

CRITICAL PLAY: AN ACTION RESEARCH INVESTIGATION

BY

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DISSERTATION

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## ABSTRACT

Given the convergence of game consumption and production in recent years, the field of art education has theorized play as a learning mechanism and developed various ways to include games into educational settings. However, the cultural ideologies and practices within gaming cultures have not gone unchallenged, and the classroom application of these practices also has its problems. Without addressing these issues when appropriating and utilizing games, educators risk further indoctrinating and assimilating students as players into hegemonic structures.

This study aimed to expand the concept of critical play developed by Flanagan (2009) for pedagogical purposes. Critical play as defined in this dissertation refers to when a player is able to engage with game as a complicated system related to the society at large and intentionally modify it based on political concerns, in game-based art pedagogy. Specifically, I used an action research approach to examine how to facilitate critical play of video games among youth in a library setting. I proposed a topology of critical play as the theoretical and curricular framework for this dissertation.

This study found that the technological capabilities of the facilitator and participants, the moral developmental differences between the facilitator and participants, and the roles that the facilitator and participants played in the pedagogical exchanges were of particular significance to how to facilitate critical play. In addition, the processes of understanding, critiquing, and modifying in the topology of critical play each provided a significant function that when taken together allowed participants to play critically. Furthermore, I came to the conclusion that the development of critical play among youth was contingent upon an affinity group that focused on transgression as its shared endeavor. In sum, this study further complicated teaching criticality as

articulated by Williamson (1981), Turnbull (1998), and Buckingham (2003) through the specific case of critical video games play.

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## Chapter 1: The Player's Guide

### Background

Prior to my 16<sup>th</sup> birthday, the new PlayStation Portable handheld gaming console came out in Taiwan. This console was the first portable gaming console that had 24-bit full color display and Wi-Fi connection ability. Everybody was talking about it at school, as it was a multi-purpose entertainment machine that not only allowed for powerful gameplay but also supported video and picture display in various formats. Everyone, myself included, wanted one. Compared to my friends who had many other gaming consoles, I had never owned a gaming console and had only played a pirated copy of Super Mario on my desktop computer and Tetris on my English-Chinese translation machine. But I was excited about this gaming console, as it was portable and promised a variety of games that I had heard about but had never tried before. The morning of my birthday, my mother asked me what I wanted, and I instantly replied "PSP!" This was followed by a long pause. A frown appeared on my mother's face. She took a deep breath and tried her best to frame the words that were about to come out of her mouth. To the best of my memory, this is what she said:

You are 16 years old now. You are at the time in your life when you need to really consider what you want from life. All your father and I have ever wanted for you is to be happy and healthy. Because of this, I will not buy you a machine to just play games. I don't want to see you waste your life away playing useless games and lose sight of what's really worth pursuing around you. (Chen, personal communication, August 22, 2005)

I remember feeling confused and ashamed about my desire to play video games. I tried to internalize my mother's advice that I should pursue productive activity instead of leisure and

aimless play, but deep down I always questioned this arbitrary distinction of usefulness and uselessness. I continued with my teenage life and steered away from the video game culture that was prevalent among my peers. However, reflecting back now, it was probably my desire and lack of participation that exoticized video games for me and drove me to the study of video games.

Fast forward to 2011, when I came to the University of Illinois at Urbana-Champaign to pursue my graduate degree in art education. Not long after coming here, I met a significant friend, who happens to be an avid gamer and game maker. He introduced me to the vast video game cultures present in the United States, and the variety of genres that evolved in this medium. However, the most fascinating aspect of my reintroduction to video games was his learning trajectory through participating in video game cultures. He learned how to build his own computer, write codes, edit videos, modify games, and edit images through participation in the various video game communities, or affinity groups, online; I remember vividly that he told me all these activities are part of playing the game. This stunned me, as it provided me with concrete evidence to argue with my mother that playing video games is not unproductive; rather, play itself can be seen as a productive activity. However, I soon realized that his position as a white man literate in English probably provided him with the ease of access to these domains of learning, while other populations might have a harder time experiencing the learning trajectory he went through.

Given this firsthand insight into the life of an avid gamer, I began to see video game consumption and production sympathetically and delved into studies on games. I discovered that Game Studies as an interdisciplinary field draws from Psychology, Sociology, Communication, Education, and the arts, and it has emerged with the popularity of video games in contemporary

culture. The field sets out to examine various aspects of this medium and its related cultural practices. Within Game Studies, Games and Learning as a subfield have gathered much attention from scholars to investigate the learning mechanisms and education potential of video gaming. Specifically, Whitton (2014) categorized eight different approaches to this topic that researchers are engaging in. These approaches are categorized as “learning with entertainment games,” “learning with educational games,” “learning inspired by games,” “learning within games,” “learning about games,” “learning from games,” “learning through game creation,” and “learning within game communities” (pp. 4-5). These approaches address different questions of the educational aspect of video gaming and games at large.

In Art Education, many researchers have begun to dissect video games in relation to art making and art appreciation. Using Whitton’s (2014) categorization to interpret these researches, art educators has focused on exploring “learning inspired by games” and “learning through game creation” (pp. 4-5). Learning inspired by games addresses the ways in which video game content is used to direct players to learn about issues, relationships, and tensions that exceed the gaming context. For example, Parks (2008) discussed ways that serious games, which are games that intend to address non-fictional events in ways to solve real-world problems such as *Peacemaker* or *Darfur is Dying*, can be used by art educators as sites for social reconstruction. Learning through game creation, on the other hand, focuses on examining aspects of learning through engaging students in the game creation process. Gill (2009) and Patton (2011) both conducted research in their classrooms that utilized game making as an artistic practice. In Gill’s (2009) classroom, high school students created 3D models and animations that are central to video games. Patton (2011) created a game-based art pedagogy that allowed students to explore complex thinking through making video games in Game Maker. These experiments

demonstrated the ways in which video games and video gaming as artifacts and practices are important for art educators to consider in our digital age.

Inspired by these efforts that engaged video games in pedagogical terms, I stumbled upon an opportunity to pilot my own version of game-based art pedagogy. During the spring of 2014, the School of Art and Design received the Public Engagement Grant from the University of Illinois to create Everyday Arts Lab, which was a course that facilitated undergraduate and graduate students to provide arts programming in the local community. I was the teaching assistant for the course and I began collaborating with the Champaign Public Library.

In the spring semester, Everyday Arts Lab's programming focused on exposing youths to a variety of art-making materials and providing project-based art lessons. I noticed that youths, aged 11 to 14, at the Champaign Public Library had a strong interest in digital technologies, and specifically video games. Thanks to the new knowledge that I had recently acquired by participating in video game cultures, I was able to talk to youths regarding their video game interests. I realized that existing library programming, which included workshops on drawing, storytelling sessions, and book club discussions, did not support their interest in video games and other online communities.

Thus, I decided to tailor the fall semester's arts programming towards our shared interest in video games and piloted a five-week-long workshop series: *Minecraft* Modification Workshops. For five weeks in October of 2014, myself, along with two co-facilitators, met with youths aged 11 to 14 for two hours every week. In the beginning, there were over 15 youths involved. But as the session went on, a core group of 6 youths continued till the end. Even though I had planned for us to modify both the audio and visual aspect of *Minecraft*, we ended

up focusing on the visual aspect and we created various texture packs along with avatar skins for *Minecraft*.

To formulate this workshop series, I drew from resources provided by CurrentLab about game-based art pedagogy, which was an initiative that grew out of Patton's (2011) dissertation research. CurrentLab provided a variety of game-based art pedagogy lesson plans and flash versions of different games on the Current Lab website for educators to use. I modified aspects of game making that I was not yet familiar with and created my own game-based art pedagogy practice. The *Minecraft* Modification Workshops built on Champaign Public Library youths' engagement with the video game *Minecraft* and other video game titles at Teen Space, which is a space in the library dedicated for youths with computers and related literature, by encouraging them to move beyond the realm of playing towards the realm of creating. I decided to focus this five-week-long workshop on the concept of critique that is the central drive to all art making. Through the process of critiquing, audiences are able to appreciate the various qualities of a piece of art, produce meaning, and generate criticism that allows for further art making. Based on these ideas, this workshop introduced a wide variety of video games and prompted youths to engage with video games as art through the process of critiquing. After these critique sessions where youths were prompted to have a group discussion about the visual characteristics of the game we had all just played, youths proceeded to modify video games graphics, specifically *Minecraft*, based on the criticism they had generated. Last, youths showcased and critiqued their own work by playing in the video games worlds that they had modified.

After the *Minecraft* Modification Workshops, I was even more interested in investigating the relationship between youths' consumption and production of video game cultural artifacts. Specifically, I found the particularity of modification to be intriguing and possibly offering more

than I had first imagined. I felt that youths were more engaged when their production was closely related to an existing cultural artifact, such as a well-known video game character. At the same time, they were also beginning to view these existing cultural artifacts critically after acquiring the ability to tinker and modify them, such as pointing out the default gender of the *Minecraft* avatar and creating female versions of the avatar.

Given the exposure to various learning trajectories as presented by my friend and this initial experience at the library, I felt comfortable that I could argue with my mother along with all the other condemnatory critics of video games that playing is not only productive but could also illicit various forms of critical engagement with our off-line realities. In this context, I proposed to conduct an action research project that investigated the possibility of facilitating critical play in the Champaign Public Library.

### **Purpose of the Study**

This study aims to explore the concept of critical play, which is when a player is able to engage with game as a complicated system related to the society at large and intentionally modify it based on political concerns, in game-based art pedagogy. Specifically, I use an action research approach to examine how to facilitate critical play of video games among youth in a library setting. Initially when this study was first conceived, the purpose of this engagement only lay on two fronts: to situate critical play in current game-based art pedagogy, and to introduce critical play in library settings as a social critique and intervention. However, after the conclusion of this action research project, I add a third purpose to this engagement: to confirm existing analyses that complicate teaching criticality.

## **Critical Play in Game-based Art Pedagogy**

Even though critical play is already an integral component of game-based art pedagogy, the purpose of this study is to further theorize what is critical play and examine the dynamics involved in facilitating critical play through action research. In his dissertation, Patton (2011) conceptualized and implemented game-based art pedagogy that facilitated complexity thinking among students through playing, critiquing and making games, both physically and digitally. Here, complexity thinking is understood as “a way for constructing meaning that involves the integration of multiple types of systems, including dynamic models, closed- looped systems, and the ability to transfer one model of a system to another situation or phenomenon” (p. iii). This cycle of game-based art pedagogy addressed aspects of consumption and the production of games through critiquing and making. This dual emphasis on appreciation and creation has been central to Art Education (Eisner, 2002), and its implementation can be observed in both Discipline-based Art Education and Visual Cultural Art Education practices (Greer, 1993; Duncum, 2003). This multifaceted process of engagement with games allowed students to experience and explore games as complex and interrelated systems, much like any other cultural artifact.

Inheriting the game-based art pedagogy framework established by Patton (2011) that emphasize the reciprocal relationship between critique and creation, this dissertation brings to the forefront and theorizes further the concept of critical play. Critical play is where the player redesigns existing game narratives, mechanisms, or structures to address the limitations of the existing game; it is when the player is able to see the game as a complicated system related to the society at large with grammar, values and rules, and intentionally modify the given system to address the experiences that they desire but are currently absent. This formulation of critical play



is informed by current discussions in Games and Learning and critiques from Critical Communication Studies. Various authors have discussed aspects of critical play using different terms, including Salen and Zimmerman's (2004) "transformative play," Gee's (2007) "critical learning," and Flanagan's (2009) "critical play." Regardless of the different terminology, these authors each pointed toward a critical position involving a certain degree of reflexivity that players are able to adopt after familiarity with the system and actions taken to modify the existing system based on political concerns.

Critical play operates on two levels: critique of the in-game design and critique of the cultural conditions in which games exist. On the most basic level, critical play refers to the player's ability to critique the in-game design and implement modifications. After playing a game, the player reflects on their experiences and considers how the rules and structure of a game contribute to its gameplay. By identifying the causality implied in games, the player is then able to tinker and modify the existing design to create alternative gaming experiences. However, depending on the platform, this process of modification requires different sets of skills to implement. For example, modifying a tabletop game requires access to certain physical materials, while modifying a video game requires the ability to understand and write in computational languages. On the cultural level, critical play refers to a player's ability to identify the social values, assumptions, or ideologies built into the procedural rhetoric and surrounding communities of a game and to consider how a game's cultural context includes and excludes certain players. The player may then proceed to modify the perceived cultural ideologies by creating alternative extratextual texts that accompany a game. This includes alternative storylines, avatars, or even creating separate online communities. In this way, critical play becomes a social critique and intervention.

Regardless of the different levels of critical play, modification is built into the concept of critical play. Modification refers to changes made on something that already exists. As critical play is an engagement with a game as an object that embodies an existing system, critical play is always an extension, an iteration, and in dialog with that current system; it is changing certain aspects of the system to introduce new possibilities.

In gaming communities, modification is a popular practice. Players use the term *mods* as a shorthand term to describe the various modifications to the game that other players have created, and *modding* to denote the practice of creating modifications. However, these mods are usually some form of software that act as an add-on to an existing game or an alternative version of a game, not as a critique. But for the purpose of this study, I am using modification and mods to encompass the various cultural practices and artifacts that players generate as a critique based on or inspired by an existing game.

The ability to create modifications through critical playing requires the players to exercise their agency as cultural consumers and producers; this process requires a certain degree of reflexivity by them to recognize their position in relation to the game as a system (Merton, 1948). Facilitating critical play, then, should guide the players to see the system as a designed object, to have the player give himself or herself permission to enter the dialog between cultural producers, and to realize the value of their narrative as intervention through manipulating the existing design. In this fashion, critical play can be understood as a practice of agency and this practice of agency is relevant beyond the realm of a game as a system. Connecting back to the framework of game-based art pedagogy, Patton (2011) argued that the purpose of game-based art pedagogy is to prompt the player to think about systems and complexities in relation to society at large. Here, approaching the game-based framework differently from Patton, the purpose of this

study is to investigate how critical play can be an aspect of game-based art pedagogy that focuses on giving players the permission to exercise and practice their agency in modifying systems that go beyond the status quo.

### **Critical Play in a Library Setting**

The other purpose for this study is to introduce the critical play of video games to library settings through game-based art pedagogy. Specifically, this action research project piloted a five-week-long Modding Wednesdays: *Minecraft* Modification Workshop program in the Champaign Public Library to facilitate middle school youths from nearby schools in a series of game modifications. It aimed to address questions of accessibility and exclusion regarding games and learning and fulfill the need to better engage youth through a game-based art pedagogy intervention in a community setting.

Video games can be educational. Gee (2007), Squire (2011), and others have theorized that gaming is a valuable medium to facilitate situated learning among students; they investigated the learning mechanisms that already exist in gaming communities, or affinity groups, and suggested ways to include aspects of gaming into formal schooling. However, these theories of learning assume an ideal learning trajectory that requires an ideal learner with plenty of access to the material technology both inside and outside of schools. While these theories are fruitful in identifying many players' experiences in participating in video game culture, they fail to address the ideologies inherent in most gaming communities that exclude certain populations.

Video games can be educational, but perhaps only in certain populations. Nakamura (2000) and McPherson (2012) pointed out the racial discrimination in digital spaces online, where users and players are assumed to be White, while other races, such as Asians, are subject to ridicule based on stereotypes once their identity is disclosed. Besides racial discrimination,

economic inequality based on class also contributes to the racial inequality in online presence, as the length of time available and the digital literacy required to access digital spaces is tied to issues of economic capital. At the same time, Taylor (2006) and others have questioned the masculinity that is built into various popular games and surrounding communities and argues that digital spaces online are not welcoming to all genders. This is evident in the “Gamergate” incident in 2014, where anonymous gamers harassed, threatened, and attacked various feminist gamers who voiced their opinions about cultural practices in gaming and proposed constructing alternative communities with less exclusion.

With the problematic nature of learning informally online and the assumed access to digital technology outside of school, I decided to create a physical space with certain pedagogical structures to support and engage youth through their consumption and production of games. This intention coincided with the needs of the Champaign Public Library, which is a local public library in the city where I am pursuing my doctoral degree.

**The Setting.** The Champaign Public Library was conveniently situated across from a local middle school, and it was a popular after-school gathering place for local youth. Specifically, the Champaign Public Library had a dedicated Teen Space on the first floor that was equipped with books, Internet connectivity, desktop computers, and a printer. On school day afternoons, youths crowded the Teen Space and other areas of the library; the desktop computers were always filled with youths gaming together or venturing into online communities. The Champaign Public Library had collaborated with the University of Illinois and other local arts organization to provide programming for youth that utilized the infrastructure of this space. When I began this study, the library was in the process of building a partnership with the Champaign-Urbana Community Fab Lab, where portable laptops, graphic tablets, digital

cameras and a variety of other digital technologies were loaned onsite to support further pedagogical programming.

With the arrival of all this new technology, Champaign Public Library was in need of a specialist who was familiar with these technologies to facilitate programming. Given the need to utilize these technologies for pedagogical purposes and the desire for youths to engage in video gaming related activities as mentioned earlier, I piloted the first iteration of *Minecraft* Modification Workshops. After this initial attempt, I began to consider further intervention that would prompt youths to critically consider their engagement with video game consumption and production. Drawing from the established framework of game-based art pedagogy, I created another five-week-long curriculum, which I refer to as *Minecraft* Modification Workshop 2.0, that aimed to facilitate critical play among youth at the Champaign Public Library. This action research project documented the development of this curriculum and examined how to facilitate critical play among youth; it aimed to better understand critical play through this implementation. By creating a physical space in a publicly accessible community setting that supported the use of various technologies and was dedicated to the modification of video games, this intervention aimed to address the social inequality built into existing discussions in Games and Learning.

### **Complicating Criticality**

The third purpose of this study is confirming the complexity of teaching criticality as formulated by Williamson (1981), Turnbull (1998), and Buckingham (2003). Specifically, through the case of this action research on critical play, I am echoing the argument that criticality looks different for different social actors with varying intersecting positionalities, and pedagogical approaches towards criticality “should be anchored in a concrete situation, at the

particular levels of actual students” (Williamson, 1981, p. 81). This means that each student needs a different set of analytical concepts in order for him or her to mobilize their lived experiences for the exercise of criticality. For teachers, this means that there is no unified way of teaching criticality, particularly through specific ideological constructs such as gender, race, and class.

It is important to note that the last purpose of this study is not the result of intentional planning, but rather the fruits of hindsight. When I first delved into this study, I was focused on using critical pedagogical approaches developed by visual culture art education (e.g. Duncum, 2003; Freedman, 2003; Keifer-Boyd et al., 2007) and critical media literacy studies (e.g. Scharrer, 2005; Gainer, 2010; Schmier, 2014; Puchner et al., 2015) to intervene in existing discourses around game-based pedagogies in *Games and Learning*, which lacked a critical perspective. I began developing the curriculum utilized in this study by mimicking how media and art educators scaffolded criticality through critiquing specific ideological constructs. As a result, I carried over the assumptions held by these educators about teaching criticality: it is straight forward in the sense that students will be critical after acquiring a standardized toolkit of analytical concepts, and their criticality can be observed through how they exercise those concepts when discussing and producing media. However, teaching criticality is not as simple as communicating and exercising analytical concepts that deconstructs ideological constructs, as I will illustrate in the coming chapters. Participants in this study not only struggled to acquire the analytical concepts I was presenting, but they also exercised criticality in ways that ignored arguments that I considered as critical.

In order to explain what I initially interpreted as my pedagogical failure in facilitating critical play, I discovered the ways in which Williamson (1981), Turnbull (1998), and

Buckingham (2003) encountered similar experiences decades ago. Though they have been arguing against the linear interpretation of criticality assumed by critical media literacy scholars, I had not covered that aspect of the literature when I first conceived of this study. Furthermore, while I was aware that some art educators questioned the political correctness assumed about criticality that was built into aspects of visual culture art education (Herrmann, 2005; Duncum, 2009), I, myself, was experiencing the complexity of criticality. I could not fully comprehend the criticisms made. They merely acted as intellectual exercises for me until I had personal experiences that placed me in a similar intersecting position and connected me to this analysis in an embodied way.

Thus, as a result of my journey to understand critical play, the purpose of this study is to further complicate teaching criticality as articulated by Williamson (1981), Turnbull (1998), and Buckingham (2003) through the specific case of critical video games play.

### **Research Question**

This research involves one main question, with two supporting questions to further explore the main question. They are as follows:

- How can I facilitate critical play of video games among youths in a library setting?
  - How does the process of understanding, critiquing, and modifying contribute to the development of critical play among youth?
  - How does learning in an affinity group influence the development of critical play among youth?

### **Significance of the Study**

This study is significant in that it adds to the existing celebratory position on video games in *Games and Learning* by providing a critical position to examine video game playing, and it

extends the existing efforts of game-based art pedagogy in new media arts education. I elaborate on these contributions in the following paragraphs.

Game Studies at large are moving more and more towards a critical examination of video game playing to further understand the implications of this medium in society. Dyer-Witheford and de Peuter (2009) pointed out that scholars have approached video games as a medium from condemnatory, celebratory, and critical positions, and the popularity and appearance of video games follow this chronological order. In Feminist Studies and Critical Communication Studies, many have problematized the cultural ideologies present in video games and video game culture. For example, Schulzke (2012) has criticized the meritocratic norm built into video games and Nakamura (2000) has reviewed the racial discourse in video game cultures. In the field of Game Design, scholars have moved towards the discussion of critical game-making that addresses the socio-cultural context in which games exist in contemporary society.

However, discussion in Games and Learning has evolved only from a condemnatory position towards a celebratory position. As a subfield of Game Studies, Games and Learning approaches games from an educational standpoint. Contrary to Game Studies where most scholars have backgrounds in English, Literary Studies, or Computer Science, researchers and theorists writing in Games and Learning are predominantly scholars from Education Policy Studies, Educational Psychology, and Cultural Studies, such as Gee (2007), Squire (2011), and Whitton (2014). Numerous studies in this subfield have appeared to claim various educational aspects of video gaming and video game culture. However, less has been said in Games and Learning from a critical position. Specifically, the overwhelmingly celebratory claims, which emphasize an ideal learning trajectory, fail to include the critiques of video game culture discussed in Game Studies, Feminist Studies, Communication Studies, and Game Design.



Thus, this study aims to contribute to the void of critical positions within discussions of Games and Learning by formulating and exploring the concept of critical play in a library setting. At the same time, this research contributes to the ongoing discussion of incorporating game-based art pedagogy into new media arts education. Researchers studying new media in Art Education have long explored ways to utilize various aspect of emerging digital technology into traditional art education settings (e.g. Taylor & Carpenter, 2007; Gill, 2009; Lin & Bruce, 2013). These efforts have focused on experimenting with art making in the visual realm, such as digital photography, digital painting, video editing, animation and 3D modeling, which I review in the next chapter. As a strand of this discussion, game-based art pedagogy examined the ways that game making can be included and considered within this realm of artistic expression. Current efforts in this strand have focused on constructing the framework for pedagogical game making that relates to other artistic practices and has placed an emphasis on constructing games as systems. In light of this discussion, this research furthers this framework by magnifying the interrelated aspects of consuming and producing games. This research is significant in that it proposes an alternative approach in game-based art pedagogy that focuses on positioning youths to modifying existing systems.

### **Parameters of the Study**

The research employs an action research methodology to examine the possibility of facilitating critical play among youth. This study took place at Champaign Public Library, and it spanned from February to March in 2016. For five Wednesday afternoons, I hosted *Minecraft* Modification Workshop 2.0 in the Nate and Lily Story Room across from the Library's Teen Space. For these Modding Wednesdays, I created a curriculum that evolved as the workshops went on.

## **Delimitations**

First, it should be noted that the curriculum devised for this action research project was informed by the first iteration of *Minecraft* Modification Workshops that I had piloted at the Champaign Public Library during the fall of 2014. Details from that series will not be included, as it was a pilot study and I did not acquire IRB to document that experience. However, I address certain curriculum design choices in this study that I've made based on that experience.

