themes based on the criteria they exhibit, it became easier to illustrate the learning that took place during, and as a result of, the process of playing video games. Figure 1 displays this interconnected nature of the themes, which will be explained through the succession of each theme in the next subsections.

Figure 1

The Interconnected Nature of the Four Themes



Note. The themes that are highlighted based on anecdotal observations of their presence within all the stories are presented within a Venn diagram. Wellbeing, being the theme with the most presence in all the stories, takes up the most space as the largest circle. Multimedia literacy is the second largest theme and can easily stand on its own, but still overlaps within wellbeing, as displayed here by the overlap of the circles. Transferable skills and problem-solving are two smaller but still present themes, and are mostly present in conjunction with either wellbeing, multimedia literacy, or with one another. The third type of overlap (transferable skills and problem-solving) is represented by the arrow connecting the two.

As illustrated, wellbeing has the largest presence within these stories, and can be found strewn throughout each theme in some ways. For this study, to further present this interconnected nature of the themes, some topics mentioned in the stories will appear in later themes, such as the process of learning lessons and morals through play appearing in the section of multimedia literacy; although morals could fall under wellbeing, being able to assess and analyze the information within the game through audio, visual, and other cues, requires an understanding of the different forms of media used.

Wellbeing

Wellbeing is the educational theme that is the most prevalent among the participants. For this study, *wellbeing* is the level of happiness and comfort, which can either be improved on their own or in a social environment. As such, interpersonal relations are also a part of the theme of wellbeing, as they connect to more social aspects of improving personal wellbeing.

Intrapersonal Management

In many instances, participants highlighted how video games helped with their mental wellbeing directly or indirectly, with indirect instances connecting to other themes. For example, video games could simply be for the sake of pure enjoyment, just as Snappy stated:

Sometimes, it's just OK to have fun. Sometimes you can just let things go and have fun.

You don't need to worry about things. And that's what racing is. I mean, you're going fast.

There's so many variables going past your head, you've got to collect these powerups to make you go faster. Or you could trip up your enemies and gain a lead in it. It's OK to have fun with things from time to time. You don't need to constantly, like, be a workaholic. Fun is acceptable. (Snappy Interview)

The ability to simply enjoy a video game is an important means to relax and should not be overlooked, as this can be a form of disengagement from situations that can be tiring or simply unpleasant. In fact, there were reported instances that involved participants using video games as a tool to help regulate their emotions in some way, such as Keith, Queuethulu and Plastique. Keith made this statement about video games: “Games have also helped me with emotional support, trying to cope with emotional trauma from when I was younger.” Queuethulu highlighted how videogames could help funnel his concentration into the game *Dark Souls*:

Whenever I get like a high anxiety thing, I start having a panic attack, I will pop in *Dark Souls*. 'Cause, while people talk about how difficult it is, for me, the difficulty and how slow paced the combat is in the original *Dark Souls*, that allows me to kind of focus my mind there. Which helps me, you know, calm down, lower my heart rate so it doesn't feel like I'm about to have a heart attack. (Queuethulu Interview)

Plastique also mentioned this idea of video games as a tool for decompression:

So, [video games] can help take your mind off things as a relaxation device, which it is. That can be a lot more effective than a lot of other things. And it is. I mean, it is a lot better than any other unhealthy coping mechanism. (Plastique Interview)

In two separate conversations, video games were brought up as a means to help manage intense emotions that could have been overwhelming. It was reminiscent of mindfulness practices, as it helped bring these individuals down from what they perceived as overwhelming emotions by having them focus on another task until they were able to face their stressors with a fresh mind.

Another direction that video games can take as an aid to achieve a level of wellbeing relates specifically to Dan's lived experiences. For Dan, his interactions with different video gaming communities helped him find different kinds of implements and options to improve his quality of life and assist him in different tasks. As he shared how he was not qualified to apply for disability benefits, Dan described the different physical problems that limited his movements and the solutions used to help accommodate for them: when he had an issue with using a keyboard and mouse, some video game community members suggested getting a mechanical keyboard and a mouse with a built-in number pad on the side; when he figured out what stimuli within games caused him migraines, he was able to coordinate with his boss to get a classroom with two sets of lights, so that he can keep his side of the room more dim; when he discovered a

type of grip for a mouse that helped him hold the item for longer periods of time, he looked for a whiteboard eraser with the same kind of grip. He also acquired a crutch in adulthood, as walking was a little more difficult for him due to suffering from a form of necrosis in his hip when he was younger. All these small changes that Dan made helped improve his physical wellbeing, and he admitted the following: “[I]f I didn't start recognizing ... the slight slight annoyances while I was gaming, ... I don't think I would have like even considered that I might also need like these slight helps in real life” (Dan Interview). In this sense, the experiences of playing video games have improved Dan’s quality of life.

Interpersonal Relations

There is also an interpersonal dimension to playing video games, which most of the participants have touched upon. Three out of the six participants associated having found their current friend groups with the social interactions that were inherent to participating in online communities linked to video games. Snappy stated,

I'm getting married because I experienced something with another person. ... I met her through a game that became a chat room to talk about and role play with other people on this game genre. Stayed friends with her for six years, got in a relationship and now I'm getting married to her. (Snappy Interview)

Similarly, Queuethulu also shared,

Well, I've met a lot of really close friends through playing video games. So, a few years back, I ended up having to cut my blood family out of my life 'cause they were dreadfully horrible people. And through video games, I kind of have a better-found family that's been more supportive and has helped me when like I was in the hospital and other things. (Queuethulu Interview)

Both Snappy and Queuethulu associated the culture of playing video games and interacting with the communities with important relationships that were formed in their lives. Likewise, Plastique also shared a similar experience, “I wouldn't have reconnected with my current best friend if it were not for video games. So, I don't think we would have connected in the first place if not for video games” (Plastique Interview). Video games offered a space for some people to connect with each other, which Plastique commented on: “there's the whole social aspect of it that can really help, because socially awkward people like me need, I don't know if it's the right word, a buffer” (Plastique Interview). All this points to the idea that video games can be used as an aid to help gamers gain social skills and connect with others, though it does not stop at this. As covered earlier, it was through playing video games that Dan was able to figure out different changes needed to help him live a more comfortable life. However, it was also the interactions within video game communities that he had that helped him steer him towards some of these changes, such as the mechanical keyboard and special number pad mouse. Alternatively, Pilot 960 made an observation about online video game communities:

You can share that appreciation of that information, but it can turn awry, if you're not careful. Because like I mentioned, you can have one or two things in common, which is the experience of the game, but you should not expect, especially with online relationships, that everything else would fit. (Pilot 960 Interview)

Pilot 960 also explained how he used video games to bond with his current friend group.

It's not just: “hey, we both played this game.” It's: “hey, I know you, I understand who you are. You're my friends, let me share one of the experiences I've had that I think you will enjoy.” It's making a game recommendation and saying, “hey, let's play this game together.” Uh, which is good time spent together bonding and appreciating something

new. What I think is the most meaningful is when you both find something new you've never seen before and you both discovered it at the same time and you, you're both like, "Oh my God, this is amazing." (Pilot 960 Interview)

He continued:

You can become a fan of the thing or the game at the same time and you can really get into it. It's that learning process of finding something you're both really appreciated and dedicated into that really puts people together really strongly. (Pilot 960 Interview)

These participants provided evidence of how video games and their communities could act as a virtual meeting place for gamers, giving them a chance to socialize and bond over shared interests. This can potentially evolve into more holistic relationships, just as any friendship made outside of the virtual scape. The difference here is that video games act as a medium for people who may have some difficulty interacting with others in most social situations.

Regardless of the reason for playing video games, it was apparent that every participant, conscious of this or not, had their wellbeing in mind. This included their appreciation of the video games and their built-in functions as a game, the application of these functions into their daily lives, their capacity to share their experiences and appreciation with other people, and the ability to use these functions as a physical mechanism to manage their emotions. When you also consider the reported benefits by half of the participants when related to ADHD, wellbeing related to the playing of video games become a natural connection to make.

Multimedia Literacy

In the context of this study, *multimedia literacy* refers to the ability of participants to analyze different forms of media within and related to video games, such as the audio, visuals, kinesthetics and literary, and draw meaning from them. This definition extends to the ability of

participants to take the meanings they perceived from their chosen source of media and reflected on those thoughts to create connections with their lived experiences. As Pilot 960 described it, “Games are a unique artform because you interact with a set piece that the designer presented to you” (Pilot 960 Interview). Because video games blend visual, auditory and interactive elements to the format, it becomes a multifaceted experience that gamers can manipulate and manage based on the limitations set by the creators of the game. Pilot 960 elaborated on this point:

So, when I say video games as part, I don't just mean they're unique because they're games. They're unique because you are still the one present and the one in control of some aspects, if a game really were to devolve. “Devolve”, I don't mean like it's worse, but if it were to cut aspects of gameplay until it just became a cut scene for three hours, then it does lose a bit of its value as a game, but the art is still preserved. So, I'm not saying a game is a better art, I'm just saying it's an artform. (Pilot 960 Interview)

By approaching video games as an artform rather than a simple game, the expectations set by them become more expansive. Pilot 960 displayed this appreciation for video games as a form of media that expressed messages rather than just a way to pass the time, which was a mindset that could engender deeper critical thinking when playing video games. However, even when not thinking deeply about the contents of the game, there are other things gamers can glean from their play. Queuethulu associated his developed vocabulary to the type of video games he has been playing: “Well, over the years, from playing for example RPG's, my vocabulary got a lot bigger. Up until a couple years ago, I didn't know that Chirurgion was...Which is like, I guess, a very old term for like a doctor.” RPGs are known for having a greater amount of text than most other genres of video games because of the level of detail of their plots, so having played many games of this genre would have exposed Queuethulu to a wide variety of words to enrich his

vocabulary. Similarly, Plastique stated “So, like video games are always in English and it definitely helped in my learning of the English language, along with English cartoons.” She admitted to not being a native English speaker earlier in the interview, and associated her current English-speaking skills partly to playing video games. She also mentioned learning about different cultures through the contents of video games:

Our generation is still very like, influenced by various Japanese stuff. Like anime and video games were developed in Japan and I realized that I know a bunch of various bits and pieces of cultural and mythological stuff about Japan solely from video games.

(Plastique Interview)

Plastique continued, “Someone plays *The Witcher*, then they will also learn about various like Polish myths and all that stuff.” Plastique drew attention to the cultural weight video games could have: Through them, it was possible to learn about different parts of various cultures, based on what each video games covered. Pushing this idea, it may also be possible to learn about what the culture of the creators of video games values based on the contents: Perhaps, a video game that championed bonds, friendship and community was made by a company in a country with those similar values, while a more capitalistic perspective in a game would come from a company situated in North America or Europe. In short, gamers can take the parts of a video game, or the sum of those parts, and learn to create deeper meaning about the world around them.

Wellbeing: Stories in Video Games

Moving onto stories within video games, they are a big part of the experience of playing, depending on the genre. Understanding a story is inherently a sign of multimedia literacy within the context of a video game. The gamer would need to properly assess the different kinds of

messages within the musical score and sound effects, the design elements of the characters and environments, and the plot of the game itself, to then analyze and create meaning, when taking all the different messages into account in conjunction with one another. From this meaning and through a metacognitive process, gamers can gain an appreciation for the messages within the video game they have played and create a greater experience for themselves from it. What is interesting to note when taking into consideration the process of analyzing and creating meaning is that every participant has mentioned elements of plot or character, at least in passing, as a sort of comfort or encouragement. For example, much of Keith's appreciation of video games came from the characters within these games, which then pushed him to expand on his views. He stated:

Well, sometimes. Sometimes it's easier to learn about a character than to think about yourself. And, as bad as that sounds, sometimes it's better for me to start that way.

