ONLINE GAMING CREATION FOR BEGINNERS

THE INFLUENCE OF VIDEO GAMES ON HUMAN CIVILIZATION

A Thesis Prospectus

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By

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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THE DEVELOPMENT OF ONLINE GAMING IN HUMAN LIFE

Introduction

With the rising of technological society, computers have gradually entered the daily life of every household. From how people do business to personal leisure, communication between people, and more, computers have completely changed everyone's life (Schindler et al., 2017). Computers are divided into two parts: software and hardware. Usually, hardware is the world of engineers, especially electrical and computer engineers, while software is dominated by technical training in computer science. Due to the wide range of computer applications, various fields related to computer applications have emerged, including information science, information system management, data processing, and computer programming.

In real life, people often have many stress (Milani et al., 2018) and anxiety disorders (Wang et al., 2018), so in order to get rid of these negative effects, all kinds of entertainment are needed. The computer is a technology that can provide entertainment functions, and the computer game industry is connected to every industry. After all, computer games can provide players with a virtual space in the game, and to a certain extent, people can escape from the real world (Kowert et al., 2014a). In this virtual world, players can play roles that cannot be played in the real world. At the same time, the inventions of different levels of computer technology have given people many experiences and enjoyments that cannot be experienced in real life.

Among people of different age groups, people who play games tend to be younger (Entertainment Software Association). Each generation has different ways of relaxing and entertaining, and games are how most of the new generation of young people choose. So how are young people affected by video games? During the development of children's minds, it is critical

to know the influence that would have on youth, as their minds are still unstable and often influenced by other factors.

For this reason, the principal aim of this exploration would start with the connection of this research topic with the development of gaming, the performance of this research, and the related resources. My CS capstone course will focus on the software engineering side of video game development. My STS research will focus on how video games can influence society and the controversial viewpoints behind game development.

THE STAGE BEFORE DEVELOPING A VIDEO GAME

Video games' influence on human civilization development is unquestionable, but different people have different opinions on whether the impact of video games is positive or negative. In this era of Internet prevalence, the explosion of information will make people's life, entertainment, and social interaction more convenient (Kowert et al., 2014b). However, at the same time, the internet is also forcing everyone to accept information that has nothing to do with them, and it is not easy to distinguish between true and false. People's hearts will have various reactions to feelings, and as long as they receive information, they will have corresponding emotions. Many young people lack experience in filtering information, but because of prematurely accepting much wrong information from the game, they will grow wildly towards the crook part and silently ferment (Wood and Griffith, 2007; Jeong and Kim, 2011). In order to prevent the consequences of misguided, an early collection of games that would have various consequences on young people's behavior will be a necessary stage.

As a new gaming designer, choosing the right type of game and developing a suitable product is a vast challenge. The work of indie game developers is often either an epiphany or adding new ideas to existing work. Since a new idea is always hard to generate, the best choice is to innovate on the basis of the predecessor. Similarly, developing brand-new games requires more time and cost in learning the basic knowledge of game design. In this case, it is essential to find all different perspectives on the game before making innovations to the existing game. However, if it is possible to make changes and innovations to a game from its original, it still has unavoidable absences (Festl et al., 2013). With different user opinions, developers could have a better idea through brainstorming and limiting all the bad influences.

THE BACKEND PORTION OF THE RESEARCH

For the purpose of investigating the different perspective viewpoints on online gaming, the technology under examination would be the functionality of different types of online gaming since they can have their meaning, mainly for study or entertainment purposes. Finding different viewpoints from both the guardians and the youth's sides would be essential for this research. For example, "Civilization" (Wyrm, 2017) is a game that the creature of it is people. In this game, one of the people's attributions is happiness. Players must build theaters and other entertainment facilities to maintain happiness. When happiness drops, people riot. Therefore, entertainment is critical.