Secondly, this research is an action research project. It is not a participatory action research project. Youths' opinion and feedback of their experiences are documented and incorporated into the emergent curriculum used and studied in this action research project. By emergent curriculum, I am referring to the Reggio Emilia approach to curricular planning that emphasizes responsiveness towards students' spontaneity and emerging interests; "teachers plan in response to the group's interests and concerns, and curriculum expands into genuine inquiry, as children and teachers become participatory colearners who attempt to understand some aspect of real life" (Wien, 2008, p. 1). I considered youths as active participants of this experiment and largely contributed to the evolution of this study. These criteria fit within the realm of action research methodology (McNiff & Whitehead, 2006). However, I am not using the term *participatory*, as I was the active facilitator, curriculum designer, and director of this research study; youths were actively involved in the enactment of the curriculum but they were less involved in the writing and articulating process of this dissertation. The term *participatory* implies that participants are actively involved in the whole research process, where certain issues of authorship often arise (MacDonald, 2012). Given the focus of this dissertation on critical play, I will maintain that this study is an action research project to avoid the line of discussion around authorship.

Thirdly, I am not arguing whether or not playing video game involves learning. This line of discussion has been exhausted, and it is assumed in this research that all experiences involve learning. The more important question is what are players learning and how can players direct meaningful learning through their engagement with video games. This research operates under this assumption, and thus to investigate critical play is an important aspect of learning in video gaming.

Fourthly, this research does not address concerns of violent tendencies among players that often accompany the discussion of video games. Discussion of violence in video games often operate under statistical analyses to find direct causality between playing violent video games and violent behaviors, which is not the line of inquiry in which I am interested. Instead, this dissertation focuses on discussions around inclusion and exclusion that youths find through engaging with video game culture.

Lastly, this research does not distinguish art from other designed objects. Bogost (2011) and other theorists had argued for video games as art and that we should engage with them as such. However, I find the distinction fruitless here. Instead, this research operates under the framework of visual culture that considers various forms of cultural artifacts that are generated and circulated in our society as forms of expression and communication (Duncum, 2003; Freedman, 2003; Tavin, 2005). Here, the video game modifications that youths created were seen as cultural artifacts that are part of the larger exchange of visual culture.

### **Limitations**

One limitation of this study lies in the inconsistent engagement of youth. As this study was situated in a library without mandatory attendance, the participation was subject to youths' capricious schedules. Youths dropped in and out without prior notice and it became hard to

maintain their long-term engagement with one topic. This limitation is addressed to a certain extent by the loosely structured curriculum that focused on a single topic each session.

Another limitation of this study lies in the infrastructure of the library and the technology with which I was equipped. The library's Internet access limited a number of websites and certain kinds of multiplayer activity online. At the same time, the software that was available on our given laptops restricted our modification to certain activities. These issues limited the possible modifications we were able to explore, but they were not detrimental to our exploration of critical play.

### **Definition of Key Terms**

In this section, I define a few key terms. These terms are not to be confused with the key concepts that I will theorize and develop in the coming chapters. Instead, these key terms act as building blocks for the rest of my argument.

#### **Context**

The Merriam-Webster Dictionary (n.d.) defines *context* in two ways. First, *context* can be understood in purely textural terms, as “the parts of a discourse that surround a word or passage and can throw light on its meaning” (para. 1). Secondly, *context* can be understood in terms of environment and settings, as “the interrelated conditions in which something exists or occurs” (para. 2). In this dissertation, I use the second definition of *context*. When I refer to *context*, I am describing the conditions underlying the social environment in which an individual exists or an event occurs. This includes how the immediate physical environment, the social relationships encountered, and the social structures interfaced are interrelated.

#### **Culture**

According to Raymond Williams (1961), there are three general ways to define *culture*. The first definition encompasses an “ideal” and “a state or process of human perfection” (p. 57). The second definition focuses on the process of documenting “the body of intellectual and imaginative work” (p. 57). The third definition emphasizes the social component of culture as “a description of a particular way of life” (p. 57). Here, I am combining the second and third definition of *culture* to describe “the knowledge, language, values, customs, and material objects that are passed from person to person and from one generation to the next in a human group or society” (Kendall, 2012, p. 36). When I use the term *video game cultures*, I am referring to the multiple social groups with varying values and practices around the media form of video game. When I use the term *video game culture*, I am referring to these various social groups as a whole.

### **Mechanism**

By *mechanism*, I refer to “the fundamental processes involved in or responsible for an action, reaction, or other natural phenomenon” (“Merriam-Webster Dictionary,” n.d., para. 4). Most commonly, I refer to *game mechanisms*, which describe the ways in which players, as subjects, interact with video game as an object.

### **Medium/Media**

In this study, I use *media* to refer to the means for communication. For example, paper is the medium of newspaper as an object, just as software is the medium of video game as an object.

### **Object**

While the term *object* is used in the field of computer science to denote “a data structure in object-oriented programming” (“Merriam-Webster Dictionary,” n.d., para. 6), I use the term to describe “something mental or physical” with boundaries “toward which thought,

feeling, or action is directed” (para. 2). For example, a painting is an object, and its boundary is the canvas containing its physical appearance. Yet, as a viewer, I may derive or project thoughts and values on it by interacting with it. In the case of this study, video game is the primary object under analysis. When I discuss video game as an object, I am referring to it as a specific piece of software.

### **Structure**

In this dissertation, I use the term *structure* from a sociological perspective to denote social structure. Social structure refers to “any recurring pattern of social behavior” (Hill et al., 2000, p. 391); it is “the complex framework of societal institutions (such as the economy, politics, and religion) and the social practices (such as rules and social roles) that make up a society and that organize and establish limits on people’s behavior” (Kendall, 2012, p. 93).

### **Subject**

In this dissertation, I use the term *subject* in two ways. First, *subject* refers to “a department of knowledge or learning” (“Merriam-Webster Dictionary,” n.d., para. 3). For example, math, science, art, and engineering are all subjects. In these cases, I will differentiate them from the other definition by qualifying the term *subject* with the word “school” to indicate their relationship with education. Secondly, *subject* refers to “the mind, ego, or agent of whatever sort that sustains or assumes the form of thought or consciousness” (“Merriam-Webster Dictionary,” n.d., para. 2). I use this second definition to describe the individuals engaged in play.

### **System**

By *system*, I mean “a group of interacting, interrelated, or interdependent elements forming a complex whole” (Salen & Zimmerman, 2004, p. 50). These elements include objects, cultures, subjects, structures, and contexts.

### **Dissertation Outline**

In Chapter 2, I review the current literature in Games and Learning. I extend the discussion by incorporating critiques from other fields to conceptualize critical play, and I situate critical play in current discussions of game-based art pedagogy. In Chapter 3, I detail the methodological framework and procedures that are used in this study. I describe the site, the curriculum, the participants, and the methods of analysis that are relevant to this study. In Chapter 4, I describe how this action research unfolded; I detail the process of this experience, the iterations of the curriculum, the reflections from the experience, and the feedback from participants. In Chapter 5, I discuss the findings of this research in relationship to the theorization of critical play. In Chapter 6, I conclude with a discussion on the possibility of facilitating critical play, and I examine the implications of this study for Art Education and other researchers working along the intersection of criticality, games, and education.

## Chapter 2: The Journey to Critical Play

According to Entertainment Software Association's 2015 survey, 42% of Americans play video games on a regular basis, and four out of five U.S. households own a device to play video games. In 2014, U.S. consumers alone spent a total of \$22.41 billion dollars in the video game industry, and it is estimated that the global video game industry is worth \$1.93 trillion dollars. Compared to the film industry's worldwide net worth of \$88.3 billion dollars, it is safe to say that video games are replacing films as the most popular form of entertainment today.

In an attempt to harness play for pedagogical purposes, various studies in Games and Learning have emerged to describe the development and implementation of game-based pedagogy. The emphasis often lies in assimilating students into society through the cultural texts as presented in video games and the affectiveness of play. However, for a critical pedagogue, the goal of education does not stop at assimilating students into society through the learning of cultural texts and the internalization of rules of conduct. Rather, the goal of education should be the facilitation of autonomous thinkers that are also able to question the existing status quo in which they were socialized. They should be able to consider the reasoning and historical formation of the cultural texts and rules of conduct they were given, and based on their own moral reasoning they would then be able to decide whether to adhere to these given conditions.

The gap between playing to assimilate and playing to construct/deconstruct provides art educators a unique position from which to contribute to this discussion. As our discipline has long advocated for the reciprocal relationship between critique and creation (Eisner, 1972), I would argue that game-based art pedagogy bridges this gap by extending the critique to the realization of an alternative through an emphasis on production. In this context, I argue for the further development of critical play in the framework of game-based art pedagogy. By



combining the criticality drawn from critical pedagogy, the force of play, and the emphasis on production, we may arrive at a method to engage students in developing their sense of autonomous agency through critically playing with the cultural form they enjoy.

Given this position, the following literature review serves two functions: to identify the knowledge gap I have outlined above and to construct a conceptual framework that theorizes and operationalizes critical play.

To begin, I theorize a topology of play in relationship to video games as a cultural form. Before delving into discussions around game-based pedagogy, it is vital to set the stage by clarifying what I mean by the terms play and video games. Drawing from Game Studies, I review the ways these terms have been theorized and applied in research studies and construct a topology of play as a framework for analysis in this study.

Later, I use this operational definition to examine discussions around game-based pedagogy. As Dyer-Witheford and de Peuter (2009) pointed out, “scholars can be said to have responded to this young medium with one of three broad stances: condemnatory, celebratory, or critical, positions whose popularity and influences have approximately followed a chronological sequence” (p. xxiv). As these three positions also characterize the discussion of game-based pedagogy in the field of education, I utilize this framework to organize my argument for the development of critical play.

I begin with a brief overview of the condemnatory position on video game playing. I summarize critics’ reasons for rejecting play as a meaningful learning experience and video games as a cultural form worthwhile for educational attention. I then challenge their position of rejecting game-based pedagogy by pointing out the flaws in their assumptions about how players

engage with video games, which leads to their failure to engage students in contemporary society.

In the next section, I review the celebratory position on video game playing. I focus on laying out current educational discourse on video game playing that emphasizes cultural participation through literacy learning. I utilize my topology of play to examine the various elements involved when players are learning through video game playing. Afterwards, I problematize the celebratory claims of current educational scholarship.

Lastly, I review and develop the critical position on video game playing. I theorize critical play in relation to critical pedagogy, game-based art pedagogy, and revisit the topology of play. By doing so, I am able to situate critical play in this study.

To identify the literature reviewed here, I searched for literature on *Google Scholar*, *EBSCO*, and *JSTOR* using the terms “video game,” “video game culture,” and “critical pedagogy.” Across the three search engines and databases, I selected the top five most cited articles or books. Among these, I also cross-searched their references to identify the most popular citations. In addition to the criteria of popularity, I identified various texts suggested by my committee members that should be included in this discussion. It should be noted that, since this literature search was done in English and used research data gathered from Western nations, this review cannot be generalized to encompass a global perspective on video games and education. In addition, even though specific subject areas, such as art education, social studies education, or science education, have their own discourses concerned with different questions and dialogues, they are considered here as sub-disciplines within the broader area of educational scholarship and are included based on their discussion around game-based pedagogy. With their common interest in game-based pedagogy, they are inherently in dialogue with each other on the

medium of video games. This chapter does not claim to be all-inclusive but modestly hopes to provide a review of a representative slice of the current literature.

### A Topology of Play

To review and assess existing discussions around game-based pedagogy that utilizes play to achieve educational purposes, I will first construct a topology of play that identifies the various elements. By extension, I will describe the relationship between play and video games for the purpose of this research.

What is play? At the heart of the matter, play is “a way of being in the world” (Sicart, 2014, p. 3). Play is a way of being in the sense that it is not an isolated activity or action that separates from reality, education, work, and so on. Rather, it is an attitude that one can take towards approaching our various realities, whether it be learning, cooking, or writing. Play can be intentional, such as when individuals intentionally engage in a formalized game with structured rules. But play can also be spontaneous and unintentional, such as when individuals engage in ludic behaviors without intentionally directing these acts of playfulness toward someone or something.

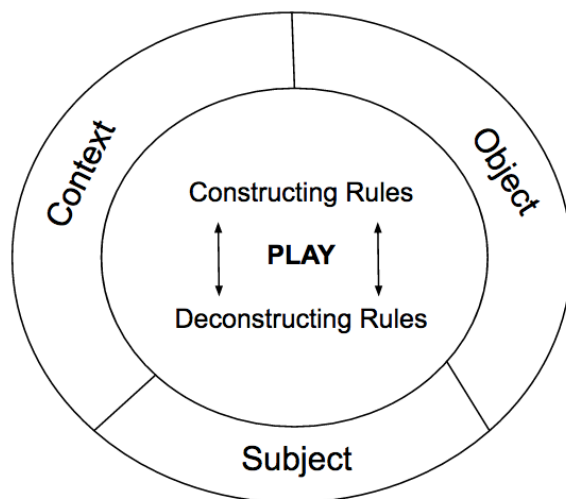


Figure 1. A topology of play

If we assume that our various realities can be understood through the lens of cultures and that various activities are interrelated and locked cultures, then we can understand play as a way to approach and perhaps untangle these cultural structures. With structures come rules, limitations, or guidelines that act as signposts and boundaries within cultures. According to Sicart (2014) and Henricks (2015), the defining feature of play lies in its force to construct and deconstruct the rules involved in the culture approached. To understand how rules are constructed and deconstructed, we must also identify the context, subject, and object that shape the culture to which play is applied. In the following, I will unpack the force of construction/deconstruction along with the elements of context, subject, and object.

### **Construction/Deconstruction**

For Sicart (2014), play is in essence the interplay between construction and deconstruction. This reciprocal relationship is characterized by their dependence upon each other; we cannot construct without materials, which requires deconstruction to achieve, and we cannot deconstruct without first having a construct to approach.

The idea that play is a constructive force can be observed in various play theorists' writings. Huizinga (1950/1955) claimed that play generates order, and thus it serves an important function among the living. For him, play is not exclusive to humans; animals play as well. This sets up the foundation for his argument that play presupposes culture, as in artificially produced artifacts, and society, as in ways of collective living, and that play is the necessary condition for culture to emerge. Caillois (1961) furthered Huizinga's discussion on the constructive function of play by stating that play not only creates but also further maintains different kinds of class structures and social order in the context of play. On the other hand, Henricks' (2006) view of play as a form of human expression supports the idea that play is constructive through his

articulation of creativity. For him, human expression is demonstrated through creativity, which involves construction via appropriation of existing social structures.

Henricks' (2006) idea of play as construction via appropriation hints at the reciprocal relationship between construction and deconstruction without making the connection explicit. For me, appropriation involves deconstructing an existing culture to extrapolate elements to be mobilized and applied in different ways in an existing culture. In this sense, play is not only constructive and generative of rules, but it is also a force to deconstruct and loosen existing systematic cultural structures as a side effect. Sicart (2014) characterized this force as the carnivalesque nature of play. Carnivals involve temporarily deconstructing systematic structures to generate laughter. At the same time, this constructed laughter is dependent upon the deconstructed culture, as it is a form of mockery or parody of the cultural text; in other words, to subvert, deconstruction cannot appear without the realization of the existing construct of a culture.

After understanding play through construction and deconstruction, I now turn my attention to establishing the context, subject, and object under which play operates.

## **Context**

Play is contextual in the sense that play is dependent upon the specific system of relationships in the culture to which it is applied. As cultural spaces contain particular hegemonies that construct values defining the space and the type of interaction, these values and social norms become the rules that govern play. In Caillois' (1961) terms, the context of play is defined by class structures and social order operating in the culture where play is applied. At the same time, these rules that structures play in the first place are also subjected to the

deconstructive force of play, meaning that play is not determined by the context. Instead, the rules as structured by the context become elements with which to play.

### **Subject**

Play cannot occur without a subject, which can be an individual or a group of individuals. As play is characterized as an attitude to apply, only an individual or individuals can deploy play. The key here lies in the fact that play does not occur unless an individual voluntarily chooses to play, whether intentionally or unintentionally (Huizinga, 1950/1955; Caillois, 1961; Sutton-Smith, 1997). If an individual attempts to apply play in a culture and discovers that s/he does not want to interact with it based on the forces of construction/deconstruction, s/he can choose to leave or simply reject employing a playful attitude towards the culture. This is an important characteristic of the subject. The subject must willingly and temporarily decouple from reality when engaging in play. It is not that play is a detachment from the culture, but rather that play is a pretense understood by the player as a way to engage with the culture.

### **Object**

The object of play is the embodied form of context for which the subject of play, the player, can interact with to experiment with the forces of construction/deconstruction; it is the physical embodiment of the rules that govern the way the player plays. With its embodied form, the play object makes the contextual rules of a culture explicit to the player and provides the starting point for the player to tinker with the rules.

In the context of this dissertation, the play object is a video game. A video game, referred to by some as a digital game, is a piece of software designed to be played as a game on a digital device that produces visual feedback to human input (Parks, 2008; McGonigal, 2011; Chien,

2012). There are various platforms, or different contexts, to play video games, from dedicated gaming consoles, to personal computers, to mobile devices. The various platforms contribute to different types of engagement, whether the user plays alone or with others. Regardless of the different platforms, a video game is always mediated digitally through a visual screen and requires a human subject, the player, to continuously interact with it by inputting commands. A video game is understood here as a cultural form that embodies the contextual values of a culture that the video game operates under (Costikyan, 2002).

### **Condemnatory Position on Playing Video Games**

After establishing a topology of play, I now turn my attention towards assessing the claims made about play and learning using video games. The first position I tackle here is one that condemns video games and rejects the possibility of mobilizing play for the purpose of learning. Even though this position has long been rejected in the field of Games and Learning, it is worthwhile to review critics' arguments in the context of this study to justify the importance of this research.

For the first three decades of video game popularization, from the 1970s to the 2000s, both academic and popular discourse held a strong condemnatory stance on what was then an emerging cultural form (Dyer-Witheford & de Peuter, 2009). The knee-jerk rejection to this form of play stemmed largely from a "moral panic" perspective. Specifically, this moral panic was concerned with the separation of the "real" from the virtual. Popular discourse in the news media often portrayed video game playing as an escape from real-life responsibilities, leading to addiction and disengagement with the society at large (Young, 1998; Cover, 2008). This disengagement was said to happen because each video game had its own navigating rules and visual world. By engaging in video games, it was claimed that participating players were

immersing themselves into the game world, which means that they were separating themselves from the real world. Players were learning the rules of the game and how to succeed according to those rules, but nothing more, critics said.

This condemnatory position operated under two assumptions. The first assumption was based on the binary separation between the “virtual” and the “real,” where interactions happening “online” or in the “game world” were considered unreal and a form of disengagement with reality. If social interactions online were unreal, then they were unproductive in terms of an individual’s reality. The second assumption was that playing is not a form of serious engagement with reality. Specifically, precisely because games were comparatively risk-free, playing games involved different processes than that of social actors navigating through fixed social structures with real-life consequences (McGonigal, 2011). Thus, video games were cast as entertainment, as mere consumption with no significant social contribution besides boosting the video game industry and the economy in general. Both of these assumptions underpinned the conclusion that video games were unproductive in terms of players’ “real life,” and thus a waste of time.

### **Challenging the Condemnatory Position**

By contrast, many education scholars, such as Gee (2007), Squire (2011), and Muros et al. (2013), contested the assumption of a separation between the “real” and the virtual. Muros, Aragón, and Bustos (2013) analyzed youth’s play of video games as constructing social networks during leisure time and concluded that what happens in the virtual world not only does not stay in the virtual world, but often has a direct impact in shaping real-life identities. Video games become places for youth to “hang out” with other youths to construct or deconstruct their relationship (Ito et al., 2010). Thus, how people perform in the virtual world has direct real-life consequences, such as losing a friend due to unwelcomed behaviors.



Pulos (2013), along with Taylor and Carpenter (2007), claimed that many theorists consider game worlds to be metaphors for real life; real life also operates with rules, though they may be less explicit. In games, the rules may or may not be explicit. Players learn the rules through direct instructions throughout the game, or they learn through experimentation with the gameplay; the player asks, if I interact with this in-game object this way, what would happen? With the instant feedback system, players learn the consequences of their actions and modify their behavior to progress in the game. In real life, the instructional guidelines for behaviors are sometimes explicitly given. Authoritative figures, such as parents or teachers, or binding contracts, such as a students' code of conduct, may explain explicitly what is expected from individuals; for example, to have ice cream, we must finish our vegetables first. However, often we grasp the implicit rules of society through experimentation; the individual asks, what would happen if I lied and said I finished the vegetables? And just like different video games titles, different life circumstances contain different rules to follow.

Thus, I would argue that the real and the virtual cannot be separated because the virtual is real in the realm of play. The virtual is real in the sense that the video game is merely an object that embodies our real-life system of meanings. Our time is a continuum, and our socialization does not stop just because we are playing a game. When individuals choose to engage in video games, they are also choosing not to do their homework at that time. When individuals learn that practice in-game will improve their skills, they are also learning the importance of practice in real life. In other words, playing a video game is an engagement with their reality.

If playing a video game is an engagement with our reality, then rejecting the object of a video game is also rejecting the reality, or systems of meaning, that students are engaged with; by rejecting video game, the condemnatory position is actually rejecting the realities of our

students. In doing so, instead of facilitating students in recognizing the connections between the systems of meaning as presented in school subjects, educators risk alienating their students.

### **Celebratory Position on Playing Video Games**

After rejecting the condemnatory position on video game playing that fail to acknowledge any educational value in this activity, I turn my attention towards reviewing arguments made by education researchers that celebrate the learning potential of video game playing. To effectively present the celebratory position, I have organized this position into three strands of discussion. First, I explore the argument that theorizes video game playing as literacy learning. Second, I examine research that explores the informal learning trajectory of players through their leisure play. Third, I survey the various game-based pedagogies that have developed in light of the argument that video game playing can be educational.

After reviewing arguments for video game playing as educational, I provide a section challenging some of these arguments on the grounds that they do not address the ideological structure and learning trajectories as presented and projected through video game playing. The lack of such critical discussion in the celebratory position provides the impetus for this research to emerge.

### **Theorizing Video Game Playing as Literacy Learning**

How can video game playing be educational? In the field of games and learning, proponents of video games argued for recognizing video game playing as educational in terms of literacy learning (Gee, 2007; Squire, 2011). In the following, I will recap their argument that theorized video game playing as literacy learning through the framework of semiotic domains.

Gee (2007) postulated that the different governing ways to decode meaning in cultures can be considered in terms of semiotic domains. By semiotic domains, he meant, “any set of

practices that recruits one or more modalities to communicate distinctive types of meanings” (p. 19). Interpreting and acting in society involves employing different semiotic domains, as the various types of cultural practices constitute the contemporary life world. In other words, Gee used *semiotic domains* to describe systems of meaning. This system of meaning encompasses the interrelationship across the social structure of a group of people, the social context in which these people interact, the people as subjects interacting, the objects being interacted with, the mechanisms to which subjects interact with objects, and the medium of objects. For example, video game culture as a semiotic domain refers to the ways in which players organize amongst each other, the physical or virtual locations that players interface with each other, the player as a subject engaging in play, the specific video game title being played, the ways that a specific video game can be played, and the extent that video game as a piece of software can be interacted with. In the following, I will use *semiotic domain* when I am attempting to describe the interconnectedness of these various elements. Otherwise, I will name the specific aspect under consideration.

Contemporary society is often characterized by multiple digital mediations, and this has called forward a new understanding of literacy (Duncum, 2004; Gee, 2007; Sanford & Madill, 2007). Traditionally, literacy was understood as “the ability to read and write” (Gee, 2007, p. 17). At the core of this ability is the process of decoding and encoding to generate meaning. However, this simplistic notion that language can exist in a vacuum without connection to other forms of communication systems is challenged by New Literacy Studies (Duncan, 2009). Images, sounds, symbols, and words all work together to convey meaning.

The understanding that language is connected to other forms of communicative systems calls forth a reconceptualization of literacy. Multiliteracy, which is informed by New Literacy

Studies, is used to encompass complex meaning formation through the various ranges of medium involved. One of the ways Jenkins (2006) used the term *convergence* was to describe this process whereby meaning emerges through a combination of media; convergence is “the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behavior of media audiences” (p. 2). Literacy, then, could be understood as learning to encode and decode cultural texts in a given semiotic domain. Multiliteracy aims to encapsulate the various forms of literacy present in semiotic domains, and to consider the complexity of cultures.