Because sometimes, I can find a bit of myself in that character. Cause I'll like, I'll read their story or listen to what they have to say and I'll hear something and I'll be like, "huh, I think I feel that," or "I can relate to that too." And that draws me closer to that character.

(Keith Interview)

This idea of connecting to a character to better understand personal experiences and the self is echoed in other interviews. Queuethulu also shared an experience similar to what Keith described:

One sticks out, Locke Cole from *Final Fantasy 6*. He spends a chunk of the game trying to bring back his, I guess, dead girlfriend. But eventually, he learns to let her go and because of it, he gets stronger as a person. Just that entire being able to, I guess, let go of

problems or parts of the past that were holding him down. He got better and I started doing that and overall, I've gotten a lot healthier over the years. (Queuethulu Interview)

Through experiencing and analyzing what happened to this character, Queuethulu was able to learn something valuable to help him “get healthier” over time. Plastique also experienced something similar, but with a different game:

The story from *Silent Hill* helped me in terms of understanding that my feelings aren't really black and white, you know. Like the way James killed his wife but he still loved her. So, like the same way, I had to leave a person behind both for my sake, for my safety, and for my mental wellbeing and for others. (Plastique Interview)

Keith, Queuethulu, and Plastique shared the experience of finding a character in a story to learn from them. Through video games as a medium for art, each gamer was able to follow the stories of characters that they were able to connect with, using their growth as a means to reflect on personal strengths and weaknesses. This kind of thinking blended multimedia literacy with wellbeing, as they used their ability to analyze and interpret a piece of media to improve themselves emotionally and mentally.

Pilot 960 had a similar experience when it came to the story of the game, but for him, it was less about self-improvement and more of a way to better understand varying views and expand a person's scope. He stated:

If you're willing to, you know, take the time to actually discuss [what happens in the game], that's very meaningful. There are so many aspects of the game that interact together, so you have to understand all of them in all their interactions to say, “I like this.” And someone says, “well, I don't like this. Here's why.” And then you can have a better perspective of who they are, what they appreciate, what they like to spend their

time doing. And for yourself, where if you disagree with someone, you can say that's fine, because we disagree doesn't mean we're not friends. (Pilot 960 Interview)

Video games, as a medium, become the basis of discussion between different perspectives, which creates new meaning and understanding between people. By approaching playing video games as another means to better connect with others, Pilot 960 analyzed the game in a multimodal angle and used this kind of analysis as a springboard for discussion, both themes of multimedia literacy and wellbeing being addressed.

Moving onto Dan, it was mentioned previously how video games helped him find accessibility tools for other tasks that he would do in the day, like typing on a computer or using a whiteboard eraser. He also connected with different aspects of a video game's plot to better appreciate the messages. However, he mentioned how a major theme of games could also have a profound effect on a community. Dan mentioned *Warframe*, sharing the following sentiment: "And it's really rare to see the thing that actually empowers them is the community and the cooperation and the mutual support between two victims that found strength in each other to actually stand up to their abuser." To come to this conclusion, two processes need to happen, one of which is the ability to analyze and interpret the information that the game's plot gives you directly or in the form of hidden secrets scattered around the different levels and areas. The second process would be to interact with other gamers who have experienced the game. Dan stated that a rule most *Warframe* players have was to not spoil the ending, so that new players of the game could fully engage themselves with the story and enjoy its twists. The thought of an entire community agreeing to not divulge any details about a game after fully experiencing it shows the connection between the two themes of multimedia literacy and wellbeing in this experience as well: The ability to understand the plot is paired with the belonging one can feel

with knowing the truth of what happens. This, along with how Dan portrayed the community of the game as welcoming and helpful, shows the multimodal learning of this experience.

Snappy, when commenting about video game stories, noted the moral aspect of some video games when it came to the stories present in them, and how video games dealing with heavier topics were impartial. She shared that “games [were] created for a wide audience, not just for a specific group of people. But there [were] specific groups of people who specifically like[d] certain games. It's just a byproduct of games. They couldn't be biased.” This perspective on the unbiased nature of video games, that they are created with the largest audience in mind, creates a space for gamers that allows for discussion in a more abstract and objective way. Acknowledging that video games have perspectives that will engage certain audiences forms a new layer of understanding of the different kinds of communities and people that someone who engages with a piece of media can meet. It takes a deep enough understanding of different games and their values to come to this kind of conclusion, while also relying on a greater understanding of the deeper underlying topics and problems such games are tackling.

What it all comes to is how different elements of story, be it characters, plot, or the morals that come from the plot, create a multimodal space for learning among gamers. As such, whether a gamer gravitates to one aspect or another of the video game's storytelling, the power behind this multifaceted way of telling a story allows gamers to be fully immersed in the game and gives them space to reflect, draw conclusions, and discuss with other individuals.

Wellbeing: Gameplay in Video Games

There is also another aspect of video games that can fit within both multimedia literacy and wellbeing: The gameplay aspects of video games also have a multimodal value. Many of the participants also associated some of their learning to the gameplay mechanics in video games.

Keith found comfort in some video games because of certain gameplay mechanics present in the game. One game he mentioned was *Pokemon Go*, where he stated:

[*Pokemon Go*] comes with its own achievements and rewards. It makes you go outside, to want to get these items and these creatures, and you get the little trophies and the items from it. Which, in turn, helps me develop that want for the goals, the trophies, and making myself do things ... that are good for myself. (Keith Interview)

This led into the kind of value he perceived in the game:

I think it's giving me the push that I need [to go outside]. Because, before that, I had trouble just standing outside. Now, I can actually go to places, go to the park and just do all different kinds of things that I didn't, I couldn't do before. And I'm hoping that eventually, you know, I won't need that. But for the time being, I'd say it's a pretty good place holder. (Keith Interview)

This one example showed how Keith relied on how the gamer interacted with a video game to help him be more active. Similarly, *Animal Crossing* filled a certain role as a reminder of how relationships worked:

But seeing like this little town and seeing all the little animals being around the character, and then the character communicating with the animals reminds me that I also have to reach out to the friends and family. Because the animals, most of the time don't come to you until you've talked to them first. (Keith Interview)

These are connections made solely on how he interprets the media that he is interacting with, both a sign of multimedia literacy and wellbeing. Keith used video games as a tool for self-improvement and comfort by creating connections based on his understanding of the media form. In a similar vein, Snappy, Queuethulu, and Plastique all connected the immersive quality of

video games and their worlds to the experience they had as individuals with ADHD and how video games fully engaged their minds as a result. In Plastique's interview, she mentioned the idea of video games being similar to meditation, based on a video she had seen circulating online. This description resonated with her whenever she played video games. She described it as such:

There was recently a video going around of this Buddhist monk talking about video games as a sort of meditation. Compares [it to] how you're focused on a game, and you forget everything around you and you're in the moment. He compares it to how meditation works. (Plastique Interview)

During the interview, she admitted that, while she was not officially diagnosed with Attention-Deficit/Hyperactive Disorder (ADHD), she recognized many of the symptoms in her behaviour and lived experiences. This was interesting, as she remarked:

This is where video games come in [when it comes to concentration], because they keep my mind occupied. Because, it's a very broad experience because it's not just a movie. It's not just a thing you do with your hands. There's a lot of parts, territories. Parts that could go into a video game. And the most specific thing that sets video games apart from other types of media is, like, very cool interactivity because you have to interact, you have to actually put in the work into the game. You know, in order to experience it and to have fun and to do all that. (Plastique Interview)

This level of interactivity that enables people to be engrossed in a game fully while also being affected by ADHD is echoed by Snappy and Queuethulu. Snappy expressed it as such:

They engage every part of my ADHD so fully that I am happy with them so much. Like the exploitative dissociation of running through a world as a different person than who

you are. That's engaging the colors, the shapes, the sounds are not overwhelming and they don't hit me in the face like a punch to the gut. (Snappy Interview)

She explained how she embraced the different facets of video games, and how the experience separated her from the reality around her. This was expressed in a positive light, similar to how Queuethulu shared his experience:

When I was younger, like probably still, I still have [ADHD]. I guess I feel like, because of stuff I've played, I've kind of learned to kind of focus on what I need to do instead of being all over the place. So, I feel like that's probably why I can do that now. I don't think I would have been able to do this like 15 years ago. (Queuethulu Interview)

Queuethulu connected his ability to better focus on other tasks with having played video games, which also related to the idea of video games being able to fully engage people with ADHD, due to the multiple ways individuals interacted with these video games. This was due to the visual, auditory, and gameplay design choices that were made with immersion in mind: Video games are made to fully entrance the gamer so they can play for longer. Although that can be unhealthy in certain situations, the fact that video games allow for people afflicted with ADHD a chance to better focus all their energy into a single goal shows their constructive power. This thought process creates room for video games as tools to help support mental health for individuals with varying exceptionalities, like ADHD.

Dan and Pilot 960 also made connections between gameplay and real life. For Dan, these observations are made through the lens of representation, where he stated:

So, sometimes I'm like "why is this woman walking so slowly," like in the recent *Amnesia*? And then I was, "oh wait, that's how I work. I work this slowly in real life. God this has to be annoying. Look, I feel you." I was like, "why? Why can't you run?" And

then I'm like, "oh wait, that's because you know who doesn't work and this doesn't work."

(Dan Interview)

This connection was followed by a broader explanation:

It's kind of like an epiphany while playing. Which is another reason why I think diversity is not just of like you know, skin color or sexual orientation. The diversity of ability in games is also important, 'cause like a lot of people don't know. So just so that people see themselves but also to help people realize, "oh, this isn't a problem with me, it's just something that happens to people," you know? (Dan Interview)

This connection also takes the ability to analyze the type of media being used, as recreating the experiences of someone disabled would not be as simple as using sound design or visuals alone:

It takes limiting certain aspects of gameplay or incorporating unique gimmicks to recreate physical or emotional limitations, like making the player character slower than the enemies, or dimming the vision of the player. Based on that analysis, the gamer also needs to push into deeper thought to create real-world connections based on those limitations and gameplay design choices. This form of representation, as Dan stated, helps people better understand different lived experiences in a way that more traditional forms of storytelling cannot, as gamers get to live through something remotely similar. Pilot 960 made connections between the lived experience of playing video games and the real world through the formation of morals and lessons that he garnered from each game. He brought up two cherished video games. For the first video game, *Journey*, he shared:

What I learn from [*Journey*] is interpreting your experience has value. That can be through a game, that can be through school, that can be through relations that you have with people. But when you take the time to think about what you've lived through and

what that means for you, that has a great value, because you can reflect on these things, and you can learn from them in a more generic sense, so that's more the abstract part.

(Pilot 960 Interview)

He also talked about *Celeste* in a similar fashion:

Because [*Celeste*] pushes you to say, “try again until you get it.” And it doesn't matter how long it takes, because what matters with the iterative process is that you learn. Every single time, you make a mistake and you keep pushing forward. And what I realized that was really big for me: you don't need to feel bad about failing 100 times, as long as you progress, as long as you're not hitting yourself against the wall. So, at times, you might be frustrated and be like, “I can't get through this.” If we talk about the game: “I can't get through this screen.” You get really frustrated. Maybe now is a good time to step back.