However, different people think differently about video games; for example, some believe that games poison young people. Many young people addicted to online games eat irregularly, do not rest well, avoid studying, and are unwilling to interact with society. Gaming can make adults unable to concentrate on work, and adults addicted to games spend more than 3 hours a day or even play games all night (Von, 2019). Those people also think that the essence of the game is to make people detached from reality, so it is impossible to produce direct production benefits for society. On the opposite side of the viewpoint, the games also allow people to replenish energy after production work, thus making production activities more lasting and effective. This viewpoint would think that playing games will lead to some indirect benefit to social production.   The relevant social group of this research is all the game players, the guardians of those players, and game developers. To be more specific, game players are one of the relevant groups of this research because gaming affects players' psychological growth, especially for young people. Since the leading reason for this research is to determine the game's impact on players, reduce the harmful impact and ultimately turn the impact to the good side, the

game players are the primary social group. The purpose of the guardian becoming one of the social groups in this study is to compare the psychological attitudes of different people towards games since parents have considerable authority over the time their children play games. If all parents are against gaming, young people will no longer have access to the gaming world (Skoric et al., 2009). Finally, game developers are the last group to be identified in this study because the primary purpose of this research is to make games suitable for players, and parents will not accuse games of the cause of misleading young people. The main reason for identifying these social groups is to connect them from the beginning of game creation. The cycle, in this case, is that those game developers are the ones who develop the games, the players are the ones who play the game, and the guardians are the one who controls the time youth play the games.

This research will use actor-network theory as one of the methodologies. The actor-network theory will significantly help in finding out the relationship of the various social groups and provide a more visual view of the layout of the research topic (Latour, 1996, pg373). The "Actor" in this theory refers to humans and non-human objects, such as concepts, technologies, organisms, organizations, and thoughts. In this research, the "actor" would be online gaming and all the social groups since the definition of the actor is anything that changes the state of things by making a difference. "Network" in this theory is the connections by actors through actions, and the network nodes in this research are the relationship between all three social groups to online gaming.

The other methodologies are discourse analysis, synthesizing previous literature, and case studies. Discourse analysis is a valuable tool to combine with synthesizing the previous literature. With the multiple writing literature on the gaming topic, summarizing other authors' viewpoints and using this summary as a reference is also helpful in this study. For example, research shows

computer games have a history back to 1952("Video Game History"); with its 70 years of growth, many people are writing about how games affect people. I would elaborate on the previous literature and summarize a few cases about this topic since this issue is still debatable in today's society (Petry et al., 2014).

THE PRIMARY RESOURCES AND TIMELINE

One of the primary sources in this research is "Do Artifacts Have Politics". The online gaming industry is the focus of attention and discussion from all classes of society. It should come as no surprise then that it associates with politics. Langdon Winner's article "Do Artifacts Have Politics?" illustrates that all technologies relate to politics. In his article, he mentions, "It is no surprise to learn that technical systems of various kinds are deeply interwoven in the conditions of modern politics." (Winner 122). This opinion makes sense since the core issue of current game politics is freedom and control. The political issues will affect the different viewpoints of the three social groups and the direction of developing online gaming.

Another primary source is Adam Chapman's "Digital Games as History" book. In his book, he provides a lengthy introduction to detail the different game types and puts his efforts into the learning perspective of different types of games. "We worry about the state of history education, that too few study too little and that the general public is disinterested and have too little knowledge of the past." (Adam Chapman, 2016, pg5). His writing brings up the idea that gaming can help people remember the past. Moreover, by putting history into gaming, the players who play the game will be likelier to remember the history when having fun.

The third resource is "Play Between Worlds: Exploring Online Game Culture" by T. L. Taylor. Taylor mentions, "He proposes that there are a variety of types of activities people prefer in multiplayer games and that we can characterize such players through a basic taxonomy" (T. L. Taylor, 2006, pg69). Since it is easy to figure out the characteristics of each player, the gaming world must be a way for people with the same character to get together. This resource is essential because it is one of the positive viewpoints regarding online gaming.

The final resource is Kenneth Chen's "How Playing Video Games Affects Our Minds and Behaviors" prospectus. In his concluding section, the author picks a side and points out that video games affect our minds and behavior, and in most cases, the effect is on the positive side. The author's point of thought provides this research with a more detailed knowledge of the theoretical side of gaming effects.

Per our current STS course plan, I will finish the final prospectus and at least 10 of the annotated bibliography before December 6. Then I will find out if I should write any additional bibliography, and if so, I will add them to my paper over the winter break. At the same time, I will also report the outline of this research during the winter break, for example, by using bullet points, listing out ideas about the main sentence, how to write each section of the paper, and planning the critical content of my final report. That way, I will have a general idea of what my research paper will look like before starting the next semester when I start writing my formal essay.

Work Cited

Chapman, Adam. Digital Games as History: How Videogames Represent the Past and Offer Access to Historical Practice. United Kingdom, Taylor & Francis, 2016.