According to Gee (2007), the reason learning in the semiotic domain of video game culture is important is because it has important implications for learning in other semiotic domains. Gee (2007) explained,

Semiotic domains in society are connected to other semiotic domains in a myriad of complex ways. One of these is that knowledge of a given domain can be a good precursor for learning another one, because mastering the meaning making skills in, and taking on the identity associated with, the precursor domain facilitates learning in another domain. (p. 39)

In other words, learning in one semiotic domain is beneficial to learning in another semiotic domain. Duncan (2009) argued that learning in one semiotic domain is beneficial for learning in another semiotic domain in terms of domain mapping. Domain mapping is the process of transferring knowledge in one domain to another through the commonalities or similarities that the other domain shares. As various video game cultures constitute a family of semiotic domains, achieving proficiency in one video game enables learners to approach other video games and related activities, such as computational thinking or film analysis, with ease through domain

mapping. An example of domain mapping is the way the mechanics of video games enable a form of learning to learn that would apply to other semiotic domains (Parks, 2008). It encourages the habit of learning through hands-on participation and experimentation (Squire, 2011). “Game over” is never the end; instead it merely suggests ways to do better next time as failing or dying does not terminate the engagement (McGonigal, 2011).

In summary, playing a video game is educational in the sense that it involves literacy learning. Here, play is the mechanism for which players become literate in cultural norms and values through interacting with the video game object; the video game object is the vehicle that embodies rules governing the culture it originates from, and playing it allows the player to internalize and acquire literacy in this culture, which may also open doors to other cultural contexts.

### **Video Game Playing as Informal Learning**

If video game playing is educational in terms of literacy development, then what specific literacy are players developing through their leisure play? In this section, I turn my attention to examining research that explores the informal learning trajectory of players through their leisure play. Specifically, I will use my topology of play to interpret this research. By doing so, I am able to identify the context, subject, and object for play to be educational, and appropriate these elements for the design of my action research.

**Context: Affinity groups and video game cultures.** If we are to understand play in terms of informal learning among video game players, the first element that needs to be addressed is the context: what is the context for spontaneous play to be educational? The various studies that examined video game playing addressed it in the context of affinity spaces and video

game cultures, namely the various communities that emerge around different video game titles and genres.

Affinity groups are, “groups wherein people primarily orient toward a common set of endeavors and social practices in terms of which they attempt to realize these endeavors” (Gee, 2007, p. 196). Most popular video games have developed, or are in the process of developing, accompanying affinity groups of active and/or even expert players. By devoting time to participate in particular video games, the player will move up from being a novice to an expert in both the game and the video game culture. As affinity spaces offer, “multiple interest-driven trajectories, opportunities to learn with experts, paths toward becoming an authentic participant, and ways to lead the group itself” (Squire, 2011, p. 65), they provide amateur players an accessible way to learn from others’ experiences in navigating this semiotic domain. They “form the sorts of goals, desires, feelings, and values that ‘insiders’ in that domain recognize as the sorts members of that domain (the affinity group associated with that domain) typically have” (Gee, 2007, p. 93). Becoming a member of an affinity group transforms the process of video game playing into a participatory practice, where people identify the community that they want to be involved with and actively pursue their passions (Duncan, 2009; Squire, 2011).

The formation of abundant affinity groups has influenced many players to make the transition from consumers to producers, as participatory practices in these affinity groups entail the contribution of ideas and materials created by players. Gee and Hayes (2012) conducted a study on various affinity groups that were organized around “a passion for building and designing for *The Sims*” (p. 133). They theorized that players are able to learn various skills for the purposes of partaking in participatory practices because certain features characterize affinity groups.

The first key feature is that these groups are organized around a common passion instead of players' personal attributes, such as race, class, gender, age, expertise level or disability. At the same time, participants share the same interaction space despite their various attributes. Participants' interactions are not segregated by their ability or personal background. Instead, participants may congregate and self-organize with others in the space based on specific shared interests.

The second key feature is that there are various forms of participation and routes to status in the group, while various roles that participants play are always reciprocal. For example, one player may be an expert in 3D modeling. She may gain recognition in the group for her skill and mentor others interested in learning more about this topic. However, she may be considered a novice when it comes to audio editing, and others who are experts on that topic may mentor her.

The fluidity of participants' roles leads to the third key feature of these groups: "the development of both specialist and broad, general knowledge is encouraged, and specialist knowledge is pooled" (Gee & Hayes, 2012, p. 138). These spaces host a wide range of technical knowledge contributed by participants, and newcomers are encouraged to gather a broad sense of the various expertise involved in game production. At the same time, if one is interested in delving into a specific aspect of participatory production, other participants who are specialists are available for consultation and dispersed knowledge from sources outside of the communal space are linked and suggested.

The last key feature is the social interactions facilitated in these groups. Participants' learning trajectory is dependent upon their individual proactive, while asking for help from others is encouraged. Furthermore, "people get encouragement from an audience and feedback from peers, although everyone plays both roles at different times" (Gee & Hayes, 2012, p. 144).

Through social interactions among participants of various backgrounds, content, either created by the original game designers or members of the affinity group, is constantly being transformed.

Outside of the realm of video game play, Freedman et al. (2013) studied what they characterized as visual culture learning communities, which can be considered as affinity groups. These communities ranged from physical to virtual, but they were still forms of affinity groups as they were formed based on similar interests in particular visual cultures, such as manga, demoscene, and graffiti. Freedman et al. further confirmed the importance of interest-based, peer-to-peer informal transmission of knowledge. Even though the learning setting was informal, students demonstrated development in art knowledge and skills, namely the ability to create and interpret visual materials. Echoing findings from Freedman et al. (2013), Duncan's (2009) study on video game affinity groups came to the same conclusion by detailing the process of peer-to-peer informal transmission of knowledge. Duncan studied the online community of video game title *The Legend of Zelda*, and observed that there existed much sharing of "know-hows" in the forums (p. 85). Plenty of discussions were based on what more could be done to the narratives and how to create alternative narratives to complement the game. At the same time, the lively community of *The Legend of Zelda* encouraged consumers to produce. The readily available audiences in the community eliminated the fear that no one would ever read their self-publication.

In sum, the context of video game playing is affinity groups. Affinity groups are educational because they provide players with the opportunity to learn from one another, form alliances, and pursue common goals. Thus, it was vital for me to approach play in the context of this study as supported by affinity groups; this study was based on developing a shared affinity group around a certain video game culture.



**Subject: Players as prosumers.** After addressing the context for play to be educational in video game affinity groups, the next element that needs to be addressed is the subject in this process. In researches that studied play as informal learning, researchers identified a key characteristic among the players, which is that they often transition from consumers to producers of the object that they enjoy, namely video games. This transition is important because it demonstrates players' ability to not only internalize rules and structures as embodied in the game, but also to create and tinker with these rules and structures as producers.

Players who have transitioned from consumers to producers have been termed "prosumers" (Toffler, 1980). This term combines the words *consumer* and *producer* to conceptualize the media participation observed in many cultural exchanges between "youth who are producing their own imagery drawn from their consumption of popular mass media" (Duncum, 2011, p. 24). Jenkins (2006) used the term "participatory culture" (p. 3) to contrast contemporary media use to a previous "consumer culture," where media exchanges were comparatively one-way: from producers to consumers. In a consumer culture, producers and consumers occupied separate roles; media production was published and broadcast by specialized professionals and distributed to consumers for consumption. That was the end of the story. This cycle is modified by participatory culture. Participatory culture is built on the technological shift in media production where there exist low barriers for consumers to transform into media producers. One example he mentioned was the fandom production of various popular literatures. Fans were not satisfied with the narratives produced by specialized professionals, and they took it upon themselves to write fan fiction that provided alternative narratives. This media production was then distributed to other fans through various methods, be it self-published magazines or online discussion forums. In some cases, the fan-produced alternative narratives

became so popular that the original producers incorporated their fan fiction into the developing plot.

Prosumerism have been observed in cultures other than video games. Duncum (2011) observed youth prosumers remaking popular movie titles using the limited technology they had access to, and distributed them to other consumers through YouTube. Even though this has largely democratized the cycle of production and consumption through the new means of distribution, these consumer-produced videos were still less popular compared to videos produced by specialized professionals. In most cases, large production companies still maintain the advantage of being able to produce sophisticated media and widely distribute them across platforms, where individual consumer-turned-producers have limited access to production and distribution avenues. This is to say that even though media productions have largely been democratized, existing power structures of media production still exist.

In terms of the learning trajectories of prosumers, Duncan's (2009) discussion of video game modder's development among players in modding affinity groups resembles Manifold's (2012) observation of fan artist's development within *Harry Potter* fandom affinity groups. The fan artists that Manifold studied were devoted fans of the *Harry Potter* book series. They interacted with each other online in what Manifold termed an interest-based community, which was an online fandom affinity group where members shared an affinity for the *Harry Potter* series. These fan artists primary interacted with each other through creating, sharing, and discussing original fan artworks, including paintings and drawings, inspired by *Harry Potter*. Manifold studied their image-making development within the group. Duncan (2009), on the other hand, studied online affinity groups of video game *Kongregate*, where modding practices were the focus of the group. Even though the affinity groups that Duncan and Manifold studied

differed in terms of the affinities shared and the artifacts produced, Duncan and Manifold came to a similar theorization about members' learning trajectory in these groups.

In the beginning, fans or players enter the affinity groups as novice participants, and they do not consider themselves as artists or video game makers. They may participate, but participation is mostly through observing the existing community. Often, discussions in these affinity groups are focused on skill-sharing or collective brainstorming, whether it is coding techniques or conceptual frameworks for transforming stories into drawings. With these “know-hows” shared in an approachable format, novice participants are summoned by these discussions to share their own versions of modification or interpretation. Novices begin by copying existing cultural productions, such as the visual representation of *Professor Snape* drawn by other members or the code for making *Flappy Bird* fly on demand.

By showcasing their mimicry of other prominent producers' work, novices become more involved and engaged in self-production. The transition from consumers to producers largely depends on social affirmation from other members of the affinity group. Other members may comment on how they can improve their practice or praise their work for its creative qualities. Through considering others' constructive criticism, the novice becomes aware of the various logics and possibilities for altering the play object for the purpose of improvement.

Through this confidence-building process, novices take their artist or producer roles more seriously and emerge as experts in their groups. Novices begin to see themselves as producers who have the ability to modify and design. In this sense, novices see themselves as designers in this context. These novices also begin to help other novices ease into the cultural context by acting as mentors. This cycle characterizes prosumers' participatory practices with media in these affinity groups.

Besides being socialized into prosumer practices, prosumers are also learning the values of the affinity groups in which they partake. Steinkuehler and Oh (2012) conducted a study on affinity groups in massively multiplayer online games, where an apprenticeship model for learning was apparent. A novice player, the apprentice, was paired with an expert player, the master, to learn about not only how to play the game better but also how to participate in the larger affinity group around the game. The one-on-one social interactions were key to the apprentice being able to gain instant feedback on not only their participatory practices but also their perspectives. As Steinkuehler (2012) summarized,

Masters show learners the ropes not merely in terms of strategies and tactics for how to play well but also and as crucially in terms of adopting the “right” set of values and attitudes toward the game, its content, its goals, world, and other players. (p. 125)

In sum, the above studies demonstrate the importance of prosumer development in understanding how video game playing can be understood as educational. However, the development towards prosumers does not address the various problematic ideologies present in video game cultures; a critical perspective towards production is not built into the concept of prosumerism. In this case, prosumers may be engaging in construction and deconstruction of rules as presented through the video game object and yet fail to ask why they should deconstruct those rules.

**Object: Video games and mods.** After discussing prosumer development in video game affinity spaces, I now turn my attention to addressing the object that is presented in this form of play. Here, the objects that players as prosumers are engaging with are not only video games but also mods.

In video game cultures, “mods” refer to players’ self-created modified versions of existing video games. The modification can take the form of adding-on texture packs to change the visuals, or even entirely replacing the gameplay but keeping the storyline. Some video game players have been called prosumers, because they consume and appropriate aspects of existing video games to produce cultural artifacts—be they short stories, fan films, or modified video games (Hong, 2013). Modifying video games is one aspect unique to video game affinity groups. As video games have moved out from the technologically savvy hacker culture, video game affinity groups have largely become “modding” communities (Dyer-Witheford & de Peuter, 2009, p. 24). This cultural practice is an integral part of the video game industry’s development, with the official publication of many popular modified games and recognition as stand-alone games.

The popularity of the modding practice is built into the technological aspect of the video game medium. As stated earlier, the procedural rhetoric of video games teaches the player the digital media’s operational logic through playing. By learning to think and process information through a video game, players are also learning the computational logic of other practices regarding digital media, such as digital computing or software operations (Taylor & Carpenter, 2007; Sweeny, 2010; Chien, 2012). The ease of entering the practice of making through domain mapping makes the production of video game-related artifacts an essential process of playing and participating in video game cultures.

As a medium, the technological structure of a video game provides an effective approach to learning about the context in which it exists; that is, it embodies situated meaning (Gee, 2007, p. 26). The problem with most learning in schools is that what is learned is abstract to the point that students cannot build situated meaning in the specific context for which the knowledge

exists. Video games, on the other hand, involve learning by doing (Jackson, 2009). Pulos (2013) described video games as an ideal learning environment precisely because of their applied nature: “players learn best when they are in a social context that encourages them to put their knowledge to use” (p. 7). The technological structure of the medium involves players interacting with the software or other players by actively inputting commands and using the feedback of the system to modify behavior. Bogost (2007) used the term, “procedural rhetoric,” to describe how video games embody governing rules through “the practice of using processes persuasively” (p. 28). The governing rules of specific games’ social context are made aware to the player through the interactive process of participation. Such play captures a process called “reflective practice,” which requires players to *probe* the game environment through inputting, form *hypotheses* about cause and effect, *reprobe* to test the hypotheses, and then *rethink* according to the feedback (Gee, 2007). This process generates situated meaning.

In sum, mods embody the forces of play with which prosumers engage. Mods are the objects that demonstrate prosumers’ ability to deconstruct and then construct new orders with their proficiency in this video game culture.

### **Game-based Pedagogy for Formal Learning**

If video game playing is educational in terms of literacy development, how can educators mobilize video game playing in formal learning settings? In this section, I turn attention to reviewing the various game-based pedagogies that educators have developed in light of seeing video game playing as educational. These various game-based pedagogies can be categorized into three different categories that emphasize different elements of play: students as players, classrooms for affinity, and lessons from video games.

**Students as players.** The first category of game-based pedagogy utilizes the mechanism of the video game to develop gamified lessons for students to play with various areas of study. In other words, students are positioned as players in this approach. By doing so, this approach aims to elicit students' voluntary participation in this learning process by mimicking how players are voluntarily participating in play.

The technological aspects of the video game medium have triggered educators to conceptualize new forms of instruction to position students as players (Jackson, 2009). This approach stems from the problem observed in many classrooms where the abstractness of school subjects alienates students from understanding and applying important concepts; the lack of motivation seen among youth in schools is in sharp contrast to their active participation in video game cultures (Jackson, 2009). Noting that many school subjects' content mirrors cultural practices in video games, some schools have begun to gamify existing school subjects. That is, using role-playing, point systems, and competition, teachers recreated the instant feedback system in games that helped students to learn from mistakes. Treatment of individual students is adjusted according to proficiency in a similar way to how video game players are allowed to choose difficulty levels. At the same time, this gamifying approach makes explicit the nature of social life; the curriculum becomes the cultural scripts for which social actors learn the cultural norms. Through the adoption of game-based instruction, schools are making explicit the social norms by which we tend to abide.

**Classrooms for affinity.** The second category of game-based pedagogy utilizes students' out-of-school video game playing experiences to identify lesson content that will engage students. In other words, classrooms are transformed into affinity spaces for students to learn through playing with content that is relevant to their out-of-school endeavors. Recognizing that

many students have already had exposure to and interest in video game playing, teachers have begun to build upon students' prior experience by drawing upon the cultural participation it entails. Instead of focusing on analyzing or extracting meaning from the actual content within gameplay, here, students are encouraged to make cultural artifacts that reference their experiences of participation. This approach values interest-driven learning, and it prompts students to develop related literacy skills.

Using students' out-of-school video game playing experiences as incentives for learning specific skills has been most popular among art educators, as the technical training plays an important part of any art making process. For example, Gill's (2009) high school classroom demonstrated that out-of-school experiences with video games played an important role in motivating, informing, and guiding students to learn about 3-D modeling and animation software, such as Autodesk Maya and 3-D CG. Patton (2011) conceptualized a game-based art pedagogy framework that emphasized prompting students to learn complex thinking through game creation. Building on their prior experiences of gameplay, students manipulated video game making software *Game Maker* to develop their own video games and "learned that game rules and computer code are subjectively written and understood within the context of dynamic systems of play" (Patton, 2013, p. 39). Alexander and Ho (2015) developed a game-based art pedagogy curriculum that focused on creating character prototypes for a game. High school students designed and created characters and narratives that were later implemented into a game by advanced programmers. Chien (2012) described cases where teachers incorporated game-making lessons using software *Scratch*. Students in these cases were able to overcome various design challenges. She states that students were interested in the subject under study to begin with, and that motivation helped them push through the difficulties that arose from learning to



design video games. This approach recognizes the inherent value in out-of-school video game cultural practices and appropriating them into the school setting. The focus on art-making techniques, the ability to manipulate computer software in this case, allows students to learn how to make cultural artifacts that are relevant to their lives.

**Lessons from video games.** The last category of game-based pedagogy utilizes existing video game content to educate students about a variety of school subjects. In this case, the focus lies in extrapolating content from video games to educate about certain targeted objectives. One common approach involves using video games as a space for an integrated curriculum of various existing school subjects. This means bringing video games to schools and having students play them in classrooms. Students playing video games are engaging in multiple modalities at once and learning different disciplines of knowledge through a holistic integration of gameplay.

Published in 1999, Sid Meyers' game *Civilization* has been used to teach history, social science, and geography. Schiller (2008) discussed how puzzle game *Portal* could be used in classrooms for students to practice information gathering and problem solving. Hutchison (2007) explored place-making practices in virtual game worlds as a way for students to experiment with maps, physics, and history through play and descriptive writing. *SimCity* and *Tropico* had been used to illustrate cause and effect in management and institutions (Squire, 2011). *Second Life* had been popular among art educators to explore the range of multimodal expressions through the open sandbox structure (Lu, 2010; Han, 2011). Open sandbox video games are video game worlds that are designed for players to free-roam and create their own gameplay (Harris, 2007). Overby and Jones (2015) studied players' experiences in *Minecraft* and suggested that art educators incorporate *Minecraft* into classrooms based on design, identity experimentation, 2-D pixel art, collaborative community building, and 3-D modeling software manipulation. The

sandbox structure also provides players with the liberty to create their own purposes and utilize the given environment for themselves. It is precisely this liberty to define gameplay and the ability to utilize tools in-game that educators have found particularly useful for teaching a variety of school subjects. For example, players in *Minecraft* can play in the survival mode, where players have to hunt for food, mine materials, and craft objects for survival. This provides educators with the opportunity to discuss issues around sustainability in our eco-system. On the other hand, *Minecraft* players can choose to play in the creative mode, where unlimited resources are available to the player with a click of the mouse. In these gameplays, the emphasis lies in building for self-expression, and players utilize the unlimited resources to create various objects, such as houses or boats, in game.

Another approach involves the use of media education to analyze the cultural ideologies presented in video games. Media education has long focused on students' literacy of media as "consciousness industries" (Buckingham, 2003, p. 2). Media literacy is defined by The Center for Media Literacy (2003) as, "the ability to communicate competently in all media forms, print and electronic, as well as to access, understand, analyze, and evaluate the powerful images, words, and sounds that make up our contemporary mass media culture" (as cited in Taylor & Carpenter, 2007, p. 87). To prevent students from becoming what Jenkins (2006) described as passive audiences that unconsciously inherit media's hegemony, media education provides a repertoire of useful concepts to decode the ideologies communicated by the cultural script in video game content. Resnick (2007) termed this process as "digital fluency" (as cited in Chien, 2012, p. 22), which is the "ability to design, create, and invent with digital media" (Chien, 2012, p. 22). In this way, this approach extends affinity groups' practice of creation through

prosumerism by critiquing and emphasizing the structural and systematic construction of video games as cultural artifacts.

A third approach towards using video game content involves the application of media education's critical stance. Some games are designed specifically to engender critical reflection of real world issues. These are usually considered to be "serious games" (Michael & Chen, 2005, p. 2). These games are usually not produced by large video game corporations but rather by independent publishers. Games such as *Peacemaker* or *Darfur is Dying* (Ruiz, 2006) prompt players to examine current human crises and probe ways to solve these problems in hypothetical settings (Parks, 2008). This approach is similar to media education in that it aims to critique the social structure. However, it extends beyond critique and prompts players to act on these problems through imagining alternative social structures.

In sum, there are various game-based pedagogies that have been developed and utilized by educators teaching in formal learning environments. By positioning students as players, building classrooms for affinity, and constructing lessons out of video games, these game-based pedagogies harness the elements of play for targeted learning objectives. For game-based pedagogies that focus on positioning students as players, the targeted learning objective is the mastery of existing school subjects. For game-based pedagogies that focus on building classrooms for affinity, the targeted learning objectives are the identification and the mastery of skills that are applicable to students' out-of-school engagements. For game-based pedagogies that focus on constructing lessons out of video games, the targeted learning objectives varies from the literacy of media in general to the critique of specific social structures.

## Challenging the Celebratory Position

In the previous sections, I reviewed arguments about learning through play as literacy development, and exemplified how this literacy development unfolds in both formal and informal learning trajectories. However, the cultural practices within the video game cultures have not gone unchallenged, and the classroom application of these practices also has its problems. Players and students are learning to become active participants of cultural practices, but what is the value of this learning when the cultural practices are situated within a stratified and hegemonic society?

Critical Internet Studies suggests that we should, “especially take a look at how freedom of speech and freedom of assembly are limited by unequal conditions of access (money, education, age, etc) and the domination of visibility and attention by big economic and political organizations” (Fuchs, 2012, p. 404). To address these issues, I will discuss the ideal trajectory and cultural ideologies assumed in educational scholars’ writings.

**An ideal trajectory.** The first problem with the claims made about learning through video game cultures is that they assume an ideal trajectory towards video game participation. The ideal trajectory refers to learning that happens through active participation in all the cultural practices of video game culture. Players are all able to learn to decode this context through engaging in play that embodies it. However, this argument does not address the issues of exclusion that often happen through cultural barriers. The application in schools furthers existing exclusions by assuming a universal experience among students. This ideal trajectory can be broken down in terms of two assumptions: the ideal player and the ideal game.

***The ideal player.*** In the ideal trajectory, the ideal player is central to the conclusion that video game players become learners of cultural participation. The ideal players are able to access

video games and participate fully as active prosumers within affinity groups. This assumption disregards the issue that the video games are situated within a social structure. Existing hierarchies and stratified social relations within a society influence who is able to produce and consume media and how media is produced and consumed. These relations are brought into the virtual worlds through digital divides.

Beyond the digital divide between developed and developing countries, there is a digital divide between generations and among same-age cohorts (Coleman & Dyer-Witford, 2007). This digital divide stems from class (Fuchs, 2012). This divide may take the form of simply denying access to platforms where video games are played. The more pressing and easily neglected divide comes in terms of the proficiency and literacy about the medium inherent in the ways this medium is accessed. Players who can only play at library computers are significantly limited in their access. In a practical sense, this leads to exclusion. Players who have access to games at home and even have the economic power to purchase advanced technological hardware with better graphics or Internet speed have a significantly different experience of engagement and degree of participation.

Digital divide also stems from cultural identities, including race and gender. White-identifying individuals overwhelmingly occupies the digital space (McPherson, 2012). While the issue of race is related to the issue of class, it is also a fact that video game cultures have constructed practices and languages that speak to a predominantly White audience. At the same time, genres of video games have centered on subjects that have long been associated with masculine domains (Taylor, 2006). Even though female gamers are no longer a rarity, the 2014 #Gamergate incident, where female gamers and game designers were the victims of cyber bullying, demonstrated how players continued to receive differential treatment based on gender

(Hathaway, 2014). As video game cultures are more associated with certain cultural identities in real life, they are not equally welcoming to all players, and those with outlier identities may not progress in the same way as the “ideal” player (Nakamura, 2000; Taylor, 2006).

If schools do not address this assumption of the ideal player, then adopting video game cultural practices as curriculum reinforces the existing hierarchy of engagement. Students who have been more proficient in this medium will probably show greater interest and perform better as video games speak to domain knowledge with which they are already familiar. At the same time, disenfranchised players will be further disengaged in schools.