(Pilot 960 Interview)

It is especially apparent in the second quote that Pilot 960 refers to how the gameplay helps convey these messages that he has learned. Just as with the other participants, to understand these kinds of lessons, he would have first had to analyze what the different visual, auditory, and gameplay design choices mean for the overall experience of the game. Based on that, he would have had to put that kind of reasoning into his own perspective and figure out what it meant for someone who played the game. These lessons that he learned from playing video games end up creating a framework for a growth mindset, a healthy way to approach any difficult task.

Transferable Skills

For this theme, *transferable skills* would refer to any skill that has been developed while playing video games and is applied to everyday scenarios. Hence, the participants who practiced a form of art professionally and reported that video games helped with their skills would be

learning capacities related to transferable skills and multimedia literacy. However, there are still capacities that are useful in other settings that can be developed from playing video games, according to Dan, Queuethulu and Plastique. Dan mentioned:

I mean, for example, some of the things I definitely learned was communicating some things a lot more clearly that especially happened with MMOs. Oh, because I've played MMO's since the early 2000s. Like 2006 or 7 when *World of Warcraft* came out about that time, so that definitely helped me. (Dan Interview)

Being in a situation where concise clarity was necessary to play well in a game, Dan was pushed to improve his spoken English. He also mentioned FPSs, stating how “a lot of people notice[d] people who play[ed] first person shooters or shooter of any form tend[ed] to drive better because they notice[d] a lot more things at the same time.” He made the claim that, because he played FPSs, Dan noticed different drivers moving lanes and other details very quickly while his mother was driving. Both skills, a mastery of spoken English and a quick eye for detail, are very valuable traits that help in the workplace. In a comparable train of thought, Queuethulu also mentioned the realism of the *Gran Turismo* series:

I learned a lot more about cars from playing the *Gran Turismo* series about engine timing and stuff like that. 'Cause it's a pretty intensive car simulation and a lot of it is very realistically done. In fact, I think that's what they were going for, so that helped me a lot when I was a teenager learning about cars and stuff. (Queuethulu Interview)

Knowing different parts of a car is part of a skillset that can be very valuable for certain kinds of employments that would require people to manage their personal vehicle or help manage others. Although these capacities seem either abstract or niche, the fact that they can still be useful in a

professional setting or provide a glimpse in various fields shows their value as tools for transferable skills.

Moving onto the overlap between the theme of transferable skills and the other themes, some of the participants have profited from practicing visual art. In fact, three out of six participants explicitly mentioned that they were either going into a field related to animation or the arts, or have earned money with drawings. Keith, Dan, and Plastique shared their experiences on how video games also inspired them to improve their abilities to create visual art. Keith made a statement about creating art:

If you want to draw something, whether it just be like for yourself, a character, like something belonging to a show or a video game, or maybe even something that you created, usually it's inspired off of something. And when you, when I'd find that one specific thing, character, object that inspires me, that was, that would be, that would inspire me to make the drawing. (Keith Interview)

Plastique also mentioned:

Obviously, I guess in terms of my creativity and my artistic tastes, it's how the visual design works in video games and how much care is put into these worlds to build them and to present them. It can be really inspiring. And yeah, it can, really I think, influence my work if it's related to video games, so there's that. (Plastique Interview)

Both spoke of the influence of media in their proper right. With most media, being able to consume it critically can create new ideas and push people to try new techniques or experiment. However, there are particular situations where all three have used video games as a reference to improve their craft. For Keith, he stated:

Cause sometimes it'd be like, I wouldn't actually want to look up realistic images. Sometimes, I would want to see what's inside of a video game first and see what has already been done and thought of. So, I would kind of give it a look and see if I can get some inspiration from that. (Keith Interview)

Dan also expressed similar sentiments with colour:

But like, since I started playing multiplayer games with customization like *Warframe* and *FF15*, I will go into *Warframe* and then I just stop because I can see somebody else's *Warframe* and I never considered that color combination [for art]. (Dan Interview)

He continued:

I also didn't start using limited palettes in my art until I started relating it to video games where it's like, you know. I would notice this is more like games, titles come into play. Or like for example the screen is cramped and full of colors and there's too many of them. And then I was like, "Huh? Maybe if I do this, maybe if I desaturate my art, it will also look better." (Dan Interview)

Plastique also showed an appreciation for different artistic directions, even if she did not particularly care for them, as shown with this statement:

So yeah, I can recognize the value in [a limited colour palette]. And I can recognize [*Shovel Knight*] as a well designed to video game in terms of, you know; it's visually clear what's happening, what's going on. It's also visually interesting, but it's not like ground-breaking, to me at least. (Plastique Interview)

These different yet similar views on video games as resource material to learn about and assess visual art are present, which blends the theme of multimedia literacy with transferable skills.

Through immersing themselves in video games as an artform, Keith, Dan, and Plastique have expanded their artistic scope to better produce art.

Problem-Solving

In this study, *problem-solving* is considered as a process split into four different parts: perceiving that there is a problem, identifying what it is, thinking about the best solution for the problem, and taking action to solve the problem. Because of the fluidity of what can be considered a problem to be perceived, many instances that show the development of problem-solving skills can relate to any of the other themes, such as learning healthy coping mechanisms related to mental health or getting past hurdles in the workplace. If we were to look at the idea of stories and how each participant in this study interacted with the stories within video games, we could interpret the lessons that they drew from their reflections as a form of problem-solving. For example, when Keith, Queuethulu, and Plastique described how they related to specific characters that inspired them to improve, these instances were qualified under the themes of wellbeing and multimedia literacy. However, we could also connect this kind of attachment and learning as a form of problem-solving: if we interpret an individual's shortcomings as a problem, then the process of analyzing and incorporating the lessons learned and observable traits of the appreciated characters can be part of finding a solution to said problems. Similarly, the connections Snappy made between video games and morality is not only related to wellbeing and multimedia literacy, but can also be perceived as a form of problem-solving. Snappy related the act of being given different moral dilemmas and trying to find the solutions within the scope of the game to get to the more fulfilling result. This balancing act between understanding and acting upon makes Snappy's perspective unique among the other participants, using video games as a personal thinktank and understanding how different games can attract different kinds of people.

In fact, the types of meaningful conversation that can happen because of the different perspectives that gamers adopt due to video games can also lead to a form of problem-solving, whether the problem is the need to better understand the people around the individual or to fully comprehend a more difficult topic tackled in the discussed video game. If the conversation leads into some more unsavoury topics, then this becomes good practice to navigate tougher conversations and to learn to find a consensus between individuals who do not necessarily see eye to eye, a very important skill to have in the workforce. In summary, video games as a medium for intensive and particular conversations create this environment to practice analytical and interpretive capacities, while also giving a space to learn how to navigate more difficult conversations, an opportunity that cannot always be present naturally.

On another note, Snappy also provided an example of problem-solving in a workplace environment with one anecdote during her time working at a T-shirt shop. She associated her developed capacity for spatial reasoning in her story to playing puzzle games, which were games that relied on different thought-based problems as part of the core gameplay mechanics, along with the time she spent playing varying video games that used similar problems. She described it as follows:

I used to have to rearrange a backroom at a T-shirt shop I used to work at, and it took-- We had limited shelf space and it took some time to figure out how we could really like consolidate space and make it look neat and orderly. But we figured it out and we were able to put different problem-solving skills in different viewpoints to use there. (Snappy Interview)

In this situation, the spacing issue at the T-shirt shop metaphorically became another puzzle in a video game. Due to the spatial skills she had developed through varying puzzle games that dealt

with similar spacing problems, she was able to apply what she learned in a real life situation and solve the issue.

In the end, the overlap of themes creates a more holistic learning, where participants engage with and interpret their experiences playing video games through different lenses. Each gamer is able to relate with the contents and gameplay of different video games, thinking more critically of the meanings behind them and drawing out different capacities in the process. Whether video games are approached as an artform with story or an elaborate tool to push gamers' capacities to beat the game, there is a metacognitive process that generates a greater experience than the individual parts that can be expanded upon onto real world practices.

Chapter 7: Discussion

The goal of this study was to gain an understanding of whether adult individuals who play video games (adult gamers) for enjoyment perceive their video game play as an avenue of learning, and if this was the case, what they believed they were learning through playing video games and how it has extended into other real-world situations. Gee (2007) and Devlin (2011), researchers in two separate fields, explained the potential of video games as inherent learning tools that could be used to teach any subject. Much of the previous research focused on academic subjects in a scholarly setting, with a sample population being either students in elementary or secondary schools (Barab et al., 2009; Cipollone, 2015; Kellert, 2018; Seidel et al., 2019; Sherry et al., 2019; Tüzün et al., 2019), postsecondary students (Mahood & Hanus, 2017; Smith et al., 2020; Vásquez & Ovalle, 2019) or on educators implementing video games in the classroom (Bell & Gresalfi, 2017). These studies mostly focused on a clear goal for the learners when playing video games when applicable, such as *Minecraft* as a powerful teaching tool that engages its players through play, creation and information sharing (Nebel, Schneider & Rey, 2016), or the acquisition and retention of a larger vocabulary in language learners (Vásquez & Ovalle, 2019). As such, there is not as much research on the intrinsic educational value of video games from the perspective of adults who are literate in the language of video games and frequently play them for enjoyment.

When analyzing the results, the themes were interrelated most of the time when assessing the reported experiences of each participant. For example, topics of wellbeing would overlap with multimedia literacy, transferable skills, and/or problem-solving. In this sense, the data suggested that the simulated scenarios and information video games have presented to the participants have helped them learn and develop all sorts of different capacities, including efficient and socially appropriate communication skills when playing with other gamers online,

critical thinking when trying to solve different obstacles during gameplay, assessing and creating meaning when analyzing characters and plot within stories of varying complexity, and healthier coping mechanisms when faced with strong emotional situations. These are capacities that can overlap with different scenarios in a person's everyday life, from collaborating with coworkers and employers, to being properly equipped to face instances of widespread misinformation, to a greater grasp of spatial awareness.

The Struggles and Solutions

There have been some struggles during the course of this study, including the limitations that the COVID-19 pandemic had placed on the population. However, due to some of these limitations, different opportunities appeared as well. Namely, the push towards research done over the Internet made room for a unique interview experience and opened this study's scope to a wider audience. Since video gaming can be done online and with a wider variety of people from different cultures now due to genres like MMORPGs, this online space for the interviews seemed like a logical approach for the current social climate and the demographic of this study. However, it was only when approaching the representation of the themes within the study that the complexity of the nature of learning playing video games appeared. In truth, not only were the themes difficult to pinpoint in a coherent way, but the placement and presentation of these themes were also an issue. What was important to articulate in this study, based on what the participants described, was the interconnectivity of the themes to create a more full and enriched learning experience.

In this sense, how participants learned through video games was more direct. From the trends seen within the six stories, the learning was done either by playing a video game or by interacting with others who have also played the video game in question. This, in some way,

echoes Rogoff's interpretation of sociocultural theory (2003), where video gaming communities can be considered having their own culture in this context. Dan's experience is a clear example of Rogoff's sociocultural theory in practice, with having learned about many accessibility tools and tricks through discussion with other members of a community of gamers, including his spouse's input when learning about macros. Not to mention, four out of six participants reported having created some kind of bond with someone through video games, whether it be a community with Dan, a fiancée with Snappy, a found family with Queuethulu, or a best friend with Plastique. Pilot 960 also uses video games to strengthen his bonds with his existing friends. The subsequent learning that happens from the presence of all these different connections can be explained through the lens of Rogoff's theory: Video games become the cultural tool that helps create conversation and bridge the different perspectives of the different members of a group; the choice of playing and sharing in the experience of video games allows all members of the friend group to settle into different roles of the experience, between those who play, watch, know more about the game, and discuss the events of the game. Through the shared experience of video games and the conversation that comes from having these shared experiences, gamers create a community where learning can happen.