Chen, K., Basit, Nada (advisor), Gorman, Michael (advisor), & Jacques, Richard (advisor) (2020). Building a New Grading System for CS 2110: Software Development Methods; The Psychology of Gaming: How Playing Video Games Affects Our Minds. Charlottesville, VA: University of Virginia, School of Engineering and Applied Science, BS (Bachelor of Science), 2020. Retrieved from https://doi.org/10.18130/v3-cncd-yx23

Entertainment Software Association. "Distribution of Video Gamers in The United States in 2022, by Age Group." Statista, Statista Inc., 7 Jul 2022, https://www.statista.com/statistics/189582/age-of-us-video-game-players/

Festl, R., Scharkow, M., and Quandt, T. (2013). Problematic computer game use among adolescents, younger and older adults. Addiction 108, 592–599. doi: 10.1111/add.12016

Jeong, E. J., and Kim, D. H. (2011). Social activities, self-efficacy, game attitudes, and game addiction. Cyberpsychol. Behav. Soc. Netw. 14, 213–221. doi: 10.1089/cyber.2009.0289

Kowert, R., Domahidi, E., Festl, R., and Quandt, T. (2014a). Social gaming, lonely life? The impact of digital game play on adolescents' social circles. Comput. Hum. Behav. 36, 385–390. doi: 10.1016/j.chb.2014.04.003

Latour, Bruno. "On Actor-Network Theory: A Few Clarifications." Soziale Welt, vol. 47, no. 4, 1996, pp. 369–81. JSTOR, http://www.jstor.org/stable/40878163.

Milani, L., La Torre, G., Fiore, M., Grumi, S., Gentile, D. A., Ferrante, M., et al. (2018). Internet gaming addiction in adolescence: risk factors and maladjustment correlates. Int. J. Mental Health Addict. 16, 888–904. doi: 10.1007/s11469-017-9750-2

Petry, N. M., Rehbein, F., Gentile, D. A., Lemmens, J. S., Rumpf, H. J., Mossle, T., et al. (2014). An international consensus for assessing internet gaming disorder using the new DSM-5 approach. Addiction 109, 1399–1406. doi: 10.1111/add.12457

Rachel Kowert, Emese Domahidi, and Thorsten Quandt.The Relationship Between Online Video Game Involvement and Gaming-Related Friendships Among Emotionally Sensitive Individuals.Cyberpsychology, Behavior, and Social Networking.Jul 2014.447-453.http://doi.org/10.1089/cyber.2013.0656

Schindler, L.A., Burkholder, G.J., Morad, O.A. et al. Computer-based technology and student engagement: a critical review of the literature. Int J Educ Technol High Educ 14, 25 (2017). https://doi.org/10.1186/s41239-017-0063-0

Skoric, M. M., Teo, L. L. C., and Neo, R. L. (2009). Children and video games: addiction, engagement, and scholastic achievement. Cyberpsychol. Behav. 12, 567–572. doi: 10.1089/cpb.2009.0079

Taylor, T. L.. Play Between Worlds : Exploring Online Game Culture, MIT Press, 2006. ProQuest Ebook Central, https://ebookcentral.proquest.com/lib/uva/detail.action?docID=3338607.

"Video Game History." History.com, A&E Television Networks, 1 Sept. 2017, https://www.history.com/topics/inventions/history-of-video-games.

Von Der Heiden J.M., et al. "The Association Between Video Gaming and Psychological Functioning." Frontiers in Psychology, 2019, https://doi.org/10.3389/fpsyg.2019.01731.

Wang, H. R., Cho, H., and Kim, D.-J. (2018). Prevalence and correlates of comorbid depression in a nonclinical online sample with DSM-5 internet gaming disorder. J. Affect. Disord. 226, 1–5. doi: 10.1016/j.jad.2017.08.005

Winner, Langdon. *Do Artifacts Have Politics*, vol. 109, 1980, pp. 121–136.

Wood, R. T., and Griffith, M. D. (2007). A qualitative investigation of problem gambling as an escape-based coping strategy. Psychol. Psychother. 80, 107–125. doi: 10.1348/147608306X107881

Wyrm, Mythril. "Building (CIV6)." Civilization Wiki, Fandom, 8 June 2017,

https://civilization.fandom.com/wiki/Building_(Civ6).