*The ideal game.* One problem with discussing video games is that there are such a wide variety of genres in which players engage. Though the assumption of the ideal game is often made explicit in educational scholars’ discussion of learning through video game cultures, projecting a single learning trajectory for how different players may engage with a given cultural script is an overgeneralization.

Gee (2007) and Squire (2011) have claimed that the learning trajectory they formulated largely depends on “good games” that build learning principles into the designs. Good games allow players to learn the semiotic domain in an efficient manner, while allowing for experimentation and failures. However, transition into active cultural participation relies heavily on affinity groups, and these may not exist for all good games. At the same time, even if there are active affinity groups, the level of engagement is not guaranteed.

In their argument about the value of game-based pedagogy, Parks (2008) and Schulzke (2012) referred to “serious games” that presented a sense of social realism and prompted problem solving of real-life issues. Serious games certainly may challenge players to consider consequences in ways that may not occur during casual play, but such games remain on the

margins of video game culture. Ironically, this marginal status may be precisely because of its educative function. As most popular games are popular largely because of their amusement and entertainment value, serious games often reject the norms of having players become powerful agents with god-like abilities—qualities that are desirable to many players. The independent development of serious games also means that they are less well known (Ruiz, 2006); the developers do not have the same access to marketing and publicity. The learning that serious games engender may take the form of isolated incidents in schools instead of mirroring larger cultural practices.

Perhaps the only way to avoid these problems is through overt recognition of the ideal trajectory and conscious actions toward addressing its limitations. This trajectory may apply to some players, but it must be understood that it is not the only trajectory. Similar to children's development in drawing, there is no linear developmental model that can adequately generalize the multiple learning trajectories. Instead, Duncum (2000) proposes a “diverse pathways and multiple endpoints” (p. 38) model of development that places emphasis on understanding individuals' learning trajectories. Given the diversity of personal experiences, it may be more fruitful to propose multiple pathways and multiple endpoints of video game engagement across different genres and players.

**Cultural ideologies.** The second problem with the claims made about learning through video games is that they do not address explicitly the embedded cultural hegemony that students are also learning. By cultural hegemony, I mean the beliefs, values, and norms that have acquired consent as cultural norms, which maintain the status quo (Gramsci, 1971; Rose, 2012). Ideologies are shared among most people but benefit only a small group of people. Video game players do learn to become active cultural participants in both the society at large and the specific

video game cultures. But what specific cultural ideologies accompany this practice? In the following, I will address two prevalent ideologies within video game cultures: the meritocratic norm and play as free, or uncompensated, labor.

***Meritocratic norm.*** Pulos (2013) claims that the video game as a medium is shaped by and contributes to the cultural hegemony of the socio-historical context within which it is situated (Pulos, 2013). Nowadays, video games can be found in most countries around the world, but this medium is most developed in capitalist societies with contemporary liberal democracies, such as the United States and South Korea (Dyer-Witheford & de Peuter, 2009). In such societies, the “meritocratic norm” is a large part of the cultural hegemony (Schulzke, 2012). According to Kernohan (1998), the meritocratic norm is the belief that, “natural ability should determine material ability to form, revise, and pursue a conception of the good” (as cited in Schulzke, 2012, para. 7). The success and failure of an individual and his or her mobility within the social hierarchy is viewed as a direct result of his or her work ethic.

The idea that individuals have the power to control their destiny, despite structural limitations, is reflected in most popular media, and this includes video games (Schulzke, 2012). Instead of confronting it, the procedural rhetoric built into the technological aspect of the medium mirrors this meritocratic norm. Players are constantly given feedback through point systems or verbal comments that allow the players to modify their behavior in pursuit of a goal. The prosperity of that world is a direct consequence of the judgment and abilities of the player. At the same time, players’ abilities are often empowered through various strengths they have chosen to take on during the character creation period or they build up over time in the game. In role-playing games or first-person-shooters, players become heroic figures capable of defeating the enemy against the odds (with extra lives and multiple chances). “Many video games do



indirectly support this norm with the amount of control they give players over the game world and their characters,” says Schulzke (2012, para. 10); in Schulzke’s view, this distances gameplay from “social realism” (para. 2). Through the embodiment of this norm in the gameplay, players learn to accept this hegemony as a necessary component of this semiotic domain. Participating in video game cultures connects the player to other cultural practices that also embody this norm, which again naturalizes and reinforces this perspective. By adopting these mechanics in a school curriculum, educators further reinforce the norm.

***Playbor.*** Combining the word play with labor, Kücklich (2005) used the term “playbour” to describe the unpaid labor that gamers voluntarily provide through leisure play. Producing cultural artifacts has become a central part of play, just as prosumption characterizes video game cultures. As the boundaries between work and leisure are increasingly blurred, playbor characterizes the new mode of production that relies on disguising labor as play, which quickens the cycle of exchange with greater productivity (Dyer-Witheford & de Peuter, 2009; Bulut, 2013). Playbor leads to the production of mods, or add-ons to existing games, which embody use and exchange value among other video game players.

While leisure play is uncompensated, the game industries have capitalized and commodified prosumers’ production. When players participating in affinity groups produce mods, they are not only helping with the publicity of the original game, but are also providing voluntary and free labor to generate new commodities for exchange within the video game industry. In fact, many large video game publishers have bought out successful mods and published them under the company name. This encourages the affinity groups to offer more labor in competition with each other to create ever better modifications in hope of being bought out and achieving fame (Bulut, 2013). This allows the publishing houses to harvest the collective

production of the network of players, which produces “far beyond the studio and the waged development team” (Dyer-Witheford & de Peuter, 2009, p. 24). While capitalizing on production from leisure is not new, the issue with playbor in video game cultures today lies in the video game industries’ reliance on these unpaid labors. Playbor becomes an intrinsic aspect to what Witheford and de Peuter (2009) describe as the ever-evolving “global capitalism of Empire” (p. 4).

However, practices opposing this hegemonic structure are taking shape. It is the understanding that the interactivity of networked participation through WEB 2.0 allows for democratic deliberations that undermine and subvert centralized mass media’s transmission of capitalist logic (Fuchs, 2012; McChesney, 2013). Instead of becoming audiences whose agency is limited through one-way communication, consumers are becoming cultural producers and talking back to the hegemonic values. In video game cultures, affinity groups that practice modding are seen as challenging the copyright logic that shapes and cultivates capitalism.

While these practices are endangering the hegemonic model, it is equally dangerous to accept without question the idea that these acts liberate us from capitalism and turns us into autonomous producers. These marginalized territories (independent producers, etc.) are being enveloped in the new immaterial labor economy and constantly being colonized by the ever-evolving global capitalist Empire (Dyer-Witheford & de Peuter, 2009). Hardt and Negri (2004) argued that current capitalism’s major labor force is characterized as immaterial labor, “labour that creates immaterial products, such as knowledge, information, communication, a relationship, or an emotional response” (as cited in Allen, 2011, p. 202). As the commodities produced are immaterial, it is easy to miss the relationship with capitalism and to forget that we are making,

doing, or creating commodities that circulate in the existing mode of production that generates value.

As discussed earlier, video game players are learning to become active cultural participants in both the society at large and specific video game cultures. However, considering the problematic practices in existing societies, does this mean that video game players are merely acquiring and practicing social norms and dominant ideologies? As learning experiences open doors for more experiences, does this mean that these experiences are only opening doors to other semiotic domains that practice these same values? Are players actually learning to become consenting citizens of the existing social hierarchy?

### **Critical Position on Playing Video Games**

Given the need for multiple learning trajectories and keeping in mind a consideration for challenging existing social structures, this section develops the concept of critical play in terms of game-based art pedagogy as a form of resistance and deconstruction for construction. If the ideal learning trajectory postulated by educational scholars is problematic in that it does not specify the cultural ideologies learned and practiced by players, then it is doubtful that most players are able to achieve critical learning. Affinity groups do provide a space where players are able to organize and construct alternatives. However, before we can conclude that video game cultures enable players to become active participants of society, more research needs to be done to examine whether players as producers of culture are conscious of their position and agency in contributing to these alternatives. How can the video game cultural practices be geared towards social change, instead of social reinforcement?

## **Critical Pedagogy**

Before turning to develop critical play, I need to address my pedagogical desire for teaching criticality and what it means to be critical in the context of this research. By desire, I am referencing Hetrick's (2013) formulation of desire as "the proclivity to help others, the passion to learn, or the inclination to teach and form connections with students" (p. 274). My pedagogical desire is what motivates me "to teach and, interestingly enough, to return to teaching after those really bad days we have all lived through" (p. 274). My pedagogical desire to teach criticality rests on the belief that it is a prerequisite to achieving social justice. My understanding of criticality is largely drawn from discourses in critical pedagogy, where social justice lies at the heart of its concern. For me, critical pedagogy is a "politics of understanding and action, an act of knowing that attempts to situate everyday life in a larger geo-political context, with the goal of fostering regional collective self-responsibility" (McLaren, 2007, p. 11). It is a way of teaching that aims to not only enable students to become aware of the social structures that guide their actions, but also to facilitate students becoming aware of their own agency in choosing or constructing alternative ways of life. Here, then, criticality refers to the ability to understand, analyze, reflect, and critique social contexts in search of transformative possibilities (Smyth, 2011).

The theory of critical pedagogy rests on two assumptions. First, society is hierarchical, being manifest through various attributes such as class, gender, and race. Secondly, students are indoctrinated into social structures that uphold these hierarchies through mainstream education's selective and value-laden criteria to assess and evaluate student success and development (McLaren, 2007).

Given these assumptions, the goal of critical pedagogy is to devise a reflexive way of teaching that recognizes these imbalanced power relations and oppression in societies, and in return construct educational encounters that place such conflict at the forefront. The hope is that students achieve emancipation or liberation. Here, liberation means students are “increasingly free to choose from a range of alternative perspectives on themselves and their social worlds” (Berlak, 1985, p. 2), as opposed to being subjected to the hegemony of their society. By doing so, critical pedagogues aim to create the possibilities for social change, where a socially just society is imagined and possibly enacted.

According to critical pedagogues, the method to achieve liberation lies in creating curriculum that positions students as co-creators of knowledge; regardless of the school subject engaged, critical pedagogues strive to facilitate students in asking the questions “why” and “how” (Freire, 2000). To translate this theory into practice, I drew inspirations from educators teaching critical media literacy. As a subfield within media education, critical media literacy researchers and educators answered the call of critical pedagogues to liberate students, specifically from media hegemony, by designing and studying critical pedagogical approaches to media. According to Kellner and Share (2005),

Critical media literacy involves cultivating skills in analysing media codes and conventions, abilities to criticize stereotypes, dominant values, and ideologies, and competencies to interpret the multiple meanings and messages generated by media texts. Media literacy helps people to use media intelligently, to discriminate and evaluate media content, to critically dissect media forms, to investigate media effects and uses, and to construct alternative media. (p. 372)

Critical media literacy educators differentiate themselves from educators of general media education by focusing on teaching media production as a way for students to develop alternative perspectives. Instead of simply focusing on a dialectic analysis of media messages with students, production lies at the center of critical media literacy as the goal is to “help students transform themselves into socially active citizens and at the same time transform society into a less oppressive and more egalitarian democracy” (p. 372).

The pedagogical approaches that critical media literacy educators developed often focused on one specific media form, such as television shows (Scharrer, 2005), popular songs (Gainer, 2007), fan fictions (Black, 2009), magazine advertisements (Gainer et al., 2009), websites (Nolan, 2014), and online discussion forums (Plencner, 2014). Their pedagogical approach started with a dialectic conversation about the ideologies presented in a media form and focused on questions of “why.” By inquiry into the messages presented, students were prompted to consider what were the messages that the media producer tried to communicate? Why were these messages being communicated? What and whose interests were being served by communicating these messages? These dialectic exercises were followed by a production component that focused on questions of “how,” where students were prompted to respond to the messages presented. For example, students produced alternative fan fictions (Black, 2009), students juxtaposed existing advertisements to create transgressive messages (Gainer et al., 2009), and students designed their own websites (Nolan, 2014). As Gainer et al. (2009) argued, “the transformational potential of critical media literacy pedagogy is increased when students are given opportunities to use media and information technology tools to tell their own stories and express their own concerns” (p. 675).

Besides the focus on one media form, critical media literacy educators also focused their curriculum on specific ideological constructs, such as gender, race, and class. According to Kellner and Share (2007), critical media literacy “focuses on ideology critique and analyzing the politics of representation of crucial dimensions of gender, race, class, and sexuality; incorporating alternative media production; and expanding textual analysis to include issues of social context, control, resistance, and pleasure” (p. 8). Utilizing activities that involved students responding to and creating popular cultural media, educators, and researchers interested in critical media literacy have experimented with pedagogical approaches to engage students with issues of gender, race, class, and so on (Scharrer, 2005; Gainer, 2010; Schmier, 2014; Puchner et al., 2015). For example, Garcia and her colleagues (2013) dealt with “questions of racism, homophobia, classism, sexism, and so forth” (p. 112) with high school students and pre-service teachers through the creation of digital media, such as podcasts, photographs, word clouds, and digital stories. Gainer et al. (2009) developed “The Elementary Bubble Project” for a media literacy unit in an elementary school, where 4th grade students were prompted to respond to gender representations in media by filling in speech bubbles on advertisement images. In all of these studies, investigations of gender, race, and class were equated with criticality, and pedagogical approaches to media that involved these topics were deemed critical and valuable.

Following the lead of critical media literacy educators, I focus this study on the ideological constructs of one media form: video games. In the context of this study, questions of why make visible the assumptions and values as embodied in video game objects. Why are these the stories being told in video games? Why are certain titles more popular among players? Why does the characters look the way they do? Why are players rewarded for certain actions while punished for other actions? What are the values presented in these games through these designs?

Questions of why reveal the implicit social values that govern our actions. After such recognition of the implicit social values, students are better able to decide for themselves whether they would like to submit to these ideologies. If they choose not to obey, then students need to ask questions about how to change. How can we construct alternative narratives and realities? In this case, teachers need to provide students with the proper tools to dismantle such structures. In the context of this study, the proper tools involve the technical know-how to manipulate the various digital-based mediums of video game operation.

### **Critical Play**

What does it mean to play critically? To answer the question, “how to gear video game playing towards social change?” I propose critical play as a possible answer. Here, I summarize and compare a few concepts that have constructed my understanding of critical play.

As a game designer and theorist, Flanagan (2009) coined the term *critical play*; according to her, critical play is “characterized by a careful examination of social, cultural, political, or even personal themes that function as alternates to popular play spaces” (p. 6). Specifically, she distinguished three types of critical play: unplaying, re-dressing/reskinning, and rewriting. Unplaying refers to the play action that rejects the assumed play pattern and enacts forbidden or unanticipated outcomes. This type of critical play involves the understanding of conventions and actively playing against it. For example, the mutilation of Barbie dolls by youth, which appeared in YouTube videos, can be understood as rejecting the normalized play pattern of taking care of the doll (Duncum, 2011). Re-dressing or reskinning refers to the alteration of appearances as represented in the play space. This type of critical play emphasizes the importance of visual representation as a form of identity. *Minecraft* players who create custom avatar skins to implement in gameplay can be understood as re-dressing or reskinning. Rewriting refers to the



subversion of play patterns and narratives that is further incorporated into normalized play.

Through the publication and circulation of these alternate narratives, rewriting characterizes the modification of existing structures and the inclusion of subversive ideas into the mainstream. Fan fiction of *Buffy the Vampire Slayer*, which later influenced the plot development and production of the series in mainstream media, is considered a form of rewriting (Williamson, 2005). These different types of critical play are each characterized by subversion; critical play is an act of transgression in attempting to override the popular and preferred dominant ways of playing.

Flanagan's (2009) theory on critical play reinforced the argument made by Salen and Zimmerman (2004) that play is meant to be transformative and disruptive. Salen and Zimmerman emphasized that play is never meant to be static and confined within the structure that initially bounded it. On the contrary, play is a process that constantly develops new structures through playing. Gee (2007) furthered this line of argument by suggesting "critical learning" (p. 31) as the prerequisite for transformative critical play to occur. Critical learning occurs when a learner is able to acknowledge a semiotic domain as a design space, and further to actively "attend to, reflect on, critique, and manipulate those design grammars at a metalevel" (pp. 31-32).

Despite the different terminology, these concepts share an affinity towards the modification of structures that construct the player's experiences. Through the act of playing, players construct new structures in ways that rethink and reconfigure the existing rules of play. In terms of learning mechanisms, they each challenge the cultural values and social norms positioned in this learning mechanism by gesturing towards alternative pathways. With that in mind, critical play as used in this dissertation refers to when the player redesigns existing game narratives, mechanisms, or structures to address the limitations of the existing game. Players are

able to see the game as a complicated system related to the society at large with grammar, values, and rules, and can intentionally modify the given system to address the experiences they desire.

**A topology of critical play.** After establishing what it means to play critically, I propose a revised topology of play to reflect the inclusion of criticality.

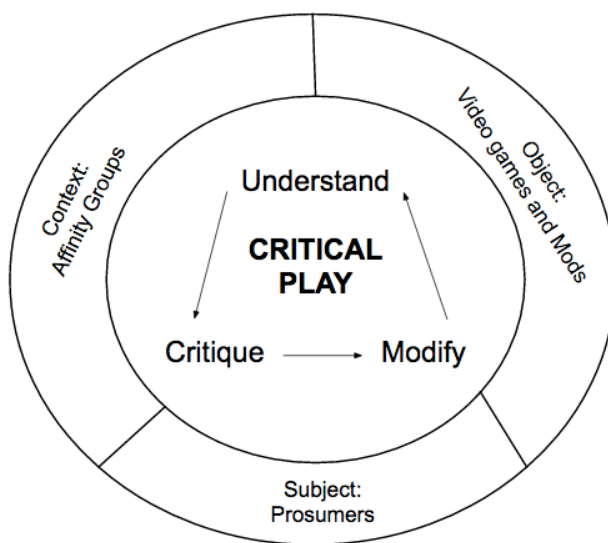


Figure 2. A topology of critical play

Here, the constructive and deconstructive forces of play are still present, but the dynamics between the two are further explained by detailing the process involved. The first step that players must undergo is one of understanding the rules and structures presented through video games. After understanding how things work, players must then ask the questions of “why.” By probing these questions, players are then prompted to reflect and critique the answers to questions of why. With these reflections and critiques, players also imagine an alternative structure. Last, players must attempt to realize their imaginations through modifying the existing structures as embodied in video games.

The context, subject, and object of play also need to be revisited. The context for critical play would still be an affinity group, wherein players can find support and challenges from their peers. The object for critical play would be video games and mods. This means that the video game they begin with characterizes the social structures in which they are situated, while the mods of video games serve as an alternative structure players have imagined and created based on their critique of the status quo. The subject of critical play would be players as prosumers with an active awareness of their role and position as productive agents in this social structure.

### **Critically Playing *Minecraft***

Released in 2011, *Minecraft* is playable across various platforms, including dedicated gaming consoles and personal computers, and has sold over 17.5 million copies worldwide (Overby & Jones, 2015 ). It belongs to the “sandbox game” genre. Other notable games in this genre include *Second Life* and *The Sims*.

There are two reasons for choosing to play with *Minecraft* critically in this research, rather than another game. First, *Minecraft* has garnered much attention from educators over the past few years (Cipollone, Schifter, & Moff at al., 2014; Overby & Jones, 2015). The open world sandbox structure provides multiple points of entry to consider, and this format offers continuity with previous art education discussions about *Second Life* (Han, 2011 ; Liao, 2008 ; Lu, 2010 ). Overby and Jones (2015) have studied player experiences in *Minecraft* in classrooms. However, less has been discussed regarding player engagement in video game culture, which encompasses experiences outside of the game itself. This leads to the second quality that recommends *Minecraft* for this study: compared to other video game titles with less popularity, the active prosumer activities in *Minecraft* affinity groups provide an opportunity to further investigate how to facilitate players to play critically (Wu, 2016).

## **Modifying Game-based Art Pedagogy**

In earlier sections of this chapter, I reviewed various approaches to game-based pedagogy. To address the problems of a presumed ideal trajectory of players and cultural ideologies inherent in many of these game-based pedagogies, it is important to introduce critical play into these game-based pedagogies.

To achieve the above, I propose a modification of Patton's (2011) framework of game-based art pedagogy by placing an emphasis on critical play. In Patton's framework, game-based art pedagogy facilitates the learning of complexity thinking through the game creation process. Complexity thinking is the ability to recognize dynamic systems; it is the "exploratory methods and approaches, responding dynamically to necessities or positions, and seeks commonalities with other domains of analysis" (Patton, 2011, p. 8). Using the concepts of move, avoid, release, and contact (MARC) as guides, "students created dynamic systems through the making of games and developed their understanding of interconnected systems and complexity through this game-making process" (p. 9).

The above game-based art pedagogy framework departs from other game-based pedagogies in that it focuses on "methods of artistic expression and imagination" (p. 27) involved in the game creation process. Instead of accepting and consuming an existing game as it is, this framework actively facilitates students in recognizing games as complex systems while providing them with guidelines to develop their own games. Here, students are positioned as producers and learn about the affordances and boundaries of this medium through the process of creation. This is significant in that it prompts students to recognize the ways in which video games as a medium are structured both technologically and socio-culturally. Going beyond other game-based pedagogies, this framework utilizes games for the goals of critical pedagogy.

I propose a modified version of game-based art pedagogy with an emphasis on critical play through modification. Here, I inherit Patton's framework of learning to see and manipulate systems through creation. However, the emphasis here is not on creating entirely new games. Instead, the emphasis is on the modification of existing games in ways that still reference existing games. This form of game-based art pedagogy focuses on giving players permission to exercise and practice their agency. It aims to facilitate the recognition of existing cultural ideologies in video games and the modification of them to posit alternative viewpoints.

By translating the theory of critical play into practice, the following chapters describe an action research project that studied the possibilities of utilizing this modified version of game-based art pedagogy to facilitate critical play.

## Chapter 3: Methodology

### Introduction

This research aims to apply critical play in a library setting to better understand how it can be facilitated. Specifically, this action research piloted a five-week-long afterschool program that took place in Champaign Public Library. This program engaged youth, aged 11 to 14. This research address the following questions:

- How can I facilitate critical play of video games among youths in a library setting?
  - How does the process of understanding, critiquing, and modifying contribute to the development of critical play among youth?
  - How does learning in an affinity group influence the development of critical play among youth?

Given the nature of my research questions, this study employed an action research methodology, as action research was particularly useful in answering questions that entailed detailed analysis of the processes involved in teaching.

### Program Description

This program description details the action aspects central to this research. As this action research was carried out and studied at an afterschool program, I address this program in terms of what it was, where it was, when it was, and whom it involved.

This afterschool program was called the *Minecraft* Modification Workshops 2.0. It was one of the various afterschool programs provided by Everyday Arts Lab. I have been a teaching artist for Everyday Arts Lab in the Champaign Public Library location since the spring of 2014. As a teaching artist, I have led two undergraduate students for two semesters in conceiving and providing arts programs for around 15 youths who hung out after school at the Champaign

Public Library, and this research project was a continuation of these previous efforts. Specifically, this research project examined the implementation of the *Minecraft* Modification Workshops 2.0 from February to March of 2016 and provided revisions to the curriculum throughout the five-week-long program. This time, however, I conceptualized and led the program myself. During the program, the workshop was held once a week for two hours at the Champaign Public Library. Anyone interested was welcomed to participate in this free program, as long as they provided the necessary personal assent and parental consent forms. Approximately 7 self-selected youths who shared an affinity for video games were involved.

### **Action Research Methodology**

Action research as a research methodology emerged in the 1940s in the United States from the writings of Kurt Lewin (Hammersley, 2004). He conceptualized action research “as involving a spiral process in which a hypothetical solution to a problem is formulated and tried out, its level of success monitored, the proposed solution reformulated in light of this, the new strategy implemented and assessed, and so on” (Hammersley, 2004, p. 166). By doing so, Lewin positioned action research as a reflexive practice. At the time, Lewin utilized this methodology to reflect and refine his consultancy practices. Later, this methodology gained momentum and popularity in the field of education in the United States as a form of research conducted by teaching practitioners to evaluate and reflect upon their practice to improve it (Corey, 1954). In the 1950s, the field of education was dominated by the scientific method, specifically a positivist perspective of science. With its emphasis on developing and confirming hypothesis through experimentation, action research was seen as a valid scientific method for conducting social science research. As a result, action research became a popular research methodology employed by teaching practitioners to evaluate their own practice.