The nature of this kind of learning is why representing what is learned while playing video games can present challenges: the process creates a kind of holistic learning, where different subjects and concepts interact and connect, and the understanding of what is learned becomes deeper and easier to understand. This process may contrast how learning is done in schools, where the curriculum is split into subjects and the connections made between subjects is not inherently ingrained in the learning: cross-curricular lessons are not mandatory and are left at the discretion of the educator teaching the material. When first trying to separate the learning that

participants did during video game play, it was already difficult to decide what could be considered a proper theme and how to define it. Some themes were dropped as separate categories and merged together when the overlap felt too much, while other subjects felt too broad to be incorporated. Defining each theme as distinct became more challenging, because the more I tried to separate the themes into distinct categories, the more overlap I could see forming between the themes. Eventually, the idea of having the themes be distinct but fluid stuck, meaning that the overlap of themes was a natural process of learning and needed to be expressed as such. This still left the issue of how to present the themes in a way that was not too confusing to the reader. Initially, I attempted to create a section for each of the four themes, then write a fifth section about all the overlap that occurred. But that only made things more convoluted for me and anyone who read through the themes. What I settled on was presenting the themes in a way that they build off one another. With the help of Figure 1 illustrating the interconnected nature of all the themes, the intention was to have the biggest theme, which was wellbeing, go first, followed by the second largest and so on. In subsequent sections after wellbeing, the goal was to describe how the theme was present alone, if at all, then see how it connected with the previously mentioned theme(s). This way, the connections became easier to follow as I added an extra layer in each section. Hence, the intent of this process was to help elucidate the complete view of learning described by the participants of their video game play.

What This Means

With the different themes presented in a way that showcases how participants learned through video games, it is apparent that, when taking into consideration Rogoff's interpretation on sociocultural theory, the claims made by Gee (2007) and Devlin (2011) have value. Gee spoke about "semiotic domains" as sets of meanings and capacities, that could overlap onto

varying situations and be used in different contexts. When looking at what each participant shared, it was apparent that each gamer took their acquired meanings and capacities that were cultivated through playing video games and interacting with their respective communities, and applied them to situations outside of anything related to their play. Examples of this included Queuethulu expanding his vocabulary and developing his social skills through play only to use what he learned in his previous job as a bar tender, and Dan learning how to create shortcut commands in one of his games only to assign shortcuts in a similar fashion for the programs he used at work and in art to speed up his process. In fact, many of the observations that Gee made in *What Video Games Have to Teach Us About Learning and Literacy* (2007) seemed to resonate with the findings of this study. In chapter 3, Gee explained projective identities, which was the process that allowed gamers “the capacity [...] to take on [a] virtual identity as a real-world identity” to learn “new values and ways of being in the world based on the powerful juxtaposition of their real-world identities [...] and the virtual identity as stake in the learning” (p. 63). Chapter 4 introduced pattern recognition and intertextuality, which was “[s]ituated meanings [leading] to real understanding and the ability to apply what one kn[ew] in action” (p. 109), and chapter 6 spoke about cultural models and the ability to reflect on them, putting the linear models of education in schools into question. There was even the concept of learners as insiders in video game present in chapter 7, which “fit well with inquiry-based classrooms and with workplaces that encourage[d] workers to think proactively and critically” (p.208), mentioning the capacity to create additional content and brand-new video gaming experiences by the gamers themselves. The theories Gee elaborated on were illustrated in this study, as participants made connections between the capacities they have acquired in video games, and the capacities they show in other situations, such as Keith, Dan, and Plastique, using the design

choices in video games to improve on their art, and how every participant used aspects of story or the characters within their games to learn lifelong values. This, along with how Devlin (2011) described this “Recife factor”, which “g[ave] the mathematics meaning by embedding it in a real context—albeit where that ‘real context’ [was] within a virtual world and [did] not have to resemble anything in the real world we live[d] in” (p. 175), reflect the overarching notion that this study has tried to convey: That living through the experiences video games offer may have a profound effect on the learning of gamers who are knowledgeable in playing video games.

One example that reflects this profound effect in the study was from Queuethulu, who had expressed his difficulty in communicating and connecting with others. Queuethulu discussed his poor relationship with his blood family, as well as how different online multiplayer video games allowed him the environment and opportunity to engage with other video gamers.

He stated:

My fiancé, I met playing *World of Warcraft*. A bunch of my friends were [met] through games like *Left for Dead*, and *Final Fantasy 14* was a bunch of them. Just through playing things where cooperation and teamwork were a big thing. So, communication became kind of very big deal. (Queuethulu Interview)

The virtual world of these video games gave a backdrop for Queuethulu to interact with other individuals with similar interests, in a possibly lower risk space. The possibility to practice interpersonal capacities related to communication in a meaningful way that encourages the formation of relationships is a soft skill that is useful many different circumstances of daily life. This is a kind of learning that can be considered significant.

Some of the previous studies highlighted the need for teacher guidance and support when trying to apply them to academic subjects like geography (Bettinger & Budke, 2019) and

mathematics (Kellert, 2018). However, what appeared to have happened was that participants took what they needed from the video games they played. Keith used video games mostly as an aid for coping with different emotional needs that were not met, with relying on game mechanics or character stories to guide and comfort him. Dan learned, through his experiences within the games he played and through interacting with the community, how to better adapt to the physical limitations of his body, finding different tools to help him complete tasks like a special keyboard and mouse, or a cane, and different tricks to improve his workflow and product, with the use of macros or different colour palettes. Snappy gravitated towards the social aspect of video games and found valuable friendships, while also discovering ways to fully engage herself in something and learn different values through the stories. Pilot 960's experiences were more abstract in how he deeply analyzed the lore and meaning of video games as an artform to take away his own set of values, while also using video games as a means to connect with his existing friend group through shared experiences. Queuethulu was able to ease himself out of his traumatic past and learned how to better communicate with others through practicing his social skills, expanding his repertoire of literature, and developing his vocabulary. Plastique, more than anyone else, gravitated towards the visual art aspect of video games, which led her to connect with specific kinds of games, while also appreciating other genres as another piece of art with its own strengths. It was also apparent that, for Snappy, Queuethulu, and Plastique, who had self-reported as having ADHD, video games had another role of engaging them and helping them manage their emotions when the situation called for it. All this to say the following: Each participant had needs and curiosities that video games helped in resolving. This echoes in part the emotional aspect of learning, where narrative-rich environment in video games can have profound influences on the gamer, as Mahood and Hanus (2017) presented. However, the

findings can go beyond that: Video games can be used to help fulfill needs that each individual gamer may have. The needs can overlap with one another, but this creates a more curiosity-based learning, where video games seem to be the springboard that pushes gamers to explore their inquiries beyond the video game simulation and into the real world.

Limitations

While this study does expand on the educational power of video games as a self-guiding and learning tool, it still has some limitations. First, this narrative inquiry study was conducted with semi-structured interviews. Although this way of conducting interviews helps guide the conversation while giving room for the participants to express their stories, it is possible that my biases were reflected in the questions that I asked. As the researcher asking questions to guide the conversation, there is no guarantee that my preconceived notions did not slip into the conversation between different interviews. Second, the demographic chosen for this study were adult gamers who have plenty of experience with playing video games. As such, the results found here might not apply to different demographics, such as adults who are not familiar with the semiotic domain of video games but still wish to develop any of the reported capacities in this study, or children who are familiar with such semiotic domains but are at a different developmental stage from adults. Finally, just as some participants reported on having ADHD, disclosing their medical record was not a part of this study. As such, it is unknown who may have been diagnosed with some kind of health issue, and how that would have influenced their experiences with video games as opposed to individuals who are neurotypical.

Avenues for Future Research

Based on what has been discussed about the holistic learning of adult gamers through video games, there are a few research opportunities that can stem from this study. One topic that

comes to mind is the connection between learning through video games and reported exceptionalities. As some of the participants disclosed having ADHD, and one participant having mobility issues, the playing experience of these participants would have differed from individuals without these limitations. Examining the stories of individuals who are adult gamers, who also experience a specific exceptionality, may show trends on how certain kinds of gamers interact and learn from video games. Moreover, although this study focused on the intrinsic learning experiences of gamers playing for fun, these gamers were mostly adults. Extending this study onto a younger or older demographics could demonstrate either an overlap in what can be learned or display different learning outcomes based on age. A final subject of interest that could relate with certain findings of this study is the connection between video gamers and loneliness. There is a growing body of literature suggesting that younger generations are more likely to report frequent feelings of loneliness (Cigna & Ipsos, 2018; Statistics Canada, 2021), and many of the participants have mentioned forming different kinds of relationships or reinforcing their existing ones through video games. Focusing on how playing video games could support the formation of friendship, which may help mitigate the effects and feelings of loneliness, would be an interesting next step from this study.

Conclusion

Looking through the lens of the interpretation of sociocultural theory proposed by Rogoff (2003), the possible connections between learning and playing video games proposed by Gee (2007) and Devlin (2011) were displayed in this study. This is reminiscent of what Gee disclosed in his final chapter: “the argument ... is not that what people are learning when they are playing video games is always good. Rather, what they are doing when they are playing good video games is often good learning” (p. 215-216). This study aimed to shed light on what adult gamers

were learning when playing video games for enjoyment, based on their own perception. Many previous studies focused on learning observed in a controlled setting like a classroom, and did not delve into what participants recognized as their learning through play (Barab et al., 2009; Bell & Gresalfi, 2017; Cipollone, 2015; Kellert, 2018; Mahood & Hanus, 2017; Seidel et al., 2019; Sherry et al., 2019; Smith et al., 2020; Tüzün et al., 2019; Vásquez & Ovalle, 2019). This study shows that, through playing and interacting with other gamers, what adult gamers use and learn from video game can be categorized into four interconnected themes of wellbeing, multimedia literacy, transferable skills, and problem-solving. It also shows that video games cater to different needs based on the gamer playing them, be it for emotional comfort and coping, making or bonding with friends, or using games as a medium for deeper discussion on topics that would not normally be broached.

This study is a step towards better understanding the educational potential of video games as a tool for learning. Since “[a] good many of the best commercial video games are already state of the art learning games” (Gee, 2005), understanding the perceived learning of the adult gamers who play them will help inform educators of the possible capacities the gamers may have developed. This also acts as a stepping stone for future research in the field, focusing on video games as a tool based on a self-guided, intrinsic appreciation of learning.