However, by the end of 1950s, critiques on action research begun to emerge and the discussion surrounding it in the United States died down. Specifically, Hodgkinson (1957) criticized this form of research as overemphasizing the “doing” or action aspect of research, and that it had overlooked the thinking or theoretical component of research. He warned against this form of research as it positions the activity or action as an end in and of itself. Regardless of this criticism, educational scholars in Britain, such as Lawrence Stenhouse and John Elliot, revived action research in the 1970s as a form of legitimate research methodology and promoted the concept of “teacher as researcher” (Hammersley, 2004, p. 166). They rejected the previous critiques as a modernist positionality, and they embraced the action component of action research as a form of thinking, or theorizing. In the context of this research, I acknowledge this criticism by emphasizing research in action, as opposed to research about action.

Since the 1970s, action research as a methodology regained popularity among educational scholars in the United States and began to be recognized by various other academic disciplines. Scholars further theorized the various aspects of action research, and they characterized three different components of action research, namely the “technical,” “practical,” and “critical” (Noffke & Somekh, 2011, p. 96). The technical refers to the development and contribution that action research may provide to the shared professional knowledge based on specific disciplines. The practical refers to the self-knowledge and personal understanding of practitioners’ own practice that action research may provide to individual researchers and practitioners. The critical refers to social action and change that are implied in action research as a way to “combat oppression” (Noffke & Somekh, 2011, p. 96). This last component resonated with various critical fields, such as Feminist Studies, as action research implies an emancipatory quality that may alter the existing status quo, and it has been taken up by various feminist



scholars and practitioners as a way to think through and combat sexist ideologies in society (Chisholm, 1990).

This popularity resulted in the emergence of strands of action research, such as participatory action research (MacDonald, 2012) and socially critical action research (Tripp, 1990). Each strand places a different emphasis on the process of conducting action research, and they aim to question different aspects of knowledge production. For example, participatory action research questions who are the knowledge producers by emphasizing the collaborative research process between researchers and participants. Taken together, these strands form the broad family of practice within action research. However, here I will not elaborate on the specific focus of each strand, as they are irrelevant to this study. I am not positioning this study in any specific strand because they do not offer any additional repertoire for me to answer my research questions.

In summary, action research as a methodology is characterized by its central placement of action within research, an understanding of practitioners as researchers, the requirement of a reflexive practice, a spiral research process, and the aim of creating social change. With this understanding, it is important to provide some justification for utilizing action research as the methodology in this study. In the following, I discuss the key characteristics and assumptions of action research as a whole, which informed the design of this research.

### **Action and Research**

Action research rests on the key epistemological framework of subjectivism, which is that research, the act of producing theory, is and should be closely intertwined with action or practical activities. In other words, knowledge can only exist through practice. This assumption was challenged widely when action research was first introduced. As a modernist notion of

knowledge, it was critiqued for its epistemological framework that distinguishes research from action. This understanding stems from the ancient Greeks' separation of *theoria* and *praxis* (Hammersley, 2004). For Plato and his followers, *theoria* refers to the essential and eternal characteristics of the universe, which is detached from and superior to human affairs. *Praxis*, on the other hand, deals with the practicality of human affairs, which is temporal and contextual and bears no significance to the overall functioning of the universe. Following this distinction, research is seen as a separate activity from all other human affairs as a way to think through and produce relevant and universal knowledge; research is an intellectual exercise aimed at producing a theory that explains the functioning and relationship of the universe. Action, or any other activities, is seen as a form of *praxis* embedded in human affairs and bears no essential truth; action involves practical considerations that are contextual and not generalizable. In this sense, to claim action as research is to conflate thinking about and enacting on ideas embedded in human affairs with the greater and more significant work of producing knowledge and truth about the world.

However, I find this separation to be a trap in language and it has indeed been challenged and rejected by Dewey's pragmatism and the postmodern thinking that followed it. Dewey challenged this dualistic form of understanding and argued that any research, or inquiry, arises from a specific context in human life. Thus, research should actively be combined and related back to the human activities for which it applies. This pragmatic model understands research as "a course of action being interrupted by the frustration of expectations, with research employed to resolve the problem and thereby enable continuation of the activity" (Hammersley, 2004, p. 169). Here, then, action is closely tied to research and vice versa. Informed by postmodern theories, this understanding was furthered by discussions surrounding subjectivity, where

subjective interpretation is essential to the understanding of reality (Somekh, 1995). A postmodern understanding of subjectivity, which is also my position in this study, rejects the possibility of an objective absolute truth detached from human interpretation and experience, and in turn understands theory only in relation to contextual, subjective experiences and activities. Here, the role of theory and the process of research that formulates it becomes an active component of human activities, which results in practical applications.

As my research question explores the theoretical concept of critical play discussed in related scholarship, this research study aims to understand its applicability in practice. In other words, this research does not aim to merely produce further philosophical discussions surrounding the concept of critical play. In addition, this study aims to address the question of how to facilitate this concept in a library setting, and it is only possible to do so by research in action. With an emphasis on research in practice, action research becomes the only viable research methodology that enables the continued theorizing and application of critical play in ways that answer the research questions.

### **Practitioner as Researcher: Insider Perspective**

The assumption that research is intertwined with action and that research results from a subjective interpretation of reality leads to another significant characteristic of action research: practitioner as researcher. If research is the process of producing knowledge that solves problems that arise from specific human activities, then the only way that research can be done is through an insider perspective, the position of the practitioner. Research detached from the activity and conducted by an outsider who did not partake in the actual activity results in only a partial understanding of reality; it may produce theories regarding what happened and how it could be changed, but it does not produce practical knowledge that stems from the subjective

interpretation of those involved. Also, it does not contribute to the active disruption of routine activities, which is understood as the purpose of research in the action methodology.

Research conducted by a practitioner involved in the situation and event provides insights into the situation from a grounded position, and the researcher is able to interpret the specific dilemmas and challenges in relation to previous experiences. The researcher is an active agent in, and a part of, the event under study, and the research should reflect the perspective of the researcher as such (McNiff & Whitehead, 2006). Moreover, as the researcher is also the practitioner, action research allows the researcher to enact the specific solutions to be theorized, reflect upon the new reality, and propose new actions that confront new contextual challenges that may arise from previous actions. In other words, the reciprocal relationship between action and research is sustained.

This emphasis on the insider perspective generates not only practical knowledge that applies to the specific practitioner and researcher, but also it produces a certain level of technical knowledge that may be passed along and enacted upon by other practitioners. Even though new challenges may arise from the new situation and context for which the solution is applied, a certain level of continuation of the solution is applicable. As practitioners in the same discipline encounter similar procedures and operate under related frameworks of understanding, technical knowledge is transferable to a certain degree. The emphasis on the practitioner as researcher also implies the ability for action research to produce critical knowledge that facilitates social change. As the process of enacting and revising the solution is embedded in the research process, a change in the status quo that disrupts the routine of a practice is always involved.

As I am both the researcher and practitioner, the framework of practitioner as researcher provides this research with further grounding regarding validity and reliability. By employing

action research, I did not need to distinguish between my role as the researcher and the practitioner. Instead, I interpreted, theorized, and acted based on the combined roles that provided me with insights.

### **Reflexive Practice**

For practitioners to become active researchers, practitioners must engage with their practice reflexively. As research is an inquiry into human activities that produces knowledge and theories, it requires the practitioner to contemplate and actively interpret the situation. Reflectivity is used here in the sense that the practitioner examines the situation and considers how his or her actions affected the outcome, and the practitioner forms further hypotheses that explain the situation and reenact further action. And it is only through reflectivity that the practitioner can formulate a theory and knowledge that explains the cause and effect in a specified human activity and its related solutions.

However, May (1997) has argued that all teacher practitioners develop theories-in-practice through their everyday engagement; in other words, teacher practitioners are always engaging with their work as a reflexive practice through the constant changes and advancements made based on previous teaching experiences. It is unlikely for teachers to remain static in their practice throughout time. In this sense, all teachers are already engaging with action research in one way or another, and it is close to impossible for teachers not to engage in reflexive practice.

Following the lines of the research questions and my combined roles, this inquiry required my action be in constant revision based on experiences in the field. I have been constantly revising my curriculum based on a new understanding of the program and the reactions of the youths involved. It was only through my reflective practice that I have revised, enacted, and reached an understanding of how to facilitate critical play.

## Spiral Process

With action research as a form of inquiry that combines action with reflexive practice, it is important to mention another key characteristic of action research: the spiral research process. The spiral process begins with observations of existing events that emerge in practice. Next, the practitioner researcher needs to reflect upon his or her observations, interpret the series of events, and propose solutions that will improve existing practice. Then, the practitioner acts upon this new understanding and takes action that will change the routine. Afterwards, the practitioner evaluates the outcome of his or her actions in relation to the larger context and proposes modifications to those actions that resolve any new conflicts. This spiral process then repeats until a satisfactory understanding has emerged or when circumstances no longer allow for the inquiry to proceed.

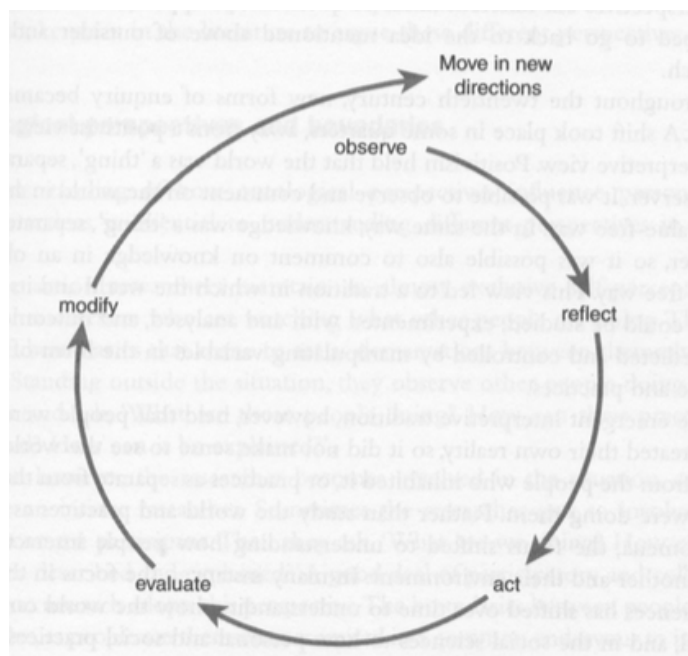


Figure 3. The Action Research Cycle (McNiff & Whitehead, 2006, p. 6)

This spiral process is significant as it separates action research from other forms of research that do not engage directly back into the situation from which the inquiry arises. In

research forms where theory building through research is detached from action, the research process does not aim to complete the cycle and only maintains observations with reflections. In the context of this research, the constant change and modification to my curriculum was enabled through the spiral process imbedded in action research. Instead of considering the various versions of the curriculum as individual cases, I was able to understand this process as a whole and discuss the specific reasoning for each modification.

### **Social Change**

The act of placing action as a central component in action research leads to this last characteristic that assumes the role of research in society: research aims to create social change. This characteristic is tied to the epistemological framework mentioned earlier; research is not an end in itself, but rather a process that leads to the actual implementation of change. Change here can be understood from the three different components of action research, namely the technical, practical, and critical. The critical aspect of research refers to addressing specific assumptions implied in routine practice in ways that unveil its oppressive nature. But the process does not stop there. By unveiling it, action research also aims to overcome these problematic ideologies with the implementation of alternatives through both the practical and technical components. Together, these changes form larger social change that is possible through action research.

The aim of social change in action research closely aligns with my purpose for engaging in this research and practice. Through the practical knowledge that altered my actions and the technical knowledge that introduced new solutions to problems in game-based pedagogies, this research aimed to produce critical knowledge that results in social change.

## **Research Stages**

This research contained three stages. The first stage involved researching the literature that discusses games and learning and formulating the research project; in this stage, the emphasis was on understanding the existing theories and practices, constructing the research questions and design, and designing the initial curriculum. The first stage was related to the observation and reflective aspects in the spiral process.

The second stage involved the cycle of carrying out the planned curriculum, collecting data related to the study, reflecting upon the data collected, modifying the curriculum, and implementing revisions in the next session. This stage fulfilled the act, evaluate, and modify aspects of the spiral process, and this cycle was repeated throughout the duration of the *Minecraft* Modification Workshops 2.0. Specifically, each cycle lasted one week long; after every class session, data was collected and the curriculum was revised based on a reflexive evaluation.

The third stage referred to the final component of this action research: analyzing the data, organizing the writing, and answering the research questions. Reflecting upon and analyzing the program as it was carried out and revised throughout, this stage summarized the findings in the hope of answering the research questions. This last stage fulfilled the final aspect of the spiral process by concluding with findings that suggests implications for the study on critical play.

## **Data Collection**

Four categories of data were collected for analysis in this research, namely interview transcripts, artifacts, journal, and the evolving curriculum. I chose to collect these data based on their ability to act as evidences in my explanation of how critical play may be facilitated. Here, I offer a description of each and the methods of collection.



## **Interviews**

Throughout the research, interviews were conducted with four participants. These interviews were conducted face-to-face at the Champaign Public Library, and they were forty-minute-long, semi-structured, in-depth interview sessions in the middle and at the end of the program. These semi-structured, open-ended interviews focused on understanding participants' expectations of the program, their perceptions of themselves as consumers and producers, their rationales for the mods they had created, and their experiences participating in the program. These interviews provided a baseline for the program and insights into the youths' perspectives on their progress into producers, and the open-ended structure allowed for themes to emerge. I audio recorded the interviews and transcribed them personally. By doing so, I was able to return to these interviews throughout the writing process and code their responses according to emergent themes.

## **Artifacts/Mods**

As the program progressed as a part of the larger curriculum, participants were prompted and facilitated to produce artifacts that act as modifications to the existing games that they consumed in ways that challenged the existing game mechanics and narratives. These artifacts took various forms, such as images and games. As artifacts, they accompanied the producers' verbal articulation of critical play and provided glimpses into the producers' abilities to exercise their agency as designers.

## **Journal**

During the program, I kept a journal, which proved to be an important part of the data for this research. After each session, I documented my observations and perceptions of the session in

relation to the research questions. The journal acted as field notes that contained key information regarding the specific functioning of each session. The journal lived on my laptop and was comprised of written texts, pictures taken from the sessions, and audio recordings.

### **Evolving Curriculum**

The last source of data was the evolving curriculum in this action research. As stated earlier, action research is a form of practice that constantly evolves based on reflection in ways that provide new knowledge. In this case, the practice was teaching and the content taught was the curriculum of the *Minecraft* Modification Workshops 2.0. As the program progressed, modifications were added to the initial curriculum to reflect on the new understandings emerging from the actual sessions. With each modification, a new iteration of the curriculum emerged. I documented the various iterations of the curriculum and analyzed them in relation to the other data sources to interpret and evaluate each approach.

### **Data Analysis**

The main research question guiding this study is: how can I facilitate critical play of video games among youths in a library setting? The concept of critical play as it is formulated in this study is the main concern, and the purpose of analysis became interpreting how the practiced curriculum may facilitate critical play. To do so, I examined the data in terms of the mods that this program produced, the self-perceptions of the youths as producers, and the questions this program elicited among youth participants in relation to video games.

To analyze the data mentioned above, I used content analysis to categorize and interpret the information, as content analysis is a technique particularly suitable for data sets that spread across various domains of media. According to Holsti (1969), content analysis is broadly defined as “any technique for making inferences by objectively and systematically identifying specified

characteristics of messages” (as cited in Stemler, 2001, p. 2). Here, content analysis is a combination of qualitative methodology and quantitative methodologies, where interpretation interacts with fixed categories. The purpose of these fixed categories was to provide systematic organization of content across various media into fewer categories for analysis. In the context of this study, my data included a variety of media, from face-to-face interactions, written materials, to video game mods. Thus, I used content analysis as a method to organize and analyze written materials, images, videos and other cultural artifacts to understand the intention and construction behind them (Rose, 2012).

In terms of the categories used for content analysis, I used both emergent and *a priori* methods of coding. To begin, I coded my data based on the processes and elements in my topology of critical play; I used subject, context, object, understanding, critiquing, and modifying as categories to organize the data into chunks. Certain data appeared in more than one of the categories, as these categories were not mutually exclusive; the purpose of these categories was to group related data together and provide a starting point for further analysis of the narrative of how to facilitate critical play.

Later, I relied on an emergent method of coding to allow for emergent themes to occur in their respective categories (Stemler, 2001). By emergent coding, I mean “categories are established following some preliminary examination of the data” (p. 3). To do so, I examined the data in each category, and took note of any emergent patterns. Then, I constructed various subcategories based on these patterns and coded the data into these subcategories. These subcategories include: playing as understanding, playing as critiquing, playing as modifying, subject’s expertise, subject’s future plans, self-made objects, objects made by others, play location, play platform, and play resources.

After all of the data categories were organized by theme, I began constructing the narrative that weaved the pieces of data in each category together. I used triangulation across various data sources to confirm the emerging arguments regarding the ways to facilitate critical play. Triangulation as a method for analysis is carried out through an examination of various sources to confirm and support a certain argument (Creswell, 2009). By triangulating data from these various data categories, I was able to formulate an argument regarding how critical play can be facilitated in a library setting.

### **Ethical Considerations**

In order to ensure the ethical protection of all human subjects involved, three measures were taken. First, the proposal for this study along with interview questions, consent forms for participation in this study, and consent forms for collecting visual and audio materials was sent to the Institutional Review Board at the University of Illinois at Urbana-Champaign; the study did not proceed until after the review. Secondly, consent forms for participation in this study and consent forms for collecting visual and audio materials was delivered to participants' guardians prior to the start of the workshops, and only youths who returned these consent forms participated in this study. The scope and intention of this study was fully explained to youths and their guardians prior to their participation. Lastly, youths appeared anonymously in this study. Participants' confidentiality was maintained at all times, both during and after the study; participants are given pseudonym when they appear in this dissertation.

## Chapter 4: Results

In this chapter, I describe my experiences conducting *Minecraft* Modification Workshops. Specifically, this chapter is split between two sections: *Minecraft* Modification Workshops 1.0 and 2.0. In the *Minecraft* Modification Workshops 1.0, I describe my experiences facilitating the first iteration of the *Minecraft* Modification Workshops series, which led the way to the second iteration, which is the focus of this dissertation action research. I provide context and background information regarding the development of this workshop series, the intentions behind and the implementation of the curriculum used in this workshop series, and my reflections and modifications for designing the second iteration of this workshop series. The second section, *Minecraft* Modification Workshops 2.0, is structured around each workshop I conducted for this action research, with a total of 5 workshop sessions. For each workshop session, I start by explaining the lesson outline and setup followed by the actual execution of each workshop, and then I conclude with my reflections and modifications for the next session. To faithfully capture the atmosphere in the workshops and participants' responses, I use participants' own words without editing whenever possible. By first understanding and detailing what happened in the *Minecraft* Modification Workshops, I will be able to connect these experiences for analysis in the next chapter.

### ***Minecraft* Modification Workshops 1.0**

The first *Minecraft* Modification Workshops emerged out of the lack of interest among youth at the library in artmaking practices, such as sculpture and drawing, introduced by Everyday Arts Lab instructors. Teen Space, where youths were encouraged to linger in the library, was an informal hangout location for youth to mingle and socialize after school. The primary way they had been interfacing with each other was through playing games together,

whether digital or non-digital. According to several youths that hung out at the library after school, one important reason that they were so invested in playing games at the Teen Space lay in their inability to access this activity at home or at school, due to the lack of time, ownership of gaming devices, game titles, or company to play with. Given this background, it was evident why they lacked interest in the programming that we were providing; the artmaking practices and themes introduced failed to connect with what youths found important in that space: playing games together.

Given this context, the first iteration of the *Minecraft* Modification Workshops was envisioned and implemented by myself with the aid of two undergraduate instructors in the fall semester of 2014. After conversations with youth at the library and extensive research in the realm of *Minecraft*, I was inspired by the modding practices in *Minecraft* affinity groups and decided to focus the curriculum on the idea of modifications.

Much like any other artistic practices, modifying any video game involves acquiring technological literacy to manipulate the medium. Modding involves the technological literacy of how to speak and interact with a computational machine, which are often characterized under the larger umbrella of digital literacy. Depending on what kinds of modifications are involved, digital literacy ranges from comprehending the basic organizational structure of the computational interface, such as graphical user interfaces<sup>1</sup> and file directory<sup>2</sup> systems, to constructing whole new enclosed systems of communication, such as coding new functions that

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<sup>1</sup> The Merriam-Webster dictionary define “graphical user interface” as “a computer program designed to allow a computer user to interact easily with the computer typically by making choices from menus or groups of icons” (n.d., para. 1).

<sup>2</sup> “The term directory is used in a computer software context to refer to what appears to the user to be a container or folder<sup>1</sup> that can hold files and other directories” (“Directory definition,” 2006, para. 1).

allow a player to collide and coexist with other players through various computational languages (Hayes & Duncan, 2012). And just like other artistic practices where the lack of access to this technological literacy prevents further exploration with a given medium, youths at the library expressed that they were very much interested in modding but did not know where to begin.

Thus, I decided to frame the initial *Minecraft* Modification Workshops around modifying the auditory and graphical representations in the game. As I had limited experience with *Minecraft* prior to this, I incorporated my personal knowledge about digital image making and sound editing with elements of modding that are popular among other prosumers in *Minecraft* affinity groups. Specifically, the curriculum prompted youths to consider how the auditory and graphical representations in the game were influencing gameplay through art appreciation and artmaking activities. For the art appreciation aspect, youths were introduced to three digital games other than *Minecraft* each week that showcased completely different auditory and graphical styles, such as the use of realistic versus pixelated imaging and first-person versus side-scroller perspectives, and we discussed how these different stylistic choices changed the experience of play. Even though an audio editing section was planned, we were only able to delve into the creation of customized skins<sup>3</sup> for their *Minecraft* avatar and the juxtaposition of different video game graphics into the resource packs<sup>4</sup> to be loaded into their *Minecraft* games. In the skin making activities, we utilized Skindex<sup>5</sup>, which is a web-browser based editor that allowed users to retexture their *Minecraft* avatar in 3D, to create an avatar that they considered

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<sup>3</sup> In *Minecraft*, skins “refer to the textures that are placed onto a player or mob model” (“*Minecraft* Wiki: Skin,” n.d., para. 1).

<sup>4</sup> In *Minecraft*, resource packs are application program interfaces that “allow players to customize textures, models, music, sounds, language files, end credits, splashes, and fonts without any code modification” (“*Minecraft* Wiki: Resource pack,” n.d., para. 1).

<sup>5</sup> Skindex is a web-based image editor specifically designed for *Minecraft* players to edit and manipulate their avatar skins.

representative of themselves. For the resource pack modifications, we utilized Photoshop to collage images onto the texture of different items in *Minecraft*, such as dirt and plant blocks, and compressed the edited images into a resource pack that is compatible with *Minecraft*.

The intention of this curriculum was to help youths practice modding the auditory and graphic representation of *Minecraft* after understanding the gameplay implications of these stimuli. However, after the completion of the workshops, it was evident that the intention of the curriculum was lost to the constant demand of learning to command the interface. Large chunks of time were devoted to simply familiarizing youths with the various user interfaces of the different platforms, such as the commands of each new game and the image editors<sup>6</sup>. In particular, the abundant functions of Photoshop were a hindrance for youths who were introduced to this interface for the first time and were only seeking to utilize the basic resizing and collaging techniques. Midway through the workshops, the co-instructors and I decided to abandon the auditory modifications that we had planned in order to give students more time to explore Photoshop, as the initially allotted time was only sufficient for youths to be able to complete rudimentary tasks such as loading the correct image files and saving the edited files to the correct directory.

Furthermore, the intention of the curriculum lacked a clear theoretical grounding to guide the students' artmaking discovery. Even when we were able to get to discussions around how the graphic and auditory representations influenced gameplay, youths were unable to translate the new findings about these influences into principles for their own modification activities. The curriculum failed to provide a compass that guided their artmaking practices. Instead, youths were utilizing the act of modding to learn about the tools, such as Photoshop and Skindex, as

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<sup>6</sup> By image editor, I am referring to a piece of computer software that allows users to digitally edit and manipulate an image, picture, or graphic, such as Adobe Photoshop.



opposed to utilizing the tools to serve a larger purpose regarding why they would want to modify *Minecraft* in such a way. In other words, the curriculum only focused on *how* we could modify the various elements of *Minecraft* for different gameplay experiences, but it failed to address the important question of *why* we would want to modify *Minecraft* in the first place. The result became workshops that modded for modding's sake.