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Appendix A

Quotes from Keith's Interview

Participant: Keith	
Wellbeing	Problem-Solving
<p>1) “And not just that, [<i>Pokemon Go</i>] comes with its own achievements and rewards. It makes you go outside, to want to get these items and these creatures, and you get the little trophies and the items from it. Which, in turn, helps me develop that want for the goals, the trophies, and making myself do things ... that are good for myself.”</p> <p>2) “Not quite yet, but I think it's giving me the push that I need. Because, before that, I had trouble just standing outside. Now, I can actually go to places, go to the park and just do all different kinds of things that I didn't, I couldn't do before. And I'm hoping that eventually, you know, I won't need that. But for the time being, I'd say it's a pretty good place holder.”</p> <p>“Well, I don't know if this is a direct answer to what you're saying, but games have also helped me with emotional support and had trying to help cope with like emotional trauma from when I was younger, a lot of different games.”</p> <p>“But what it all comes down to is that you talk to these little animals that are living around you. What that reminded me of, you know, out of the game, is friends and family. Because I would often feel like either the friends and family is too small, like they're not even there, or that they're too far away.”</p> <p>3) “But seeing like this little town and seeing all the little animals being around the character, and then the character</p>	<p>1) “And not just that, [<i>Pokemon Go</i>] comes with its own achievements and rewards. It makes you go outside, to want to get these items and these creatures, and you get the little trophies and the items from it. Which, in turn, helps me develop that want for the goals, the trophies, and making myself do things ... that are good for myself.”</p> <p>2) “Not quite yet, but I think it's giving me the push that I need. Because, before that, I had trouble just standing outside. Now, I can actually go to places, go to the park and just do all different kinds of things that I didn't, I couldn't do before. And I'm hoping that eventually, you know, I won't need that. But for the time being, I'd say it's a pretty good place holder.”</p> <p>5) “Every time I come back to the game in terms of like actually progressing in the game though, chances are, I'll probably be more interested in using that specific character or going after that specific character, depending on what I'm playing.”</p> <p>6) “Yeah, I think it does. Yeah. I strongly believe that finding that one specific thing whenever doing anything really, it can help motivate you to continue doing it.”</p> <p>8) “There also needs to be room for games that aren't just happy, but they're also not just sad either. Some games will put that little bit of sad in there, and if I can relate to that sad and then I can get through it and then feel okay in the end, I'll go back to that game,</p>

<p>communicating with the animals reminds me that I also have to reach out to the friends and family. Because the animals, most of the time don't come to you until you've talked to them first.”</p> <p>“If anything, it gives a sense of relief because there's like less responsibility while there still being responsibility its own sense.”</p> <p>4) “Well, sometimes. Sometimes it's easier to learn about a character than to think about yourself. And, as bad as that sounds, sometimes it's better for me to start that way. Because sometimes, I can find a bit of myself in that character. Cause I'll like, I'll read their story or listen to what they have to say and I'll hear something and I'll be like, “huh, I think I feel that,” or “I can relate to that too.” And that draws me closer to that character.”</p> <p>5) “Every time I come back to the game in terms of like actually progressing in the game though, chances are, I'll probably be more interested in using that specific character or going after that specific character, depending on what I'm playing.”</p> <p>8) “There also needs to be room for games that aren't just happy, but they're also not just sad either. Some games will put that little bit of sad in there, and if I can relate to that sad and then I can get through it and then feel okay in the end, I'll go back to that game, cause I'll be like “this character, you know, got through that so I can get through that too.” ”</p> <p>9) “There's a lot of characters in [<i>Genshin Impact</i>]. They keep adding more characters to the games, or the game. And I just, I always go back to thinking about [Diluc] because he's gone through a lot. And I just kind of see how he's dealing with it and I'm like, “I can do that too.” ”</p>	<p>cause I'll be like “this character, you know, got through that so I can get through that too.” ”</p>
<p>Transferable Skills</p>	<p>Multimedia Literacy</p>

3) “But seeing like this little town and seeing all the little animals being around the character, and then the character communicating with the animals reminds me that I also have to reach out to the friends and family. Because the animals, most of the time don't come to you until you've talked to them first.”

6) “Yeah, I think it does. Yeah. I strongly believe that finding that one specific thing whenever doing anything really, it can help motivate you to continue doing it.”

7) “If you want to draw something, whether it just be like for yourself, a character, like something belonging to a show or a video game, or maybe even something that you created, usually it's inspired off of something. And when you, when I'd find that one specific thing, character, object that inspires me, that was, that would be, that would inspire me to make the drawing.”

8) “There also needs to be room for games that aren't just happy, but they're also not just sad either. Some games will put that little bit of sad in there, and if I can relate to that sad and then I can get through it and then feel okay in the end, I'll go back to that game, cause I'll be like “this character, you know, got through that so I can get through that too.” ”

10) “Cause sometimes it'd be like, I wouldn't actually want to look up realistic images. Sometimes, I would want to see what's inside of a video game first and see what has already been done and thought of. So, I would kind of give it a look and see if I can get some inspiration from that.”

4) “Well, sometimes. Sometimes it's easier to learn about a character than to think about yourself. And, as bad as that sounds, sometimes it's better for me to start that way, because sometimes I can find a bit of myself in that character. Cause I'll like, I'll read their story or listen to what they have to say and I'll hear something and I'll be like, “huh, I think I feel that,” or “I can relate to that too.” And that draws me closer to that character.”

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8) “There also needs to be room for games that aren't just happy, but they're also not just sad either. Some games will put that little bit of sad in there, and if I can relate to that sad and then I can get through it and then feel okay in the end, I'll go back to that game, cause I'll be like “this character, you know, got through that so I can get through that too.” ”

9) “There's a lot of characters in [*Genshin Impact*]. They keep adding more characters to the games, or the game. And I just, I always go back to thinking about [Diluc] because he's gone through a lot. And I just kind of see how he's dealing with it and I'm like, “I can do that too.” ”

10) “Cause sometimes it'd be like, I wouldn't actually want to look up realistic images. Sometimes, I would want to see what's inside of a video game first and see what has already been done and thought of. So, I would kind of give it a look and see if I can get some inspiration from that.”

Note. This table organizes statements that Keith had made during his interview. Quotes that fit in more than one theme have a number in front of them, helping in clarifying in how many themes the statement fits in.

Appendix B

Quotes from Dan's Interview

Participant: Dan	
Wellbeing	Problem-Solving
<p>2) “Another thing that gaming has given me an insight in is finding my own accessibility tools and accessibility options because I'm not actually disabled, I don't qualify to be disabled physically.”</p> <p>3) “And I don't think, if I didn't start recognizing the slight annoyances while I was gaming, I don't think I would have even considered that I might also need like these slight helps in real life.”</p> <p>4) “So, sometimes I'm like “why is this woman walking so slowly,” like in the recent <i>Amnesia</i>? And then I was, “oh wait, that's how I work. I work this slowly in real life. God this has to be annoying. Look, I feel you.” I was like, “why? Why can't you run?” And then I'm like, “oh wait, that's because you know who doesn't work and this doesn't work.”</p> <p>5) “It's kind of like an epiphany while playing. Which is another reason why I think diversity is not just of like you know, skin color or sexual orientation. The diversity of ability in games is also important, 'cause like a lot of people don't know. So just so that people see themselves but also to help people realize, “oh, this isn't a problem with me, it's just something that happens to people,” you know?”</p> <p>6) “And it's really rare to see the thing that actually empowers them is the community and the cooperation and the mutual</p>	<p>1) “You have instances where you have to basically coordinate with other players and it can be anywhere from 5 to like 50 players. And very often, like you like the cooperation, the synchronization is very important.”</p> <p>2) “Another thing that gaming has given me an insight in is finding my own accessibility tools and accessibility options because I'm not actually disabled, I don't qualify to be disabled physically.”</p> <p>3) “And I don't think, if I didn't start recognizing the slight annoyances while I was gaming, I don't think I would have even considered that I might also need like these slight helps in real life.”</p> <p>7) “This is something that helped me at a job, but I wouldn't do it again for other reasons where I figured out like, because of the stuff and this came after I figured out some customization in some warframes like, “hey, I could also do similar customizations with the software we use at work.” I could do these macros and then they did those macros.”</p> <p>8) “But then, when you start having a similar problem in a video game, you kind of wanna do this? You know, you want to get over this. This is also, for example, where all of the time management games also helped me. It's like, I was always really, really bad at multitasking until I started playing city builders.</p>

<p>support between two victims that found strength in each other to actually stand up to their abuser.”</p> <p>“This game did not have \$70.00 worth of content on launch. It did not. But I didn't really consider it until, you know, it helped me realize what kind of things. Like, it wasn't until after spending that much money and I still didn't get [the Zenyatta skin], 'cause I actually started realizing about so many things in my life that I was doing because I thought, “oh, everybody does that,” that not just [was I] losing money, but [it was] making me really, really upset.”</p>	<p>Because then, I had to like, “oh, in this area of my city, we have flooding. And here, they have a sewage problem. What do I do? Can I fix both of them at the same time?” ”</p>
<p style="text-align: center;">Transferable Skills + Observable skills</p>	<p style="text-align: center;">Multimedia Literacy</p>
<p>“I mean, for example, some of the things I definitely learned was communicating some things a lot more clearly that especially happened with MMOs. Oh, because I've played MMO's since the early 2000s. Like 2007 or 8 when <i>World of Warcraft</i> came out about that time, so that definitely helped me.”</p> <p>1) “You have instances where you have to basically coordinate with other players and it can be anywhere from 5 to like 50 players. And very often, like you like the cooperation, the synchronization is very important.”</p> <p>“A lot of people notice people who play first person shooters or shooter of any form tend to drive better because they notice a lot more things at the same time.”</p> <p>“For example, you can notice when you play an FPS like I can see a person running and I can predict roughly where they are going to run now. 'Cause people react in sometimes very predictable ways. And then you find out that when you go outside into the real world, all these people do the same exact thing. It's like, “Oh yeah, this driver is going to turn to go right</p>	<p>4) “So, sometimes I'm like “why is this woman walking so slowly,” like in the recent <i>Amnesia</i>? And then I was, “oh wait, that's how I work. I work this slowly in real life. God this has to be annoying. Look, I feel you.” I was like, “why? Why can't you run?” And then I'm like, “oh wait, that's because you know who doesn't work and this doesn't work.”</p> <p>5) “It's kind of like an epiphany while playing. Which is another reason why I think diversity is not just of like you know, skin color or sexual orientation. The diversity of ability in games is also important, 'cause like a lot of people don't know. So just so that people see themselves but also to help people realize, “oh, this isn't a problem with me, it's just something that happens to people,” you know?”</p> <p>6) “And it's really rare to see the thing that actually empowers them is the community and the cooperation and the mutual support between two victims that found strength in each other to actually stand up to their abuser.”</p> <p>9) “But like, since I started playing multiplayer games with</p>

now.” ”

2) “Another thing that gaming has given me an insight in is finding my own accessibility tools and accessibility options because I'm not actually disabled, I don't qualify to be disabled physically.”

3) “And I don't think, if I didn't start recognizing the slight annoyances while I was gaming, I don't think I would have even considered that I might also need like these slight helps in real life.”

7) “This is something that helped me at a job, but I wouldn't do it again for other reasons where I figured out like, because of the stuff and this came after I figured out some customization in some warframes like, “hey, I could also do similar customizations with the software we use at work.” I could do these macros and then they did those macros.”

8) “But then, when you start having a similar problem in a video game, you kind of wanna do this? You know, you want to get over this. This is also, for example, where all of the time management games also helped me. It's like, I was always really, really bad at multitasking until I started playing city builders. Because then, I had to like, “oh, in this area of my city, we have flooding. And here, they have a sewage problem. What do I do? Can I fix both of them at the same time?” ”

9) “But like, since I started playing multiplayer games with customization like *Warframe* and *FF15*, I will go into *Warframe* and then I just stop because I can see somebody else's *Warframe* and I never considered that color combination [for art].”

customization like *Warframe* and *FF15*, I will go into *Warframe* and then I just stop because I can see somebody else's *Warframe* and I never considered that color combination [for art].”

10) “I also didn't start using limited palettes in my art until I started relating it to video games where it's like, you know. I would notice this is more like games, titles come into play. Or like for example the screen is cramped and full of colors and there's too many of them. And then I was like, “Huh? Maybe if I do this, maybe if I desaturate my art, it will also look better.” ”

<p>10) “I also didn't start using limited palettes in my art until I started relating it to video games where it's like, you know. I would notice this is more like games, titles come into play. Or like for example the screen is cramped and full of colors and there's too many of them. And then I was like, “Huh? Maybe if I do this, maybe if I desaturate my art, it will also look better” and what do you know.”</p>	
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Note. This table organizes statements that Dan had made during his interview. Quotes that fit in more than one theme have a number in front of them, helping in clarifying in how many themes the statement fits in.