### **Reflections and Modifications**

This initial pilot provided me with two major takeaways for modifying the *Minecraft* Modification Workshops curriculum. First, I had overestimated the general digital literacy of youths at this library. Contrary to literature that suggest youths who are experienced in gaming on digital platforms can easily translate their literacy onto other computational operations (Gee, 2007), it became evident to me that these youths' sophistication in commanding in-game controls did not extend far outside of the piece of software that they were operating with. They appeared to be savvy and resourceful in utilizing web-based interfaces to seek out information and find ways to evade the library IT restrictions for loading various games, but their basic understanding of how information is stored on computers and how similar functional icons translate across various pieces of software was considerably limited. Given this, it became vital that the next iteration of this curriculum needed to limit the scope of investigation and allocate more time to communicating basic digital literacy. Furthermore, the tools needed to be user-friendlier in the sense that they should not have an overwhelming number of functions that could steepen the users' learning curve. Thus, the *Minecraft* Modification Workshops 2.0 curriculum focused solely on exploring the implications of graphic representations in *Minecraft* and a web-based platform Nova Skin Resource Pack Editor that had limited functionalities. As well, a simplified file compression process was chosen to replace Photoshop as the tool for artmaking.

Secondly, the curriculum needed a larger framework that directed and emphasized the investigation of why we should modify existing video games alongside the consideration of how we could use various tools to achieve that modification. Instead of simply looking at how different graphical representations influenced gameplay, the curriculum needed to be structured around articulating a clear purpose for subsequent modifications. This would require inquiry into how existing graphic representations limit or exclude certain gameplay. To achieve this purpose, I utilized critical play as the larger framework as it provided me with a way to better scaffold the sequence of activities that targeted the discovery of why we might want to modify *Minecraft*. Specifically, each activity fell within and was enacted chronologically according to the cycle of understanding, critiquing, and modifying. Through this recursive cycle, youths were pushed to critically examine the flaws of *Minecraft*'s existing game design in terms of its social dimensions, in order to construct a modification aimed at eliminating some of these challenges. The hope was that youths were first and foremost considering the reasoning behind their modifications.

### ***Minecraft* Modification Workshops 2.0**

In this section, I detail the experience of designing, implementing, reflecting, and changing the curriculum for *Minecraft* Modification Workshop 2.0 with each session as a unit.

#### **Pre-workshop: Recruitment and Preparations**

To recruit youth participants for this workshop series, I spent two consecutive Wednesday afternoons prior to the beginning of the program for an hour hanging out at the Champaign Public Library Teen Space getting to know the youths there and promoting the upcoming program. I chose to only recruit during Wednesdays as the following program would

be held on Wednesdays, and recruiting any other day of the week may have solicited youths who had other extracurricular activities already scheduled for Wednesday.

As seen in the layout illustration below, Teen Space was structured around three main rows of desktop computers that take up half of the room, with a general lounge area alongside the librarian's desk in one corner and a few stacks of books on the other corner. When full, Teen Space accommodated up to 40 youths at one given time. From what I perceived, the gender makeup of the space tended to be 30% girls and 70% boys, with most boys on computers and most girls sitting around the lounge area. The racial makeup appeared to be 50% Caucasians, 40% African Americans, and a 10% mix of Latinos and Asians.

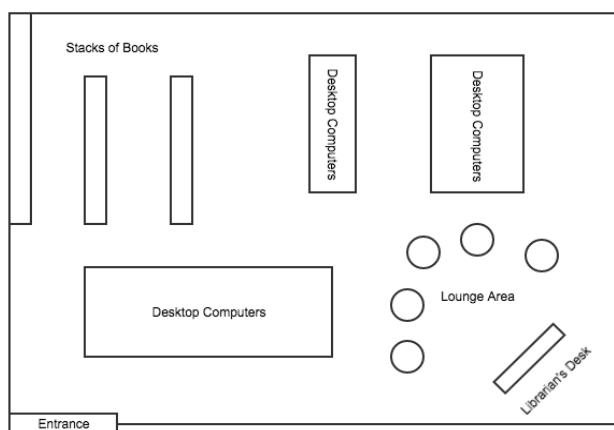


Figure 4. Layout of Teen Space

The parental approval process to sign-up for this program was quite different than those in other youth programming at the library, which provided me with some recruitment challenges. Most after school youth programming at this library did not require parental permission and was not widely publicized until the day of the event; the norm was that youths arriving at Teen Space were informed about the exciting programming that the librarians had scheduled for the day, and youths were encouraged by the librarians to attend the programming in a room other than Teen Space. When youth attendance was low at the programmed event, librarians would incentivize

youth participation by providing youths with extra computer time after a certain period of program participation. This exchange compounded with the randomized parent pick-up time (without their realization of youth's participation in programs) resulted in youths often dropping in and out of the scheduled programs without expectations to experience the whole session from beginning to end. Consecutive participation in different programs across weeks was also not expected from youths.

Given that this program was part of a dissertation research project, the University of Illinois's Institutional Review Board (IRB) required me to institute standardized protocols in recruiting youths for this program by mandating youth and their parents to sign assent/consent forms for youths' participation after reading about the scope of the project and their right to withdraw participation at any time. This structure provided me with three challenges. First, this meant that causal drop-ins that youths were used to were prohibited, and while sporadic participation was uncommon it could not be eliminated. Second, recruitment for this workshop series was contingent upon youths successfully explaining to their parents their desire to participate, acquiring parental permission and signature, and remembering to bring the assent/consent forms back to the library. Third, librarians were not allowed to exchange favors with youths to attend my program, and attainment of youth's participation sat largely on how they enjoyed working with the content provided, myself, and other participants.

To at least partially address these challenges, I made the following arrangements. First, in preparation for any dropouts mid-way through the curriculum I decided to recruit more youth participants than I had the equipment for. Secondly, I arranged with librarians to remind youths that had shown interest to return their forms, and I asked librarians to collect any returned forms on days that I was not there. Finally, while I took this sporadic participation into account in the

design of the curriculum by framing each workshop as a standalone session that could be accessed without participation in the previous week, each session still built on top of the last. To achieve the intended experience of the whole curriculum, a participant's understanding of what we experienced previously was still preferred.

On the first Wednesday for recruitment, shortly after 3 p.m. when most youths that frequent the Teen Space had trickled in, I started with a general announcement to the room about the upcoming *Minecraft* Modification Workshops from the Librarian's Desk, detailing the focus of the program and the parental approval required for participation. I prepared flyers that gave the basic information about the date/time/location of the program, and attached to it IRB approved assent/consent forms that had my contact information along with a comprehensive explanation of the research project for them to pass around and take home. Many youths cheered after I mentioned *Minecraft*, and a couple of boys approached me directly after I made the announcement to acquire the flyers. I asked youths to return the signed assent/consent forms to the librarians any day of the week when they come back to the library.

After the general announcement, I went around the room, from computer to computer and chair to chair, to talk to each individual youth. Youths who were on the computers were very invested in the different games that they were playing, and I had a hard time trying to get their attention for any extended period of time. For the first few youths that I approached, I started by reiterating the emphasis of the program that I was promoting. Many took a copy of the flyer and subtly implied that others were waiting to play with them. Later, I revised my approach by inquiring about what games they were playing and what the game was about, and then asking them if they saw any connection between their game and my program. Youths seemed much

more responsive then, as they were eager to explain to me the purpose of whichever game they were engaged in and how it was like or different from *Minecraft*.

I also approached youths who were hanging out in the lounge area. Specifically, I approached two girls sitting side-by-side working on their homework. They seemed excited to hear about the program when I made the general announcement, but they did not come to me and ask for handouts afterwards. I asked them if they played *Minecraft*, and both of them replied that they loved the game. I then asked if they would like to take the flyers home and ask their parents if they could attend, but they seemed reluctant. I asked, “Is there a reason why you wouldn’t want to sign-up for this program?” One of the girls replied, “We don’t play a lot... we are not very good... not as good as other people.” I reassured them that the program did not depend on expertise in *Minecraft*, as we would be using *Minecraft* as a jumping off place to learn about new artmaking methods, and an interest in *Minecraft* would suffice. They then proceeded to ask me what I meant by artmaking methods, and I explained by using the example of *Minecraft* avatar skin editor that they said they were familiar with. After hearing that, they seemed happy about the inclusion of skin editing and asked for the flyers to take home. Later, I walked around the library and passed out the rest of the flyers. On this first day of recruitment, I passed out a total of 20 copies of the flyer with assent/consent forms attached.

On the second Wednesday of recruitment, I spoke first with the librarian working that day to assess the return rate on the flyers I had passed out the week before. Not to my surprise, only 2 participants had returned their forms to sign up. Along with one participant whose parent emailed me the forms, I had only officially recruited 3 participants so far. I then made another general announcement to the room detailing the event, and reminded youths that if they were interested, they needed to return the forms to the librarians as soon as possible. While I was

making the announcement, many made sounds of “Ahhh” and “Oooops,” which seemed to signal their frustration at forgetting to return the forms.

After the announcement, one youth came up to me to return the forms, while another came apologetically saying that he had lost his forms and asked for another one. I happily passed to him a copy of the flyer. I then went around the room targeting youths who I had spoken to the pervious week to inquire about their forms. I approached first the two girls mentioned previously. They seemed apologetic as I approached, and before I even had the chance to speak they started explaining to me that they regretfully declined to participate. They said that while they would definitely join if the program were scheduled for another day, they were no longer available Wednesdays as they were starring in a play at school that would start rehearsing in the next couple of weeks. They even returned the unused flyers back to me. I mentioned that while it was regretful that they could not participate, I would definitely let them know if I planned to host this again another time. I was, and still am, unsure whether or not the scheduling conflict lies at the heart of their declination to participate. After the two girls, I spoke with a dozen of other youths, and inquired about whether they were still interested. Most of them responded that they were very much still interested, but they had lost their forms and asked for another copy. I gave out another 10 copies and made sure to convey to them that they would need to return the forms by next Wednesday, when the program started.

By the end of my recruitment period, a total of 10 youth participants had signed-up by returning their parental permission forms. While I had tried to balance the gender distribution during my recruitment period by passing out an equal number of flyers to both boys and girls, the final return rate does not match up. Among the 10 youths, 2 self-identified as girls and 8 self-identified as boys. In terms of racial identity, 7 youths identified as “white,” and 3 youths as

“black.” In many ways, the racial distribution in this program resembled the percentage of different youths at Teen Space. In terms of grade level, 8 youths were in 6th grade and 2 youths were in 7th grade.

To my surprise, no youths from my previous *Minecraft* Modification Workshops had signed up. More curiously, I had not seen most of them except one at Teen Space when I went to recruit. After speaking with a librarian, I was made aware that 3 out of the 6 youths I interacted with previously had changed schools or moved out of town. And the others had simply stopped visiting Teen Space as frequently, presumably moving on to exploring new afterschool territories as they had gotten older. For the only youth I was able to speak to, she mentioned that she had “moved on from *Minecraft*” as she considered it “boring” (Holly, personal communication, January 27<sup>th</sup>, 2016). Hence, she would not be joining us. While it would have been interesting to work with youths I was familiar with, and they would have been able to practice certain activities that I had introduced previously, the opportunity to work with all new faces eliminated the need for me to attend to the group dynamics of interfacing new and returning youths.

Besides recruitment, I also made several trips to the library to prepare for the upcoming program. In terms of space and equipment, I decided to continue using the Nate and Lillie Room directly across from Teen Space and bring in laptops purchased by Everyday Arts Lab for this workshop series. Even though this room was not under a teen librarian’s jurisdiction, my teen librarian contact was able to borrow the room for me under the condition that I return the room exactly as it was before I entered it. In terms of equipment, I had brought the laptops on site prior to the workshop to run through every software and website that we would be accessing. This was in the hope of identifying any glitches that might occur and minimize the need to trouble-shoot during the program.



During the first iteration of *Minecraft* Modification Workshops, I had hoped to have the program held in Teen Space, as youths were already there and others that were not participating initially might be further inclined to join us after overhearing what we were doing. However, after I met with the library's IT personnel, they did not approve several software that I needed installed due to security concerns denied my request to access certain roaming data folders on the library's desktop computers. It was also at this meeting that I was made aware that they did not allow any patrons to download and install programs on their computers, with *Minecraft* being one of them. This led me to the discovery that youths playing *Minecraft* at Teen Space were not actually accessing the legal copy of the game with their own purchased accounts, but rather they were sidestepping the download requirement and playing a web browser version. Given the security measures of the library's IT, the teen librarian and I sought alternatively to use the Nate and Lillie Room with my own computers. This option allowed me to employ computers over which I had more control. At the same time, the Nate and Lillie Room was not too far away from Teen Space that youths would feel too far removed from their other friends at the library. This distance was important because youths often visited each other for varying amount of time during their hang-out period at the library. If participants of this study had to be removed from Teen Space for extended periods of time, they would be less inclined to commit to our workshops as it would limit the opportunities for these impromptu visits.

### **Workshop 1: What is a game?**

**Lesson outline.** For the first workshop, the main focus was to understand what a game is, and by extension, what *Minecraft* is. Even though participants and myself had been playing games, and specifically video games and *Minecraft*, for quite some time, it was not immediately apparent that we all shared the same idea or even similar ideas when we thought about a "game."

We all came to learn about games and to play games in different contexts, and what we identified and associated as a game, may have been different. This resulted in different imaginations about the boundaries of a game and provided us with different connotations when we tried to interact or modify it. Thus, I thought it was important for everyone participating in the workshop to take a moment and reflect on how we draw the boundaries around a game before we delve into playing with the said boundaries. In terms of the topology of critical play that I have theorized in Chapter 2, we cannot effectively critique or further modify unless we are first aware and understand what it is that we are playing with. To play critically with something, one must first have an implicit understanding of the boundaries of play as they relate to the context, object, and subject. In other words, this first workshop falls within the understanding phase of critical play.

To achieve this learning objective, I had three activities planned. The first activity was to involve a small group introduction and discussion, where participants were to be introduced to the workshop series, each other, and myself. During their introductions, they were to be prompted to talk about their grade level, their favorite game, the reason it was their favorite game, and their expectations for the workshop. The second activity was to play *Pictionary* as a group. To play *Pictionary*, one person was to be tasked to draw out a particular thing that they thought of, and the others were to be tasked to guess what the person had in mind. In the context of this workshop, the person drawing would be tasked to draw a game that they knew well. The reason for this prompt was that participants would then be tasked to think about key symbols in games that represented whole gameplays, and we would be able to have a meta discussion about the type of interactions involved in games being drawn. Furthermore, a reflective discussion about what they observed about how *Pictionary* works and how the other games drawn works was to follow. The last activity was to involve playing three video games that I preselected,

comparing and contrasting the different games mentioned and experienced on that day, and coming to a conclusion about how each of us defined a game. The three video games were *Tetris*, *Adventure Story*, and *Minecraft*.

**Setup.** With this initial plan in mind, I arrived an hour early to get everything ready on the first Wednesday the workshops were scheduled. When I arrived, the librarian in charge of the room I reserved had forgotten about the event. After a teen librarian was contacted to clarify the reservation, I was given access to the room. I then moved the furniture in the room around to have a large table in one corner of the room for all 8 laptops, and an empty space for non-laptop activities in another corner. I proceeded to log each laptop onto the library's public wifi, which led me to the first technical difficulty of the day. Though I had previously brought all of the laptops to the library for testing and made sure they were all working properly, one laptop must have reset overnight and was no longer presenting the proper time, which led to it not being able to connect to the library's wifi. As these laptops belonged to the University of Illinois that was sponsoring my study, my student account, which was not an administrator account, denied me access to reset the system settings on the laptop. This meant I could not reset the time. I decided then to abandon that laptop for the day, as there were other setups that were more pressing. Next, I tried to connect my laptop with the projector, which I had also done before without a problem. But I was not able to this time as the input setting on the projector was reset incorrectly. Normally, this would simply mean that I would reselect the input on the projector. However, the projector in this room was mounted high up at a place where I could not reach unless a large ladder was used, and the button for input selection on the side of the VGA cable where I could reach was not functioning. After assessing the situation, I realized that a projector controller would be the best viable option at that point, and I asked a librarian for it. However, they kept the

projector controller in another area of the library. At this point, which was around 10 minutes before the scheduled program, participants started showing up and wanting to talk to me. Thus, while the librarian went to get the controller, I stayed in the room to host the youths trickling in.

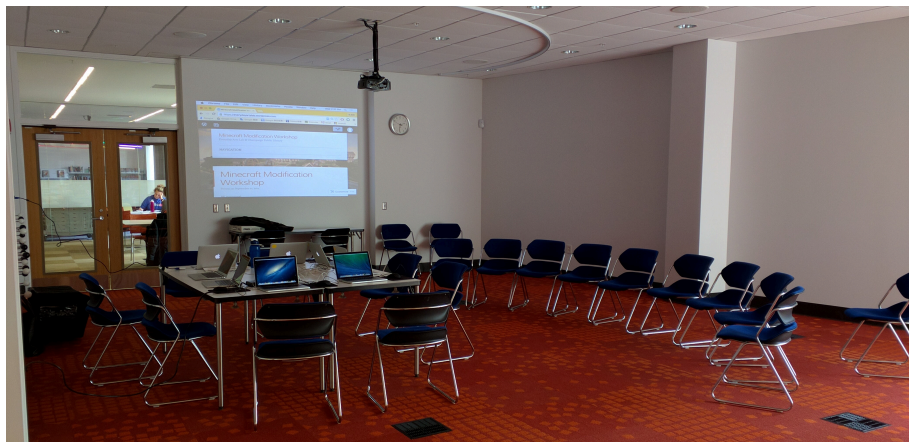


Figure 5. Layout of Nate and Lillie Room

**Activity 1: Introductions.** Ken and Tom were among the first few to arrive. They already knew each other from school, and they were panting as they got in. They mentioned that they had raced each other from school “to get here,” as they’d been counting the days until this workshop started. As participants trickled in, I introduced myself, asked them to leave their bags in one corner and pick a seat at the table with the laptops while we waited for everyone who had signed up to arrive. Most of them sat in pairs, next to the friend that they came in with. After they sat down, they immediately inquired whether they could start playing. I agreed and went around the room to help them login to the laptop and *Minecraft*. During the time that we waited for the loading bar on the computers to complete, each participant seemed to have a long list of questions that they wanted to ask me. “Will we be playing the ‘real’ *Minecraft*?” “Is it true that we will make resource packs?” “Are we really focusing on *Minecraft* for this [workshop series]?” “Are we really going to play with mods?” They all seemed excited with a slight disbelief that we would be learning about *Minecraft* through this official library program. I

confirmed all of their speculations, and added that we would be focusing on these activities with the purpose of making *Minecraft* better. They all cheered, and began talking about the different *Minecraft* mods that they'd encountered while playing *Minecraft*. Around this time, the librarian came in to deliver the projector controller, and I was able to successfully project my laptop screen on the wall. Since my laptop was occupied by one of the participants, Bob, everyone turned to look at the screen that was projecting Bob's *Minecraft* gameplay. Everyone began giving Bob advice about the dirt house that he was just beginning to build in the creative world.

As the conversation grew louder and all laptops were occupied, I sensed that it was time to move towards the first activity I had planned. I asked everyone to move to the empty space on the other side of the room, and we sat on the floor in a circle. I began by outlining the focus of the whole workshop series, and the main question we would be tackling today: what is a game? Many laughed, and Jim shouted out, "I think people who came here would all know what a game is!" Murmurs grew, and I responded, "Yes, we all probably have an idea of what is a game, but our understandings might be different."

Many started cross talking about what they thought was a game and not a game, and I took the opportunity to talk about rules for this space. After everyone quieted down, I asked what they thought our rules should be for our few weeks together. They were quiet at first, but soon Aly raised her hand. I called on her, and she quietly said, "Maybe not yell?" I agreed, and many others also continued to give input. We came to the conclusion that we would not raise our voices, we would try our best to stay quiet and listen when someone was talking, and we would not troll<sup>7</sup> or grief<sup>8</sup> others when we were playing together.

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<sup>7</sup> According to the Urban Dictionary (n.d.), trolling refers to "the art of deliberately, cleverly... pissing people off, usually via the internet, using dialogue. Trolling does not mean just making

After settling on how we wanted to be treated and treat each other, we moved on to our names, grade level, favorite game, the reason why it was a favorite game, and expectations for the workshop. Aly was sitting next to me, so she went first. She was very shy, and the first thing she said was, “Well... this is awkward.” I laughed in hopes of lightening up the mood, which triggered others to do so too. She then continued to tell us about herself, and others followed. I compiled a list of their initial answers in the order that they gave below. After Aly and Zoe went, Jim said, “Since we are all here, we all love *Minecraft*. So we should say another game that we like,” which prompted others to talk about other games. After we were halfway through, Lee and Joe came to the room to join. I briefed them about what we were doing, and they joined the circle.

During this sharing time, many asked each other follow up questions, such as after Zoe mentioned her love for *Five Nights of Freddy*, Dan asked her whether she had played the *Minecraft* mod for it before. Most of the follow up inquiries took the form of offering further information about the game named, or explaining their shared affinity for the game. For example, after Jim talked about *Call of Duty*'s missions, Ken offered to the group that his favorite mission in *Call of Duty* was in the latest installment of the series.

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rude remarks: Shouting swear words at someone doesn't count as trolling; it's just flaming, and isn't funny. Spam isn't trolling either; it pisses people off, but it's lame.”

<sup>8</sup> In video game cultures, “griefing is defined as a situation in which a gamer, rather than completing the tasks outlined by the game, intends to cause grief to the opponents and disrupt their enjoyment of the game” (Rubin & Camm, 2012, p. 372).

	Grade Level	Favorite Game(s)	Reasons	Expectations
Aly	6 <sup>th</sup>	<i>Minecraft</i>	“It’s fun?... and open.”	“Nothing... really.”
Zoe	6 <sup>th</sup>	<i>Minecraft</i> ; <i>Five Nights of Freddy</i>	“I like <i>Minecraft</i> because I make up the story. And [ <i>Five Nights of Freddy</i> ] is scary! I love it.”	“I want to try skin and resource pack stuff. I also never tried [to install] a mod before, so I want to do that. Mostly just anything we will do.”
Jim	6 <sup>th</sup>	<i>Call of Duty Series</i>	“It’s really cool! I like exploring and finishing all of the missions.”	“Definitely the resource pack stuff. And playing the real deal [ <i>Minecraft</i> ].”
Bob	6 <sup>th</sup>	<i>Naruto</i> ; <i>Super Smash Bro.</i>	“I loved the anime ( <i>Naruto</i> )... so I also liked the game.”	“I want to try to make a <i>Naruto</i> Skin [for my avatar in <i>Minecraft</i> ]. And coding things. I want to try that.”
Dan	6 <sup>th</sup>	<i>The Legend of Zelda</i> ; <i>Five Nights of Freddy</i>	“Zelda is one of the first games I’ve ever played.”	“Umm... I have tried a couple mods and [resource] packs before already, but I have never made my own... so that too.”
Tom	6 <sup>th</sup>	<i>Super Smash Bro.</i>	“I don’t know... It’s fun playing together. [And] win.”	“[Shrug] I just want to play [together] here.”
Ken	6 <sup>th</sup>	<i>Call of Duty Series</i>	“[Because of the] wars.”	“Playing too... We don’t really get to play much different stuff here [at the library].”
Fin	6 <sup>th</sup>	“I can’t pick one... all of the ones they said I like too. But not <i>Call of Duty</i> .”	“ <i>Five Nights of Freddy</i> is so crazy!!!” [said with his hands around his face similar to the painting “The Scream”]	“I dunno... nothing really.”
Lee	7 <sup>th</sup>	“Maybe <i>Minecraft</i> ?”	“For all of the extra stuff [mods] that you can do with it.”	“I just wanted to see what happens.”
Joe	7 <sup>th</sup>	<i>Minecraft</i>	“It’s fun.”	“Just checking it out too...”

Table 1. Introduction responses

As many of them mentioned “fun” as the driving force for their love of certain games, I prompted a discussion about what makes a game fun, and whether or not that defined a game. “It’s just whatever makes me enjoy playing,” Jim responded. Tom added, “If it’s not fun [to play], it’s not a game.” I prompted, “But for example, not everyone likes *Call of Duty*, does it mean it’s not a game then?” Jim thought for a moment, then said, “No.... so [a game is] maybe just what we can play with.” Zoe eagerly added, “Well, I think it doesn’t have to be fun, but [games] have a story. Like *Minecraft*.” “Yeah, like the *Naruto* story!” Bob agreed. “What’s *Minecraft*’s story?” I asked. Zoe responded, “You are the story! You make it up!” At this point, everyone started to cross talk, and they were having mini-conversations about what elements are in a game as well as what kind of story they thought each game had. I could not document all of what they said, as they were all talking at once.

**Activity 2: Pictionary.** Sensing that some of their conversations had steered away from the previous activity, I moved towards the second activity. I laid out the giant drawing pad, and gave them the instructions. Zoe offered to go first, and she quietly started drawing. Everyone stared for a moment, and then they began shouting out observations and questions. “I think it’s a platformer.” “Did we talk about this game earlier?” “No, I think it is something we didn’t say [earlier].”

I prompted participants to keep thinking about how they were playing this game while also trying to guess the answer. They soon figured out the answer to Zoe’s drawing, and they eagerly took turns drawing. During this process, they did not only focus on the game that we were playing. As there were many down times in this game, they talked about a variety of things in the process of waiting for the drawer to produce more clues in the drawings. For example, Fin mentioned that they often played *Pictionary* at Teen Space, and he found himself a terrible



drawer. Tom also stated that he was “really bad” at drawing, but he thought it was not a hard game. In terms of the meta discussion about *Pictionary* as a game, they added rules that confined the activity and a goal as key elements to how they would define a game. Zoe stated, “I think there are rules involved. Like how I can’t talk-talk [while drawing], but I can talk through my drawing.” Fin agreed, and added, “Yeah, it’s like playing pretend.” “It’s about trying to get to one place.” In terms of whether or not they found *Pictionary* to be a fun game, Ken said, “I think it’s only fun if you were playing with a lot of people, like this.” At this point, they were mostly talking amongst themselves, and I contributed minimally. Even though they were playing this beyond the initial time I had allotted for it, I decided to let them continue as the conversation grew organically.



Figure 6. Playing *Pictionary*

**Activity 3: Video games.** After most participants took their turns at *Pictionary*, we moved along to the last activity. They jumped as I said we would play a few video games now, and we moved back to the table with laptops. As we got back to the table, a whole set of technical difficulties occurred. Since we’d been away from the laptops for a while, the wifi connection was lost. Noticing this problem, I tried to demonstrate how to connect back on with the projection of my laptop. However, the connection window was not popping up for some people correctly, and I had to move around the table to help some of them trouble-shoot

individually. It became rather chaotic, as some participants had logged on already and had begun playing while others were just chatting, playing on their phones and waiting for me to get around to them.

After some time, we were finally all caught up. I directed participants to the Wordpress site that I had built to communicate with them for this workshop series by asking them to type out the website url address shown on the projector. I had thought that this would be rather simple, but it turned out they needed a lot of help. Since many of them had never used a Mac OS X operating system before, they did not know “how to get onto the Internet” through a web browser. More specifically, they did not know which application to select and where to select it, as there was no “start” menu. After I directed their attention to the Chrome icon, they began having problems typing out the url address. After they tried once and failed, they immediately called out my name, stating that they needed individual help. When I did go to help, the problems turned out to be mostly that of a simple typo or incorrect spacing.

After finally getting everyone to the correct website, they mostly lost their focus on me. I tried to get them to focus on *Tetris* first, but I was not successful. Many of them had problems loading the game on the web browser. After going around and helping individuals trying to load the game, I realized the problem was out of my control. There was a lot of heavy traffic on the library network at the same time, which caused the long loading time and sometimes failed connections. Even though I had tried to conduct a stress test during my preparations, I had not anticipated the potential usage on this network from other library patrons. I suddenly remembered that our local Fab Lab had setup a private network at this library for their programs, and I decided to connect to the private network to see if the traffic was better there. Finally, I was able to connect a few youths to the Fab Lab network, and connect to *Tetris*.



Figure 7. Participants playing different games

However, while participants were waiting on me to figure out this connectivity issue, they were bored and they had figured out how to entertain themselves. Ones that were waiting for me to assist them began playing the next couple of video games I had listed on the website. Ones that I was working with to solve the issue on their computer could not really follow along with what I was doing, and they shifted their attention to their friend's screen. Aly walked up to me at this point and excused herself. She apologetically said that her mom was there, and she had to go. I assured her it was no problem, and I looked forward to seeing her next time. Realizing that I had lost the group's attention during the individual trouble-shooting sessions, I decided to just go with the flow and let them explore at their own pace the games I had listed. Dan and Fin asked that if they could play a game that was not listed, and I agreed. Bob really wanted to start making *Minecraft* avatar skins, so I directed him to the website that I was planning to use. I realized that trying to follow my strict lesson plan was impossible at best and an imposition at

worst. Instead, I began seeing this as a club, and thought to myself perhaps this is what an affinity space looked like.



Figure 8. Bob working on his *Minecraft* avatar skin

During participants' free play, they were also sharing ideas about the game and talked about mods they'd heard of or knew. I interjected by steering the casual conversation towards *Minecraft* and its rules, goals, and story. They seemed to be particularly intrigued at the "real deal," as many restated that they did not have access to it at the library and did not have an account at home. They also conversed about the difference between survival and creative modes of play, and how the rules differed in each mode. The story also became rather different, with survival modes being about trying to survive in the wild and creative modes being about trying to make interesting "things" with unlimited blocks. Many agreed that the only point of convergence between the two modes lay in the goal, which was to have fun playing with friends.



Figure 9. Dan, Zoe, and Bob discussing game modes

Around 4:50 p.m., parents began to show up. To end the workshop, I made a group announcement summarizing what we did that day, and gave a quick preview about the plan for the next week.

**Reflections and modifications.** Reflecting on the first day, there were a number of surprises – the major one being the number of technical hurdles I had to get over. For the last activity, I realized that more time was spent on trying to get to the activity than actually doing the activity. This came as a surprise as I had already taught a version of this workshop before and many other classes using various digital technologies. I thought I had learned from my previous mistakes as an instructor and that I had seen all that could go wrong. I had tried to anticipate the technical issues beforehand, made ample preparations to prevent any breakdown, and attempted to plan accordingly for this workshop series. However, it was evident that I had not thought through every component, or simply that there would always be new, unforeseeable problems. As the old saying goes, “technology never works.”

Given the pretense that new technical difficulties would always occur, I needed to come up with a better solution. How should I address the issue of technical trouble-shooting during

instruction? This became a central question that I tried to answer throughout the rest of the workshop series. Without addressing it first, it was impossible to get to the question of playing critically. As opposed to scattering around the room, helping each person individually and losing the group's attention, I thought perhaps more of my attention should be given to the processes of getting to my planned activity. My answer after the first day was that I would eliminate as many unnecessary hurdles as I could and I would solicit help from other participants whenever possible. I decided to drop the three-new-games-a-day activity, as there was too much uncertainty involved. At the same time, I noticed that a couple of participants did not require any of my help, mostly due to their sophistication in trouble-shooting on their own. I decided that I would make it a focus to have them help others out, as opposed to depending on me to trouble-shoot alone.

Another surprise after the first workshop was how much I struggled internally about how I should instruct or facilitate the workshop series. Though I had in mind that it would be a rather spontaneous and casual environment, when participants deviated from my initial lesson plan, the teacher side of me felt the urge to control the situation. When participants were steering off course, laughing and messing around with games that I had not planned for, I felt conflicted about how I should act and respond. On the one hand, they were having fun and developing a relationship through that process. On the other hand, I was worried about their loudness and their disregard for my instructions. At times when I did interject and tried to steer the conversation in a certain direction, I noticed that their interest lowered and curiosity lessened. And at times when I left them to their own accord, I noticed that they seemed to have investigated further.

Reflecting back to theories about affinity groups, informal learning in affinity groups works because individuals were invested in learning based on their own drive and interest as

opposed to someone else mandating their focus. As such, I decided that I should reframe this workshop series for myself. As opposed to thinking as a classroom teacher with all details of the whole two hours planned out, I should consider this more as a club that allows for the free flow of ideas to emerge. And when those ideas emerged through behaviors I had not anticipated, I would refrain from obstructing them and allow them to develop.

## **Workshop 2: What is a mod?**

**Lesson outline.** The focus for this day was mods; specifically, what is a mod and why do people make mods? For gamers, mods usually refer to modifications to an existing game. But the idea of modification can also be extended to other areas of life, as we make modifications to different objects for different reasons. The common thread between game mods and other modifications in life lies in the intentional act of changing something that already exists. This intentionality represents ideas for improvement by the person making the modification, which also implies a critique of the original object. Thus, the idea for this lesson was to identify the commonality between different types of mods for games and other objects, understand the reasoning behind the creation of different mods, and to start to envision our critiques of *Minecraft*. In the topology of critical play, this lesson pushed beyond understanding and begun to practice critiquing.

To achieve the learning objectives mentioned above, I planned two activities. First, we would start with a general discussion about mods, the different types of mods that exist for *Minecraft*, and what kind of improvements to *Minecraft* we could make based on critiques to it. To facilitate this discussion, I prepared several non-digital objects that were modifications of other objects for us to consider the purpose behind these creations. I also prepared two YouTube

video clips of Anita Sarkeesian's Feminist Frequency<sup>9</sup> show that provide a critique of the gender representations in video games for participants to consider the kind of mods that could be created. For participants to generate their own critiques of *Minecraft*, I intended to ask them: do you know anyone in your life who is not engaged with *Minecraft*? Why do you think they are not engaged with it? Imagine how you came to play *Minecraft* and have stayed engaged with it, what qualities or requirements exist for you to be continually interested in it? And how do you see these requirements as possible barriers for some population or person you know? What types of gameplay do you think are missing from *Minecraft*? And how would you change *Minecraft* to be more enjoyable for you and the people you've mentioned? For the second activity, we would be exploring the reasoning behind the creation of certain *Minecraft* mods. To do so, I prepared two categories of *Minecraft* mods, including map mods and texture mods. These two types of mods were then used to compare and contrast with vanilla version of *Minecraft*.

**Setup.** Like the first day, I arrived at the library an hour early to setup. But unlike the first day, I did not encounter any difficulties getting the room set up. I laid out the space the same as the first day, with the addition of several common household objects. I had brought them in for the first activity and laid them out on the table situated under the projector. I was casually browsing my emails when Zoe and Fin walked in around 2:45 p.m. They greeted me with excitement and asked right away if they could play on the laptops until others arrived. I agreed and casually asked their opinions about last week's workshop. Zoe enthusiastically assured me that she thought it was really cool to compare the different games we brought up and played. She

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<sup>9</sup> Feminist Frequency is a "not-for-profit educational organization" that produces videos analyzing "modern media's relationship to societal issues such as gender, race, and sexuality" ("About Feminist Frequency," n.d., para. 2). Their videos are accessible via YouTube and their website.



also stated that this program had instantly become the highlight of her week and that she had looked forward to coming back ever since we had departed last week. Fin, on the other hand, mentioned that he “kinda” knew how to define a game better now, but he was eager to get to the “making stuff.”

Not long after Fin started playing *Minecraft*, he immediately had a problem with the display and sought my help. His game screen appeared abnormal, with what seemed like three different types of graphics overlaying each other. I asked him to check a display setting, but that did not resolve the issue. As I was pondering with Fin what could have caused it, I was called away by a librarian seeking information about the workshop. After I returned, I was happily surprised that Fin had solved the problem on his own. He proudly told me that after I pointed him to the *Minecraft* display setting area, he messed around with the different options and found the “3D toggle” button that had caused the issue. This gave me more confidence about the idea of having more individual and peer-focused trouble-shooting time today and a feeling of relief that I did not have the burden of solving every technical difficulty alone.

As participants trickled in, they all got on to *Minecraft*. I had set up a local server this week, with the idea that participants playing on the server together would replace the three-new-games warm-up activity I had planned previously. However, they were only interested in the server I had set up for them for a short period of time, as they discovered the different maps and resource packs mods I had installed on the laptops for the second activity today. My initial internal dialog was, “Oh, no! That’ll ruin the surprise and the whole second activity.” But then I reminded myself that I had decided after last week to let youths explore whenever possible and to reject the strict linear lesson idea. They were extremely excited, as one of the mods was inspired by *Five Nights of Freddy*, a game they had mentioned the previous week and informed

me about. They started to self-organize amongst themselves to play together with this mod, and they began calling out all of the additional functions and features that were added. I was mostly observing at this point and thinking to myself that this probably would not have happened if I had shut them off and determined to only allow for exploration in a contained process.

**Activity 1: Discussion about mods.** Shortly after 3 p.m., most participants had shown up, with the exception of Aly and Joe. No one seemed to know whether they were coming, so I decided to move on to the first activity. As I asked everyone to pause their game and move to the empty space for a discussion, Lee approached me and stated apologetically that he had to leave. I said, “No problem, is there anything I can do for you?” He mumbled something unintelligible that contained the word “sorry,” and gave me a hug before he left. I did not see Lee at the workshops afterwards.

After everyone sat down, I asked whether someone could tell me what “mod” stood for. Dan shouted, “Modification, duh!” I laughed, and asked if someone else could describe what modification meant. Bob stated that “a mod is an add-on to a game,” while Dan added that “a mod can be another game.” Noticing that they were focusing on games, I inquired about whether something can be a mod or modification without being related to a game. Their answers were mixed. I then pointed their attention towards the several objects I had prepared: sunglasses, hardcover books with jackets, a peeler, a knife, and a tea container. When I first asked them if the sunglasses were a mod, they reacted strongly and shouted out with a unified “No!” But after I put the sunglasses on, Dan shouted out, “Yes, it’s a mod to you.” I asked, “Why is this a mod? How did it change me? And why would I need this mod?” They came up with different answers, “It allows you to see better.” “It protects your eyes.” “It prevents the sun from hurting you.” I then went through all of the other objects, and they began to actively describe how each object

could be considered as a modification either to another object or to us when applied. Zoe made a notable observation that I had not even considered previously; she mentioned that “book jackets are a modification to just the book because they are like skins for the books so they can be recognized and customized, just like an avatar.” I proceeded to ask them, “Why do you think people make different kind of modifications?” Their answers were varied; “better,” “safer,” “easier,” “friendlier,” “cuter” and “more efficient.”. In summary, I felt that they were beginning to see how modifications are in place to make different situations more accessible or approachable.

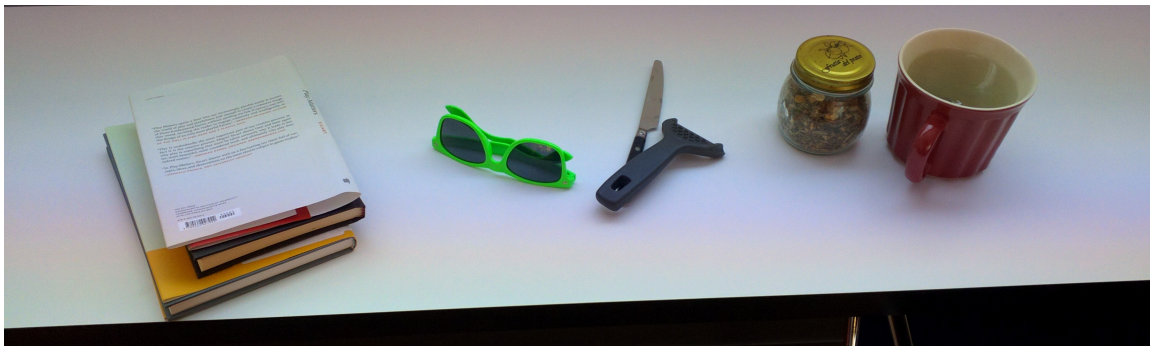


Figure 10. Objects as mods

Sensing that participants were beginning to see the different purposes behind making modifications, I transitioned to the Feminist Frequency videos. I prefaced the videos by stating that the speaker, Anita Sarkeesian, would provide a critique of some video games, or pointing out problems in video games that could be improved upon. And their job was to find out what she was critiquing and imagine what kind of mods we could make based on this critique. While they were watching, I paid close attention to their reactions. They were very focused, seemingly wanting to accomplish the task. They also made cheering noises when characters that they recognized were featured. At times when Anita Sarkeesian talked about gender differences in characters, Fin and Jim looked confused and made the noise “huh.” There were a few

conversations here and there, particularly between Zoe and Dan. I heard Zoe murmur, “I know about this, I heard about it before.” They seemed to be in agreement with Anita, as they nodded along. Bob, Tom, and Ken were paying attention at first, but their intense gaze faded away around halfway through the second video.

After the screening, some participants jumped to express their opinions even before I had the chance to ask. “I think she is trying to say that girls are a certain way in games, like victims always,” Dan said. Zoe announced to the group that she agreed with what the video said about the stereotype of girls, but she did not see herself in that light; she said, “Even though they [female characters] are like that, I don’t have to be like that.” Others were rather quiet, so I asked them what they thought the video was saying, and whether or not they agreed with it. Fin responded that he guessed he agreed with the idea that “girls are not really playable characters” and often just part of the plot line, but he had not seen it like that before. Tom agreed with Fin, and said, “I never thought of this. I guess that’s kinda sad.” Ken, Jim, and Bob did not have a lot to say, and only answered “yeah” or “I dunno.” When asked about what kind of mods that they could imagine based on this critique, they had even less to say. “I try to use a lot of the different skins for most of my avatars,” Zoe said as she considered how she rejected some of the stereotypes of girls’ appearances in games. Dan added, “Maybe make different stories..? But that’s a lot of work.” Others said they did not have anything else to add, and that Zoe and Dan had said all they could think of.

Sensing that participants were losing interests in the discussion about gender, I decided to bring up the issue of race in video games, which had not been explicitly discussed in Anita Sarkeesian’s videos. Using the critiques of gender as example, I asked if participants had noticed any patterns in terms of race, ethnicity, or nationality among characters in video games. They

lowered their heads to think. Ken broke the silence and said, “Evil characters are usually monsters.” I grabbed on to that comment and asked, “What kind of monsters are they usually? Do they look like any particular group of people in your life?” Ken insisted, “No, they’re just monsters.” I waited for others to chime in, but they did not. I turned the focus on “good” characters and asked them to consider the racial or gender representations of default playable characters they had assumed control before. Steve, the default character in *Minecraft*, and Zelda, the default character in *The Legend of Zelda*, were among the most popular mentions. However, they were confused as to why the race and gender of these characters had any significance. Dan mentioned, “Yeah, they’re both boys with lighter skin... but that’s just because of the story.” I asked them to think about why it was so common that video game stories were told in this way, and whether the story could be told in another way with different protagonists. Zoe picked up on my implication that video games often portray boys as the protagonists but she insisted that it wasn’t an issue for her. “I don’t have any problem playing as boys... it’s just part of the story,” Zoe said.

As the discussion slowed down and I felt participants were exhausted by all the talking, I asked them to grab a pen and told them we were going to write a little bit and then to go play *Minecraft*. They were a bit more energized after this incentive and wrote away based on my prompt. I asked that they write down the names of a few people in their lives who did not play games, such as *Minecraft*, or who did not like to play games, and to write down some possible reasons for this. On the side of the paper, I asked them to write down some their own critiques of *Minecraft*, and what kind of mods they could create for the people they had listed and themselves. All of them listed their parents, siblings, or friends as people who did not like to play, with the major reason being they did not care or that they did not understand *Minecraft*.

Many of them could not think of what they did not like about *Minecraft* and simply skipped answering that question altogether. Among the mods they imagined, many of them simply put down other video game inspired mods that they had tried before or wanted to try. I asked them why they liked those and wanted to make those, and Zoe said, “Well, it’s like bringing your two favorite things together so people can come together.” Tom seemed to be inspired by this comment and wrote down “football mod.” I asked how he came to this idea, and he said, “My dad loves football; I think a football theme can make him interested [in *Minecraft*].”

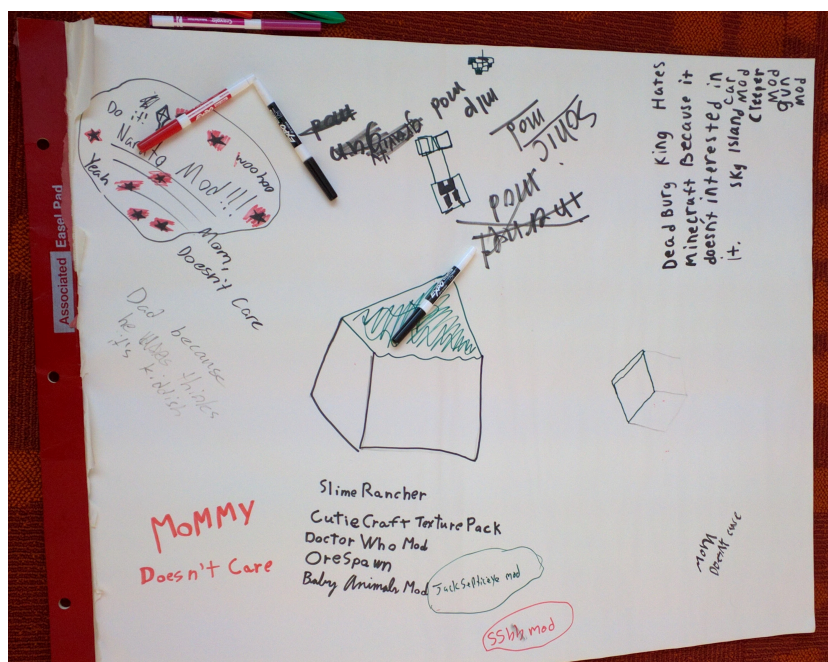


Figure 11. Brainstorming pad

At this point, we only had 30 minutes left. Though I felt like we had not really created a concrete idea for mods and a clear reasoning behind it, I wanted to get to the mods that I had prepared. So, I asked them to return to the laptops with the condition that they kept thinking about their own mods.

**Activity 2: Playing mods.** As we got back to the table, I prompted participants to explore the two maps and three resource pack I had installed, and to consider the purpose behind these

mods. One of the maps was a texture display that showcased every single entity programmed in *Minecraft*. We went back to the laptops and I asked them to check out the texture display map on the server. They were shocked at how extensive it was. Ken said, “This must have taken them so long to make!” Bob gushed, “It’s so cool because you can see all the textures.” However, that initial response lasted only a short while, and they became self-organizing, trying to find each other in the game and creating houses together. Though it would seem that they had forgotten my initial prompt, I did not interfere. Instead, I watched them explore the map together. At one point, Dan asked me to OP him and others, meaning to give them administrator access to the server with the ability to change the game rules. I said sure, but I did not know the exact server command off the top of my head. He asked if I had the server console with me, and I said yes it was on my laptop. He flew over and typed a few commands in the terminal, but the server responded that it was not an option with the way I had configured the server. I offered to Google this issue with him and try to reconfigure our server, but Dan declined. He was eager to get back to playing with others, and he walked back sadly.

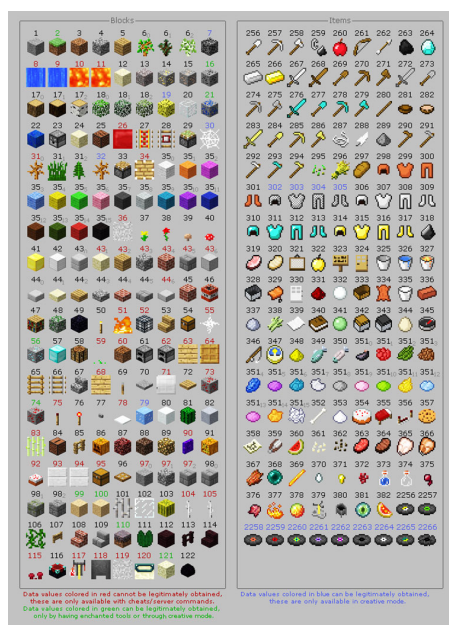


Figure 12. List of all *Minecraft* blocks

I then asked participants to try out the three different resource packs. They were really impressed with the various changes. I passed out the handout I had prepared with a list of all the textures, and they were extremely grateful for it and even ecstatic. I asked them to refer to it to see what had changed, but I don't think any of them did. Many said they did not like the Zelda-inspired resource pack because not much had changed. A few of them grew frustrated with the wait time to load the *Tron* mod, and Ken even began playing on his phone's *Minecraft*. Zoe really wanted to make her own skin for *Minecraft*, so I showed her Skindex to customize avatar skins, which I had shown Bob on the first day. However, instead of making one, she decided to download a foxy-inspired skin that someone else made and shared. I asked her why she did not want to make her own, she said she liked to see what others had come up with and to use what was in the community already.