Appendix C

Quotes from Snappy's Interview

Participant: Snappy	
Wellbeing	Problem-Solving
<p>1) "I remember growing up in elementary school. It was more of a privilege, but it became something that I looked forward to every single Friday. Every single Friday, if I had done really good, my mom would pick me up after school and we would go down--again, I'm dating myself here--to Blockbuster, which was right outside the subdivision. And she's like, "OK, you can pick one-two games at most," and I would run through the store and go directly to the Nintendo games."</p> <p>"But like there were so many games I never got to finish, because either I was tackling a challenge that was too big for me at the time and I couldn't understand it, or there were parts that looked a little bit too intimidating to me. Now I look back and go: "I could do that. I could do that because I'm experienced and I can tackle that. I could absolutely do that." "</p> <p>"Oh God, every time you beat a game, it just gives you this like extensive accomplishment."</p> <p>2) "There are certain games that you can save up certain resources to purchase things, and there are things that you want to purchase and things that you need to purchase. And when you save up enough money to buy one of those things, you have to choose. Money has become an interesting issue. It's an interesting topic for me because I am currently saving to get a house. So, purchasing things, you have to weigh out what you need versus what you want."</p>	<p>"I used to have to rearrange a backroom at a T-shirt shop I used to work at, and it took-- We had limited shelf space and it took some time to figure out how we could really like consolidate space and make it look neat and orderly. But we figured it out and we were able to put different problem-solving skills in different viewpoints to use there."</p> <p>2) "There are certain games that you can save up certain resources to purchase things, and there are things that you want to purchase and things that you need to purchase. And when you save up enough money to buy one of those things, you have to choose. Money has become an interesting issue. It's an interesting topic for me because I am currently saving to get a house. So, purchasing things, you have to weigh out what you need versus what you want."</p> <p>3) "Sometimes you have to pause the game, put it down, get up, go get some water, stretch your legs. Deescalate the situation so you can come back to it more calm. And this has been a big help in my life. Sometimes an argument or a situation gets to where things are so frustrating. You gotta just let it go. You gotta let it go and walk away."</p> <p>4) "Sometimes, if you'd never stop, never give up, never just-- you don't quit, then you can progress. Whereas in life, that's very true in many circumstances. But, in the case of relationships sometimes, if you're in a bad situation, if you keep fighting it,</p>

“Oh God, first, sometimes it's just OK to have fun. Sometimes you can just let things go and have fun. You don't need to worry about things. And that's what racing is. I mean, you're going fast. There's so many variables going past your head, you've got to collect these powerups to make you go faster. Or you could trip up your enemies and gain a lead in it. It's OK to have fun with things from time to time. You don't need to constantly, like, be a workaholic. Fun is acceptable.”

“Lesson #2: it is perfectly acceptable to beat your friends into the ground in a competitive sport so long as they are good sports about it.”

3) “Sometimes you have to pause the game, put it down, get up, go get some water, stretch your legs. Deescalate the situation so you can come back to it more calm. And this has been a big help in my life. Sometimes an argument or a situation gets to where things are so frustrating. You gotta just let it go. You gotta let it go and walk away.”

4) “Sometimes, if you'd never stop, never give up, never just-- you don't quit, then you can progress. Whereas in life, that's very true in many circumstances. But, in the case of relationships sometimes, if you're in a bad situation, if you keep fighting it, you can get away from it. You just gotta keep fighting it.”

6) “So, [video games] are engaging and I can talk with the video game if I want to. Nobody is going to judge me for that, and I'm not going to get in trouble for it. Because nobody can hear me unless I want to. I can engage into a live chat room with my friends, with strangers, which ever tickles my fancy. I can join one person, five people, no people, depends on my mood, and

you can get away from it. You just gotta keep fighting it.”

5) “Games are created for a wide audience, not just for a specific group of people. But there are specific groups of people who specifically like certain games. It's just a byproduct of games. They can't be biased.”

6) “So, [video games] are engaging and I can talk with the video game if I want to. Nobody is going to judge me for that, and I'm not going to get in trouble for it. Because nobody can hear me unless I want to. I can engage into a live chat room with my friends, with strangers, which ever tickles my fancy. I can join one person, five people, no people, depends on my mood, and enjoy the game and the process and teamworking capability or a solo adventure if I want to, which fits the ADHD thing so well. I could be an extrovert or an introvert. It doesn't matter, or it could be both. It doesn't matter. It engages me fully and I can play for hours. And the only time I could stop is to be like, “OK. I need a break,” or “I'm hungry,” get up, get some water, get some food, chillax and then come back to it refreshed, refueled, energized, excited like that's what I like about games. That, and they're fun.

<p>enjoy the game and the process and teamworking capability or a solo adventure if I want to, which fits the ADHD thing so well. I could be an extrovert or an introvert. It doesn't matter, or it could be both. It doesn't matter. It engages me fully and I can play for hours. And the only time I could stop is to be like, "OK. I need a break," or "I'm hungry," get up, get some water, get some food, chillax and then come back to it refreshed, refueled, energized, excited like that's what I like about games. That, and they're fun.</p> <p>7) "They engage every part of my ADHD so fully that I am happy with them so much. Like the exploitative dissociation of running through a world as a different person than who you are. That's engaging the colors, the shapes, the sounds are not overwhelming and they don't hit me in the face like a punch to the gut."</p> <p>"I'm getting married because I experienced something with another person. ... I met her through a game that became a chat room to talk about and role play with other people on this game genre. Stayed friends with her for six years, got in a relationship and now I'm getting married to her."</p>	
<p>Transferable Skills</p>	<p>Multimedia Literacy</p>
<p>1) "I remember growing up in elementary school. It was more of a privilege, but it became something that I looked forward to every single Friday. Every single Friday, if I had done really good, my mom would pick me up after school and we would go down--again, I'm dating myself here--to Blockbuster, which was right outside the subdivision. And she's like, "OK, you can pick one-two games at most," and I would run through the store and go directly to the Nintendo games."</p> <p>2) "There are certain games that you can save up certain resources to purchase things, and there are things that you want</p>	<p>5) "Games are created for a wide audience, not just for a specific group of people. But there are specific groups of people who specifically like certain games. It's just a byproduct of games. They can't be biased."</p> <p>7) "They engage every part of my ADHD so fully that I am happy with them so much. Like the exploitative dissociation of running through a world as a different person than who you are. That's engaging the colors, the shapes, the sounds are not overwhelming and they don't hit me in the face like a punch to the gut."</p>

to purchase and things that you need to purchase. And when you save up enough money to buy one of those things, you have to choose. Money has become an interesting issue. It's an interesting topic for me because I am currently saving to get a house. So, purchasing things, you have to weigh out what you need versus what you want.”

3) “Sometimes you have to pause the game, put it down, get up, go get some water, stretch your legs. Deescalate the situation so you can come back to it more calm. And this has been a big help in my life. Sometimes an argument or a situation gets to where things are so frustrating. You gotta just let it go. You gotta let it go and walk away.”

4) “Sometimes, if you'd never stop, never give up, never just-- you don't quit, then you can progress. Whereas in life, that's very true in many circumstances. But, in the case of relationships sometimes, if you're in a bad situation, if you keep fighting it, you can get away from it. You just gotta keep fighting it.”

6) “So, [video games] are engaging and I can talk with the video game if I want to. Nobody is going to judge me for that, and I'm not going to get in trouble for it. Because nobody can hear me unless I want to. I can engage into a live chat room with my friends, with strangers, which ever tickles my fancy. I can join one person, five people, no people, depends on my mood, and enjoy the game and the process and teamworking capability or a solo adventure if I want to, which fits the ADHD thing so well. I could be an extrovert or an introvert. It doesn't matter, or it could be both. It doesn't matter. It engages me fully and I can play for hours. And the only time I could stop is to be like, “OK. I need a break,” or “I'm hungry,” get up, get some water, get some food, chillax and then come back to it refreshed, refueled, energized,

excited like that's what I like about games. That, and they're fun.	
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Note. This table organizes statements that Snappy had made during her interview. Quotes that fit in more than one theme have a number in front of them, helping in clarifying in how many themes the statement fits in.

Appendix D

Quotes from Pilot 960's Interview

Participant: Pilot 960	
Wellbeing	Problem-Solving
<p>1) “And what I learn from [<i>Journey</i>] is interpreting your experience has value. That can be through a game, that can be through school, that can be through relations that you have with people. But when you take the time to think about what you've lived through and what that means for you, that has a great value, because you can reflect on these things, and you can learn from them in a more generic sense, so that's more the abstract part.”</p> <p>2) “Because [<i>Celeste</i>] pushes you to say, “try again until you get it.” And it doesn't matter how long it takes, because what matters with the iterative process is that you learn. Every single time, you make a mistake and you keep pushing forward. And what I realized that was really big for me: you don't need to feel bad about failing 100 times, as long as you progress, as long as you're not hitting yourself against the wall. So, at times, you might be frustrated and be like, “I can't get through this.” If we talk about the game: “I can't get through this screen.” You get really frustrated. Maybe now is a good time to step back.”</p> <p>3) “The worst thing you can do is well, “I have to do it and I have to do it immediately and I have to do it without any mistakes.” No, that's not how you learn, and that's not how you better yourself. And those two games in that aspect specifically, were really good.”</p> <p>4) “So, we're very afraid of failure. But, in the gaming environment, they say, “forget that limitation. You can iterate as</p>	<p>1) “And what I learn from [<i>Journey</i>] is interpreting your experience has value. That can be through a game, that can be through school, that can be through relations that you have with people. But when you take the time to think about what you've lived through and what that means for you, that has a great value, because you can reflect on these things, and you can learn from them in a more generic sense, so that's more the abstract part.”</p> <p>4) “So, we're very afraid of failure. But, in the gaming environment, they say, “forget that limitation. You can iterate as much as you want., and you will improve and you will be back in the game world.” And then, in real life you will say, “OK. I shouldn't be afraid of failure. What I should be afraid of is fearing failure,” because then you will never try anything new, you won't try to be imaginative or creative with solving.”</p> <p>7) “A lot of the time what happens is that you find people with similar interests and you build upon those common links and make greater relationships out of that. That's very good. Yeah, because it can teach you that you don't need to like someone in every aspect of their person to be good friends with them. You can really find one or two things that you both agree on and then the rest of the relationship can be built upon that.”</p> <p>9) “If you're willing to, you know, take the time to actually discuss [what happens in the game], that's very meaningful. There are so many aspects of the game that interact together, so</p>

much as you want., and you will improve and you will be back in the game world.” And then, in real life you will say, “OK. I shouldn't be afraid of failure. What I should be afraid of is fearing failure,” because then you will never try anything new, you won't try to be imaginative or creative with solving.”

“Get out of your comfort zone through the intermediate of a video game, which is your comfort zone.”

5) “Some of them are about the passage of time, others are about the apparent meaninglessness of human like in the grand scope of the Universe, and those are big ideas. And you can't get to those ideas just by saying, “well, let's read a book that talks about it” and understand them personally. You can understand what someone else's interpretation is when it's passive work. But when it's a dynamic work where you're the one interacting with what you're playing with it, then the ideas become more personal.”

6) “If you talk about violence in games or sexuality in games, or maybe references to traumatic event that happened in the past worldwide or personally, these should not be banned, because as long as you prevent an artform from discussing a certain subject, you prevent that subject from being understood.”

7) “A lot of the time what happens is that you find people with similar interests and you build upon those common links and make greater relationships out of that. That's very good. Yeah, because it can teach you that you don't need to like someone in every aspect of their person to be good friends with them. You can really find one or two things that you both agree on and then the rest of the relationship can be built upon that.”

8) “You can share that appreciation of that information, but it can

you have to understand all of them in all their interactions to say, “I like this.” And someone says, “well, I don't like this. Here's why.” And then you can have a better perspective of who they are, what they appreciate, what they like to spend their time doing. And for yourself, where if you disagree with someone, you can say that's fine, because we disagree doesn't mean we're not friends.”

<p>turn awry, if you're not careful. Because like I mentioned, you can have one or two things in common, which is the experience of the game, but you should not expect, especially with online relationships, that everything else would fit.”</p> <p>“It's a discussion topic that comes up quite often because what happens with your real friends is not around one game, which is what the initial community is about. It's about, “hey, you have so many times with your friends and you're trying to add on to them, to make them stronger.” ”</p> <p>“It's not just: “hey, we both played this game.” It’s: “hey, I know you, I understand who you are. You're my friends, let me share one of the experiences I've had that I think you will enjoy.” It's making a game recommendation and saying, “hey, let's play this game together.” Uh, which is good time spent together bonding and appreciating something new. What I think is the most meaningful is when you both find something new you've never seen before and you both discovered it at the same time and you, you're both like, “Oh my God, this is amazing.”</p> <p>“You can become a fan of the thing or the game at the same time and you can really get into it. It's that learning process of finding something you're both really appreciated and dedicated into that really puts people together really strongly.”</p> <p>10) “So, when you play a game, what I recommend to people is don't play as a form of escape from life responsibilities. You should address your responsibilities and you use games as a method to explore facets of life that are not necessarily accessible all the time.”</p>	
<p style="text-align: center;">Transferable Skills</p>	<p style="text-align: center;">Multimedia Literacy</p>
<p>2) “Because [<i>Celeste</i>] pushes you to say, “try again until you get</p>	<p>1) “And what I learn from [<i>Journey</i>] is interpreting your</p>

it.” And it doesn't matter how long it takes, because what matters with the iterative process is that you learn. Every single time, you make a mistake and you keep pushing forward. And what I realized that was really big for me: you don't need to feel bad about failing 100 times, as long as you progress, as long as you're not hitting yourself against the wall. So, at times, you might be frustrated and be like, “I can't get through this.” If we talk about the game: “I can't get through this screen.” You get really frustrated. Maybe now is a good time to step back.”

3) “The worst thing you can do is well, “I have to do it and I have to do it immediately and I have to do it without any mistakes.” No, that's not how you learn, and that's not how you better yourself. And those two games in that aspect specifically, were really good.”

4) “So, we're very afraid of failure. But, in the gaming environment, they say, “forget that limitation. You can iterate as much as you want., and you will improve and you will be back in the game world.” And then, in real life you will say, “OK. I shouldn't be afraid of failure. What I should be afraid of is fearing failure,” because then you will never try anything new, you won't try to be imaginative or creative with solving.”

6) “If you talk about violence in games or sexuality in games, or maybe references to traumatic event that happened in the past worldwide or personally, these should not be banned, because as long as you prevent an artform from discussing a certain subject, you prevent that subject from being understood.”

7) “A lot of the time what happens is that you find people with similar interests and you build upon those common links and make greater relationships out of that. That's very good. Yeah,

experience has value. That can be through a game, that can be through school, that can be through relations that you have with people. But when you take the time to think about what you've lived through and what that means for you, that has a great value, because you can reflect on these things, and you can learn from them in a more generic sense, so that's more the abstract part.”

2) “Because [*Celeste*] pushes you to say, “try again until you get it.” And it doesn't matter how long it takes, because what matters with the iterative process is that you learn. Every single time, you make a mistake and you keep pushing forward. And what I realized that was really big for me: you don't need to feel bad about failing 100 times, as long as you progress, as long as you're not hitting yourself against the wall. So, at times, you might be frustrated and be like, “I can't get through this.” If we talk about the game: “I can't get through this screen.” You get really frustrated. Maybe now is a good time to step back.”

5) “Some of them are about the passage of time, others are about the apparent meaninglessness of human like in the grand scope of the Universe, and those are big ideas. And you can't get to those ideas just by saying, “well, let's read a book that talks about it” and understand them personally. You can understand what someone else's interpretation is when it's passive work. But when it's a dynamic work where you're the one interacting with what you're playing with it, then the ideas become more personal.”

“Games are a unique artform because you interact with a set piece that the designer presented to you.”

“So, when I say video games as part, I don't just mean they're unique because they're games. They're unique because you are still the one present and the one in control of some aspects, if a

because it can teach you that you don't need to like someone in every aspect of their person to be good friends with them. You can really find one or two things that you both agree on and then the rest of the relationship can be built upon that.”

8) “You can share that appreciation of that information, but it can turn awry, if you're not careful. Because like I mentioned, you can have one or two things in common, which is the experience of the game, but you should not expect, especially with online relationships, that everything else would fit.”

9) “If you're willing to, you know, take the time to actually discuss [what happens in the game], that's very meaningful. There are so many aspects of the game that interact together, so you have to understand all of them in all their interactions to say, “I like this.” And someone says, “well, I don't like this. Here's why.” And then you can have a better perspective of who they are, what they appreciate, what they like to spend their time doing. And for yourself, where if you disagree with someone, you can say that's fine, because we disagree doesn't mean we're not friends.”

10) “So, when you play a game, what I recommend to people is don't play as a form of escape from life responsibilities. You should address your responsibilities and you use games as a method to explore facets of life that are not necessarily accessible all the time.”

game really were to devolve. “Devolve”, I don't mean like it's worse, but if it were to cut aspects of gameplay until it just became a cut scene for three hours, then it does lose a bit of its value as a game, but the art is still preserved. So, I'm not saying a game is a better art, I'm just saying it's an artform.”

6) “If you talk about violence in games or sexuality in games, or maybe references to traumatic event that happened in the past worldwide or personally, these should not be banned, because as long as you prevent an artform from discussing a certain subject, you prevent that subject from being understood.”

9) “If you're willing to, you know, take the time to actually discuss [what happens in the game], that's very meaningful. There are so many aspects of the game that interact together, so you have to understand all of them in all their interactions to say, “I like this.” And someone says, “well, I don't like this. Here's why.” And then you can have a better perspective of who they are, what they appreciate, what they like to spend their time doing. And for yourself, where if you disagree with someone, you can say that's fine, because we disagree doesn't mean we're not friends.”

Note. This table organizes statements that Pilot 960 had made during his interview. Quotes that fit in more than one theme have a number in front of them, helping in clarifying in how many themes the statement fits in.

Appendix E

Quotes from Queuethulu's Interview

Participant: Queuethulu	
Wellbeing	Problem-Solving
<p>2) “It's a lot easier for me to be the one to start a conversation now. Before, I had to be a lot more reactive. I can be a little more proactive in conversation now, so I will say it has also helped some of my social cues. Back in like my teenage years, I was kind of socially awkward. But, through how I've learned to talk to people online and through video games, it's definitely helped me be a little more socially aware of, you know, people's vocal cues, how they look. Stuff like that.”</p> <p>“Well, I've met a lot of really close friends through playing video games. So, a few years back, I ended up having to cut my blood family out of my life 'cause they were dreadfully horrible people. And through video games, I kind of have a better-found family that's been more supportive and has helped me when like I was in the hospital and other things.”</p> <p>“In all my years of playing, a lot of people I know say it's their form of escapism. For me, it's more of a decompression tool. Like I don't play the games to forget everything, I kind of play the games to give my mind something to focus on that's not my own issues. Which does sound like escapism I understand, but I don't try to get away from my problems. I use it to just kind of vent frustration, I guess.</p> <p>Or like, in cases I play a lot of Dark Souls. But I play that usually when I'm in a bad headspace because it makes me focus on the mechanics of blocking parrying, you know. 'Cause the mechanics</p>	<p>1) “Well, the smaller vocabularies definitely helped me, in both my personal and work life, 'cause I can pick up on stuff a lot better than I used to. 'cause now I actually I know more, terms and stuff that I didn't know when I was younger.”</p> <p>2) “It's a lot easier for me to be the one to start a conversation now. Before, I had to be a lot more reactive. I can be a little more proactive in conversation now, so I will say it has also helped some of my social cues. Back in like my teenage years, I was kind of socially awkward. But, through how I've learned to talk to people online and through video games, it's definitely helped me be a little more socially aware of, you know, people's vocal cues, how they look. Stuff like that.”</p> <p>3) “Well, a while back, I used to be a bartender at a fairly high-end bar. Still played a lot of, for example. In this case, I was playing a lot of Final Fantasy 14. And I had some guys talking about older like, they were talking about Beowulf at the bar. I think that's what the epic poem was called. [...] But we ended up having a whole conversation.</p> <p>The only reason I was able to pick up on this was because I started hearing terms that I've heard in Final Fantasy 14. So, I was able to join in and help their conversation along, 'cause they kept getting stuck on words. Like, we couldn't remember certain terms and I was being able to pick up from the context clues what they were saying based on what I've learned in video games.”</p>

of their combat is very methodical, so you can't just go in hacking, slashing. So, it gives me something to concentrate on when I need to clear my head in that case.”

“Whenever I get like a high anxiety thing, I start having a panic attack, I will pop in *Dark Souls*. 'Cause, while people talk about how difficult it is, for me, the difficulty and how slow paced the combat is in the original *Dark Souls*, that allows me to kind of focus my mind there. Which helps me, you know, calm down, lower my heart rate so it doesn't feel like I'm about to have a heart attack.”

5) “When I was younger, like probably still, I still have ADD. I guess I feel like, because of stuff I've played, I've kind of learned to kind of focus on what I need to do instead of being all over the place. So, I feel like that's probably why I can do that now. I don't think I would have been able to do this like 15 years ago.”

“*[Zombies At My Neighbors]* makes me feel happier. Like, it reminds me of a time when I had a really good friend. We played it a lot and when I moved, we lost contact. It kind of reminds me of how I felt in those times. Like happy memories.”

6) “I would say the worth in video games is that they show us that we can be more than what we are currently.”

7) “One sticks out, Locke Cole from Final Fantasy 6. He spends a chunk of the game trying to bring back his, I guess, dead girlfriend. But eventually, he learns to let her go and because of it, he gets stronger as a person. Just that entire being able to, I guess, let go of problems or parts of the past that were holding him down. He got better and I started doing that and overall, I've gotten a lot healthier over the year.”

5) “When I was younger, like probably still, I still have ADD. I guess I feel like, because of stuff I've played, I've kind of learned to kind of focus on what I need to do instead of being all over the place. So, I feel like that's probably why I can do that now. I don't think I would have been able to do this like 15 years ago.”

7) “One sticks out, Locke Cole from Final Fantasy 6. He spends a chunk of the game trying to bring back his, I guess, dead girlfriend. But eventually, he learns to let her go and because of it, he gets stronger as a person. Just that entire being able to, I guess, let go of problems or parts of the past that were holding him down. He got better and I started doing that and overall, I've gotten a lot healthier over the years.”

Transferable Skills	Multimedia Literacy
<p>“I learned a lot more about cars from playing the <i>Gran Turismo</i> series about engine timing and stuff like that. 'Cause it's a pretty intensive car simulation and a lot of it is very realistically done. In fact, I think that's what they were going for, so that helped me a lot when I was a teenager learning about cars and stuff.”</p> <p>1) “Well, the smaller vocabularies definitely helped me, in both my personal and work life, 'cause I can pick up on stuff a lot better than I used to. 'cause now I actually I know more, terms and stuff that I didn't know when I was younger.”</p> <p>2) “It's a lot easier for me to be the one to start a conversation now. Before, I had to be a lot more reactive. I can be a little more proactive in conversation now, so I will say it has also helped some of my social cues. Back in like my teenage years, I was kind of socially awkward. But, through how I've learned to talk to people online and through video games, it's definitely helped me be a little more socially aware of, you know, people's vocal cues, how they look. Stuff like that.”</p> <p>3) “Well, a while back, I used to be a bartender at a fairly high-end bar. Still played a lot of, for example. In this case, I was playing a lot of Final Fantasy 14. And I had some guys talking about older like, they were talking about Beowulf at the bar. I think that's what the epic poem was called. [...] But we ended up having a whole conversation.</p> <p>The only reason I was able to pick up on this was because I started hearing terms that I've heard in Final Fantasy 14. So, I was able to join in and help their conversation along, 'cause they kept getting stuck on words. Like, we couldn't remember certain terms and I was being able to pick up from the context clues what</p>	<p>“Well, over the years, from playing for example RPG's, my vocabulary got a lot bigger. Up until a couple years ago, I didn't know that Chirurgeon was...Which is like, I guess, a very old term for like a doctor.”</p> <p>1) “Well, the smaller vocabularies definitely helped me, in both my personal and work life, 'cause I can pick up on stuff a lot better than I used to. 'cause now I actually I know more, terms and stuff that I didn't know when I was younger.”</p> <p>3) “Well, a while back, I used to be a bartender at a fairly high-end bar. Still played a lot of, for example. In this case, I was playing a lot of Final Fantasy 14. And I had some guys talking about older like, they were talking about Beowulf at the bar. I think that's what the epic poem was called. [...] But we ended up having a whole conversation.</p> <p>The only reason I was able to pick up on this was because I started hearing terms that I've heard in Final Fantasy 14. So, I was able to join in and help their conversation along, 'cause they kept getting stuck on words. Like, we couldn't remember certain terms and I was being able to pick up from the context clues what they were saying based on what I've learned in video games.”</p> <p>4) “I feel like, because of all the games, I've probably started reading more. You know high fantasy stuff than I would have back in the day so, I feel like it's, just overall, made me a more knowledgeable person about literature.”</p> <p>“I believe [dangerously violent games] can [have a space where they can be beneficial for growth], they just have to have a much better grasp and scope. Not just, “haha, violence for violence’s</p>

<p>they were saying based on what I've learned in video games.”</p> <p>4) “I feel like, because of all the games, I've probably started reading more. You know high fantasy stuff than I would have back in the day so, I feel like it's, just overall, made me a more knowledgeable person about literature.”</p> <p>5) “When I was younger, like probably still, I still have ADD. I guess I feel like, because of stuff I've played, I've kind of learned to kind of focus on what I need to do instead of being all over the place. So, I feel like that's probably why I can do that now. I don't think I would have been able to do this like 15 years ago.”</p> <p>6) “I would say the worth in video games is that they show us that we can be more than what we are currently.”</p> <p>7) “One sticks out, Locke Cole from <i>Final Fantasy 6</i>. He spends a chunk of the game trying to bring back his, I guess, dead girlfriend. But eventually, he learns to let her go and because of it, he gets stronger as a person. Just that entire being able to, I guess, let go of problems or parts of the past that were holding him down. He got better and I started doing that and overall, I've gotten a lot healthier over the years.”</p> <p>“Well, I guess technically video games also taught me my first bit of coding. My family bought a Commodore 64 when I was young, and I started, because of video games, learning basic. Which, I believe, started me down the path of becoming a coder. So, without video games in my life, I would not have gotten into computer programming. So, I mean, that's literally about the last bit I had.”</p>	<p>sake.” They have to have a point. Like <i>Hatred</i> is just a guy who quote hates everybody, so he's going to kill everybody. But there's not much else to it.</p> <p>On the opposite end of that same--I don't know what to call it. “Spectrum” is probably the best word you have. The <i>Postal</i> games. The first one was kind of murder simulator, but after that, <i>Postal 2</i>, you don't have to kill anybody at all to get through the game if you don't want to. You can technically do a pacifist run of <i>Postal 2</i>.”</p> <p>7) “One sticks out, Locke Cole from <i>Final Fantasy 6</i>. He spends a chunk of the game trying to bring back his, I guess, dead girlfriend. But eventually, he learns to let her go and because of it, he gets stronger as a person. Just that entire being able to, I guess, let go of problems or parts of the past that were holding him down. He got better and I started doing that and overall, I've gotten a lot healthier over the years.”</p>
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Note. This table organizes statements that Queuethulu had made during his interview. Quotes that fit in more than one theme have a number in front of them, helping in clarifying in how many themes the statement fits in.

Appendix F

Quotes from Plastique's Interview

Participant: Plastique	
Wellbeing	Problem-Solving
<p>1) "It was something really heavy. And maybe, just a little bit, the story from <i>Silent Hill</i> helped me in terms of understanding that my feelings aren't really black and white. You know, like the way James killed his wife but he still loved her. So, like the same way I had to leave a person behind both for my sake, for my safety, and for my mental wellbeing and for others."</p> <p>2) "I've read studies where, for example, it's beneficial for surgeons to play the video games because it keeps their hands flexible."</p> <p>"Also, the same goes for people with dementia, for example because it keeps their minds active and all that stuff."</p> <p>3) "This is where video games come in [when it comes to concentration], because they keep my mind occupied. Because, it's a very broad experience because it's not just a movie. It's not just a thing you do with your hands. There's a lot of parts, territories. Parts that could go into a video game. And the most specific thing that sets video games apart from other types of media is, like, very cool interactivity because you have to interact, you have to actually put in the work into the game. You know, in order to experience it and to have fun and to do all that."</p> <p>4) "[Video games] can help [decrease] the person's anxiety or depression, which are both things that I have. So that's fun, but it</p>	<p>4) "[Video games] can help [decrease] the person's anxiety or depression, which are both things that I have. So that's fun, but it can also become like unhealthy escapism. It's a double-edged sword in that in that sense."</p> <p>5) "The story from <i>Silent Hill</i> helped me in terms of understanding that my feelings aren't really black and white, you know. Like the way James killed his wife but he still loved her. So, like the same way, I had to leave a person behind both for my sake, for my safety, and for my mental wellbeing and for others."</p> <p>6) "Yeah, like you know, you feel like you're in the actual emotional pain, actual physical pain, and you can't really think straight and travel for some reason. <i>Shovel Knight</i> really helps me a lot in that in that regard, [as a relaxation tool]. So, there's that."</p> <p>7) "But, at that point, it wasn't as much about [<i>Shovel Knight</i>'s] story as much as about the game and how it was both accessible and challenging to me. Because I mean, it's a relatively simple platforming game. But, it also can be challenging, which is this sort of platforming games that focus on the actual physical challenge in the game."</p> <p>10) "Having trouble concentrating on stuff and the video games give me this whole big experience that occupies all facets, you know. It's not just music, it's not just a video, it's not just text, it's all that you know."</p>

can also become like unhealthy escapism. It's a double-edged sword in that in that sense.”

“There was recently a video going around of this Buddhist monk talking about video games as a sort of meditation. Compares how you're focused on a game, and you forget everything around you and you're in the moment. He compares it to how meditation works. And that's really interesting to me, I guess.”

“So, [video games] can help take your mind off things as a relaxation device, which it is. That can be a lot more effective than a lot of other things. And it is. I mean, a lot better than any other like unhealthy coping mechanism.”

“I wouldn't have reconnected with my current best friend if it were not for video games. So, I don't think we would have connected in the first place if not for video games.”

“There's the whole like social aspect of it that can really help, because socially awkward people like me need, I don't know if it's the right word, a buffer.”

5) “The story from Silent Hill helped me in terms of understanding that my feelings aren't really black and white, you know. Like the way James killed his wife but he still loved her. So, like the same way, I had to leave a person behind both for my sake, for my safety, and for my mental wellbeing and for others.”

6) “Yeah, like you know, you feel like you're in the actual emotional pain, actual physical pain, and you can't really think straight and travel for some reason. *Shovel Knight* really helps me a lot in that in that regard, [as a relaxation tool]. So, there's that.”

<p>7) “But, at that point, it wasn't as much about [<i>Shovel Knight</i>'s] story as much as about the game and how it was both accessible and challenging to me. Because I mean, it's a relatively simple platforming game. But, it also can be challenging, which is this sort of platforming games that focus on the actual physical challenge in the game.”</p> <p>10) “Having trouble concentrating on stuff and the video games give me this whole big experience that occupies all facets, you know. It's not just music, it's not just a video, it's not just text, it's all that you know.”</p>	
<p>Transferable Skills</p>	<p>Multimedia Literacy</p>
<p>2) “I've read studies where, for example, it's beneficial for surgeons to play the video games because it keeps their hands flexible.”</p> <p>8) “Obviously, I guess in terms of my creativity and my artistic tastes, it's how the visual design works in video games and how much care is put into these worlds to build them and to present them. It can be really inspiring. And yeah, it can, really I think, influence my work if it's related to video games, so there's that.”</p> <p>9) “So yeah, I can recognize the value in [a limited colour palette]. And I can recognize [<i>Shovel Knight</i>] as a well designed to video game in terms of, you know; it's visually clear what's happening, what's going on. It's also visually interesting, but it's not like groundbreaking, to me at least.”</p>	<p>“So, like video games are always in English and it definitely helped in my learning of the English language along with English cartoons.”</p> <p>“Our generation is still very like, influenced by various Japanese stuff. Like anime and video games were developed in Japan and I realized that I know a bunch of various bits and pieces of cultural and mythological stuff about Japan solely from video games.”</p> <p>“Someone plays <i>The Witcher</i>, then they will also learn about various like Polish myths and all that stuff.”</p> <p>1) “It was something really heavy. And maybe, just a little bit, the story from <i>Silent Hill</i> helped me in terms of understanding that my feelings aren't really black and white. You know, like the way James killed his wife but he still loved her. So, like the same way I had to leave a person behind both for my sake, for my safety, and for my mental wellbeing and for others.”</p> <p>3) “This is where video games come in [when it comes to concentration], because they keep my mind occupied. Because,</p>

	<p>it's a very broad experience because it's not just a movie. It's not just a thing you do with your hands. There's a lot of parts, territories. Parts that could go into a video game. And the most specific thing that sets video games apart from other types of media is, like, very cool interactivity because you have to interact, you have to actually put in the work into the game. You know, in order to experience it and to have fun and to do all that.”</p> <p>5) “The story from <i>Silent Hill</i> helped me in terms of understanding that my feelings aren't really black and white, you know. Like the way James killed his wife but he still loved her. So, like the same way, I had to leave a person behind both for my sake, for my safety, and for my mental wellbeing and for others.”</p> <p>8) “Obviously, I guess in terms of my creativity and my artistic tastes, it's how the visual design works in video games and how much care is put into these worlds to build them and to present them. It can be really inspiring. And yeah, it can, really I think, influence my work if it's related to video games, so there's that.”</p> <p>9) “So yeah, I can recognize the value in [a limited colour palette]. And I can recognize [<i>Shovel Knight</i>] as a well designed to video game in terms of, you know; it's visually clear what's happening, what's going on. It's also visually interesting, but it's not like ground-breaking, to me at least.”</p>
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Note. This table organizes statements that Plastique had made during her interview. Quotes that fit in more than one theme have a number in front of them, helping in clarifying in how many themes the statement fits in.