Seeing that I had lost participants' attention for the day, I gave up the idea of trying to get them to think about the idea behind these mods. Instead, I showed them where to find map and resource pack mods on the projector. Few of them paid attention, but Tom followed along and instantly installed a *Five Nights of Freddy* resource pack. This got the rest of the group's attention, and everyone else wanted to learn how to get it. I repeated the process again to the group and walked around helping them when their install did not appear. All of their problems were a result of selecting incompatible mod versions, and I took the chance to explain the importance of version control. As *Minecraft* is continuously being updated, there are multiple versions. And mods made for *Minecraft* at a certain time may not be compatible with the latest *Minecraft* version.

The workshop ended as participants continued to browse through the sea of community shared mods. Instead of an official closure, I let them hang around until they were picked up.



**Reflections and modifications.** Overall, I was rather satisfied about this workshop. Even though we were not able to accomplish everything I had set out to do, we were able to connect mods with other forms of modifications and consider the purpose behind them. The only problem seemed to be that participants were not able to provide any specific critique of *Minecraft*. Upon further consideration, I realized that my initial imagination of criticality for critical play might need to be revised; I realized that I had imagined a certain type of critique when I spoke of criticality, specifically along the axis of gender, race, class, ability, etc. My hopes had been that the Feminist Frequency videos would have provided one set of examples, and I had hoped that participants would be able to describe other instances of problematic portrayal. However, as participants' answers demonstrated, their understanding of the world was much different than mine, and their considerations at their point in life were constrained by their experiences and understanding about the world. However, this does not mean that their responses were not critical. Rather, it is a different type of criticality. In particular, they were more sensitive towards age differentiations and thematic preferences in play, which implied a systematic understanding of how an individual's play was tied to larger social attributes. I realized that I needed to keep this in mind and further develop their sensitivity on these issues as we continued.

Reflecting back on the modifications I had set out to achieve in this workshop, I was certain that I would continue with them. In terms of trying to deal with technical difficulties that happened on the first day, the idea of replacing the three new games with a localized *Minecraft* server proved to be successful. Not only was I able to eliminate the uncertainty involved with the library's network traffic, I also got the chance to observe them self-organize in the game environment. The idea of sharing the trouble-shooting responsibility more with youths also made

an impression on me. Fin proved to me that he did not need me around to solve his problem with the *Minecraft* display, and perhaps my earlier approach could have taken away their chance to learn to solve problems on their own. I also noticed that Dan was rather fluent in different computer commands, and I planned to solicit his help more later on when his peers were in need.

In terms of trying to be more flexible and responsive towards emergent themes, this approach also proved to be fruitful. By stepping back and allowing them to explore what they wanted at the moment, I saw their desire and ability to self-organize and achieve a common goal. They were not only helping themselves, but they were also willing and eager to help each other to achieve the same state that they were in. And by responding to the emergent interests on the different types of maps and resource packs, I got the opportunity to point them towards the wide array of online *Minecraft* resources and the purpose of version control, which they would probably continue applying outside of this workshop.

### **Workshop 3: Paper prototyping**

**Lesson outline.** The focus for this workshop was paper prototyping. As part of the larger iterative design process of this workshop series, the plan was to use paper prototyping to create a concrete and practical plan for later modifications using laptops. By having a thought out and tested plan, youths would be able to focus on learning how to use the software to achieve their ideas in the later workshops, as opposed to trying to come up with an idea while distracted by the process of learning to communicate with the computers. My hopes were that with the requirement to create a prototype, youths would be pushed to further refine their critiques of *Minecraft* and consider more closely how the different elements in the existing game contributed to this outcome. In terms of critical play, this workshop was particularly significant, as participants would be applying their understanding and critiques of *Minecraft* that we had

accumulated over the previous two weeks to tap into the process of modifying using paper prototypes.

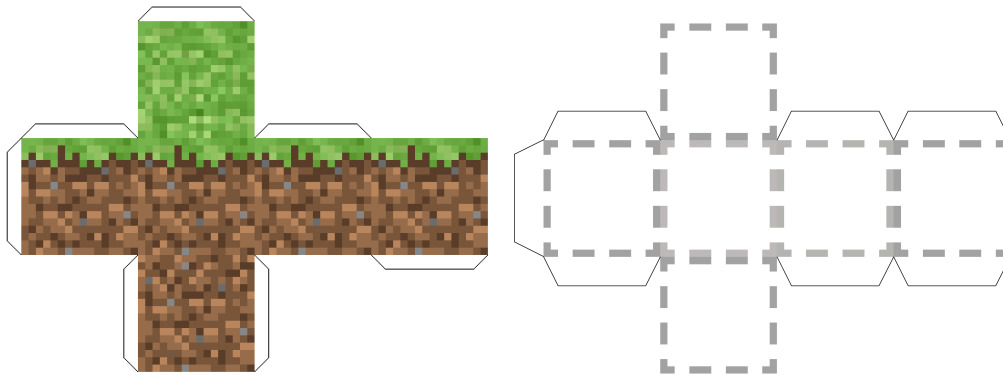


Figure 13. *Minecraft* paper cutouts

To facilitate the paper prototyping process, I planned two activities. The first activity would focus on using paper craft techniques to make physical *Minecraft* blocks and it would function as a warm-up for the second more prototyping-intensive activity. I prepared multiple *Minecraft* block cutouts on paper so that participants could cut them out to create a 3-dimensional block. I also prepared several empty blocks with no textures for participants to design their own blocks. My idea was that we would be able to talk casually about what we had learned over the past two weeks and brainstorm a bit about how they saw that translate into a mod. Specifically, I would ask them to consider the implications of the critiques to *Minecraft* that they had developed based on personal experiences. Who were left out in their play of *Minecraft*? Why were they left out? Were there any common attributes among these players that were left out? The purpose for this prompt was to initiate conversations among participants that transcended describing personal experiences to recognizing collective differences among players; by questioning and connecting the anecdotal experiences that they had described, I hoped that participants would be able to elevate their critiques from personal preferences to systematic exclusions. Afterwards, participants would be asked to consider how to revise these

systematic exclusionary practices through their thematic mods. For example, if players felt excluded from *Minecraft* because they did not resonate with the gender assumptions of the default character, how could their mod address their concern?

The second activity focused on introducing participants to the idea of paper prototyping and having them actually make some prototypes. To begin, I prepared three game paper prototype demonstration videos to show participants, and discussed with them the purpose of making prototypes. Afterwards, they would be given a worksheet that prompted the theme and modifications to be made. In terms of the modifications, there were two levels of change. First, they needed to identify the individual blocks that they would change. Second, they would need to have *Minecraft*'s crafting formula in mind and consider how the changed blocks altered the outcome and story of the game. The idea here was to get participants to play around with the rules of the game as exemplified in the crafting formulas. To complete the worksheet, I printed out several *Minecraft* textures for them to cut out and collage with and a periodic table of *Minecraft* blocks that I had found online. To exemplify the process of modifying individual blocks to change the meaning of *Minecraft* crafting formulas, I made an example of changing the torch block into a pencil block using the *Minecraft* formula for them to consider. As seen in figure 13, the crafting formula for a torch is a block of coal and a stick. By modifying the torch into a pencil, the block representing coal is now representing graphite, and the meaning of this crafting formula changed.

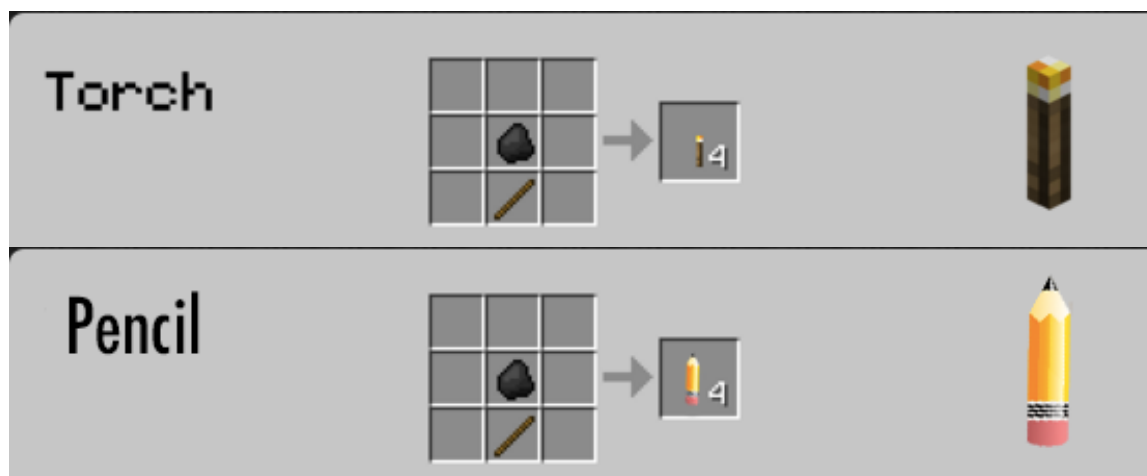
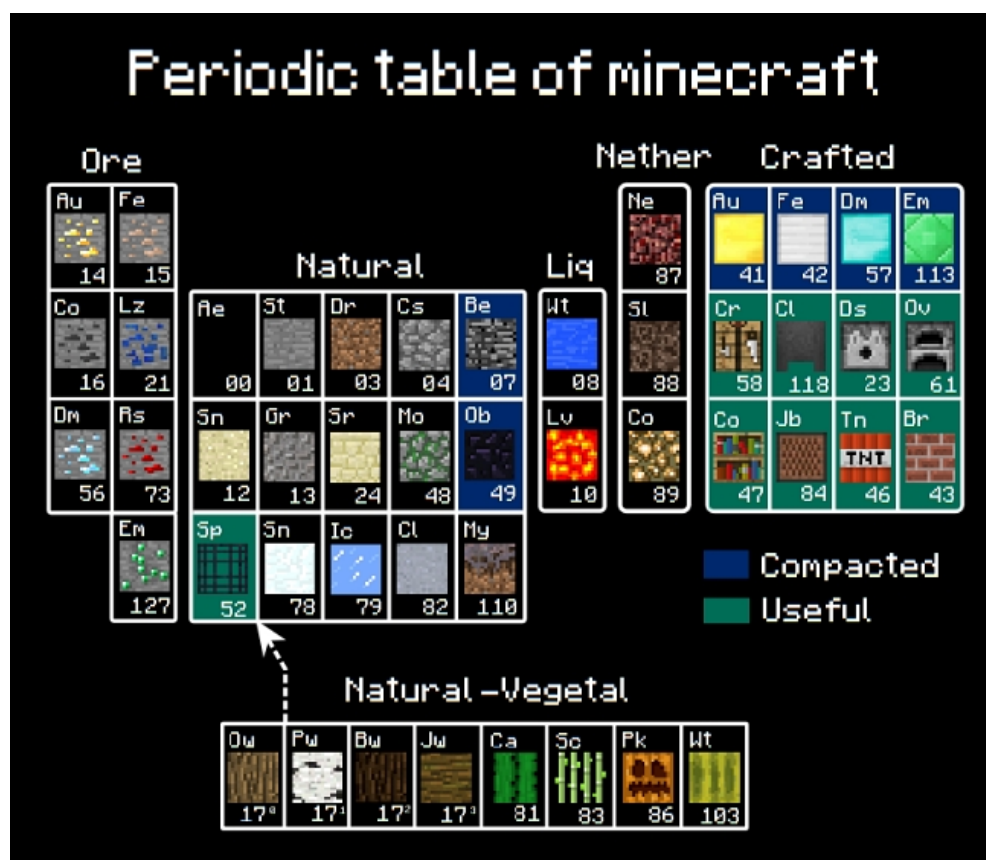


Figure 14. Formula to craft pencil

Figure 15. The periodic table of *Minecraft*

**Setup.** Since the focus on this day did not require laptops, I arrived only 30 minutes earlier to setup. I had the room laid out the same as before, but I decided not to set out the

laptops in the beginning, as I did not want participants to be tempted to play *Minecraft*. Instead of laptops, I placed the paper cutouts, markers, glue, and scissors on the table.

**Activity 1: Paper craft.** Fin was the first to arrive, around 2:50 p.m. Instead of asking for the laptops, he was curious about the paper cutouts on the table and asked “What is this?” I explained to him that we would be playing with paper craft first today, and I asked if he’d ever tried it before. He replied that he had not, but he instantly picked up a scissor and paper to cut without my instructions. Dan and others showed up, and they seemed to know what this was all about. Bob excitedly said, “Oh, I’ve seen these at Target before!” I explained to him that I found these cutouts online and simply printed these out for free. Dan eagerly corrected me, “Well, excluding the cost of the printer. And the paper and ink.” I laughed and agreed with him, and asked the group whether they’d tried this before. Most of them said no, but that they had seen or heard of this before. Our conversation grew into how people make paper crafts and the different type of material we could use, such as cardboard. As Fin fumbled with his paper block, he offered a critique that the paper we used was “bad” because it gets crushed easily. Bob seconded him, but added that he thought paper was so much easier to work with as cardboard must be difficult to use due to its thickness.

Noticing that Zoe and Aly had not shown up, I asked if anybody had heard from them. Nobody seemed to have been in contact with Aly, but many said that they spoke with Zoe throughout the week. Dan was the last one to have spoken with her that day, and relayed the information: “She said she had to get tutor [sic] after school because her grades are bad. She really wanted to come, but her mom says no way unless her grades improve.” I was quite saddened by this information, as Zoe had shown a lot of interest in what we were doing. However, it was clear that I could not have changed the situation. From this point on, it became a

crew of 6 participants that regularly came to the workshops, and it was evident that we had lost Zoe, Aly, Joe, and Lee as participants.

I informally started the day with the announcement that we would be playing with paper and making a plan for our mods today, as participants fumbled away with the scissors and papers they had picked up after walking in. Dan enthusiastically inquired if we would get to use the laptops today, and I informed him we could after we are done with making a plan. Ken and Tom sat there not engaged with the activity like the others. I asked if they needed any help to get started, and Tom said, “I can’t cut.” I was rather surprised, and jokingly asked if he really had never used scissors before. He said that they “Just don’t use it, ever.” I found that quite shocking and unbelievable, and I further inquired if they were currently in any art classes at school, hoping to get a bit more context and try to relate them to this activity. Tom said he was not in any art class, because he was in the “AVID” program. Even though he could not tell me what “AVID” stood for, he explained that because of “AVID,” his classes are all STEM (science, technology, engineering, and mathematics) focused in preparation for college. He proudly mentioned that he used Photoshop instead of actual paper to make images and made a video game before using Scratch through that program. I was intrigued and tried to relate the activity to the lasso tools in Photoshop. However, he still refused to pick up the scissors, while others kept busy with trying to get as many blocks done as possible.

For some reason, the conversation among the group switched to what they wanted to do when they grew up. Fin said he wanted to be a paleontologist, because he wanted to work with fossils, earth science, and history. Dan said that he wanted to do something with computers like his parents, who were programmers. Jim said that he wanted to be a YouTuber. He explained, “There’s a lot of YouTubers that makes a lot of money and they are super young.” Others

chimed in, and mentioned Felix Kjellberg, a.k.a. PewDiePie, who is famous for his “Let’s Play” YouTube series. Apparently he was even interviewed by major TV networks thanks to his popular series. I admitted that I was not aware of PewDiePie, and Jim suggested that we watch some of his videos. In one video, PewDiePie recorded his gameplay in Fallout 4 along with his reaction through webcam footage on the corner. He made comments and sometimes exaggerated physical gestures as he went through the game. Participants all laughed when PewDiePie made a funny face that I did not find funny, and I suddenly felt a bit old. We also watched one interview that PewDiePie gave to a news network, which revealed that he was only 26 years old and he had more subscribers than Lady Gaga and Beyoncé. Jim explained to me that the reason his videos are so popular is because he makes really clever comments that are very silly. I asked if others also liked him, and if so, why. Bob responded that he enjoyed watching the different video games being featured, as he did not have access to most of them. Fin said that due to YouTube’s recommendation he had watched a couple of PewDiePie’s videos before, but he was “not that into it.”

They were extremely focused when I played the videos, but their hands also never stopped working. Seeing that these videos provided a lot of conversation, I asked them to suggest another YouTuber. Fin wanted us to play videos by his favorite YouTuber LDSHadowLady, a.k.a. Lizzie. As I pulled up her YouTube page, I was struck by how much pink there was. In sharp contrast to the aesthetics of PewDiePie’s videos, I would describe LDSHadowLady’s video design as cute and “kawai.” On her YouTube page and in her videos, she used large amounts of pink and icons often observed in the genre of Japanese girls’ anime, such as rainbows, stars, and hearts (figure 15). However, LDSHadowLady’s video content structure was similar to that of PewDiePie; her video featured mainly a gameplay recording with her webcam footage on the



corner. In the video we watched, she was playing Garry's Mod with a group of friends, and as far as I could tell, they were not following any game plan but simply messing around in the virtual game space. In my field notes, I recorded "random" as the word that came to mind as I watched it. I was curious as to how others perceived LDSShadowLady, and apparently she was not as popular among our group as PewDiePie. It seemed that Fin was the only one that really liked her, his reason being, "She's so cute and nice! I like cute."

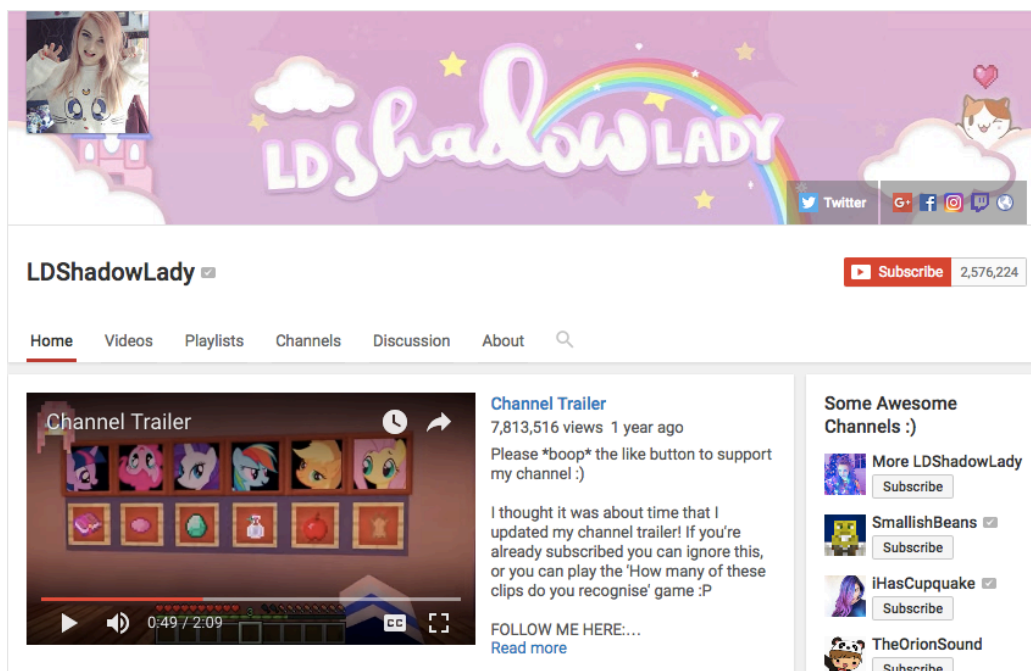


Figure 16. Screenshot of LDSShadowLady's YouTube Page

After LDSShadowLady, we watched a few other YouTubers, such as Nigahiga. Seeing that they seemed to be so interested and invested in these videos, I briefly brought up the possibility of us making videos that virtually walk viewers through our game world after we modified it. They were slightly interested but mentioned that they'd never worked with videos before and were concerned about the difficulty of such a project. I contemplated and then explained that we could at least try if we had enough time at the end of this workshop series.

By this time, most participants had made several *Minecraft* paper blocks, and they were playing around with the physical blocks together. Fin and Bob were throwing blocks around and laughing. And Tom and Ken were making storylines with the blocks that others made and shared with them. When it got a bit loud, I asked them to quiet down and explained to them that I did not want us to get into trouble with the library. Even though I nudged them to create new blocks with the blank cutouts, they were not interested.

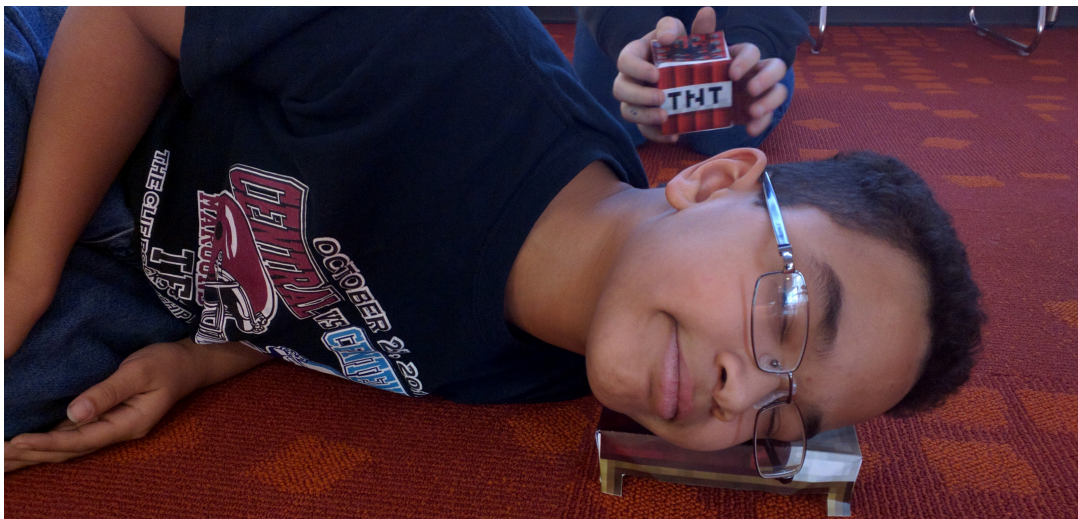


Figure 17. Fin and Bob making a story for *Minecraft* paper craft

**Activity 2: Paper prototyping a mod.** As I transitioned into the second activity, I asked everyone to quiet down for a moment. Bob actively asked others to pay attention so that the “teacher” can talk. Fin immediately responded, “But she’s not a teacher!” I took the moment and reflected back, “Yeah, what do you all see me as?” Bob yelled back, “Leader!” Dan added, “Researcher!” Tom answered with some hesitation, “Facilitator maybe? Player definitely.” I laughed, and thanked them for letting me know how they positioned me in this workshop. I was glad to hear that they considered me less as a strong authoritative figure and more as a peer contributor.

I began the activity by asking if they'd ever heard the term "paper prototype" before. To my surprise, everyone nodded and had their own explanation for it. I thought Tim's answer summarized everyone's response well; he said, it is "models you make before the real deal." I proceeded to show them the video game prototyping videos that I had prepared, and they all paid close attention. Afterwards, Jim was eager to inform me that one of the video game ideas was a rip off of this other game that he had played before. I laughed and asked if they could think of any reason why they made these paper prototypes and why was it that they used paper for it. Dan responded, "Because if you start with the real thing, you might mess up." Bob added, "Paper is easier to work with." "Having a paper prototype gives you a better idea what things would look like later; we did it at school once," Tom concluded. I affirmed their answers, and passed out the worksheets and examples I had prepared. I asked them to consider this as the thematic blueprint for their prototype and to create paper prototypes using the empty cutouts after they'd completed the blueprint. They enthusiastically wrote away, and I reminded them to think about who they wanted to benefit and make *Minecraft* better for with their theme.

I walked around as they worked away and noticed that Tom was only staring at his sheet. He explained that he could not think of anything, and I asked him to whom he had written last week that did not like *Minecraft*. He said he thought of his mom, and the reason being "Because it made her dizzy with all the colors." I asked him to consider how *Minecraft* could be changed to accommodate her discomfort, and he thought for a while before coming up with the answer "I can make it black and white!" Seeing that he was satisfied with his answer, I continued around the group to ask them about their reasonings behind their design. It was not until later on that I realized Tom changed his idea to a football theme, as he wanted to appeal to his father more. Bob explained to me that he wanted to create a *Naruto* theme mod for *Minecraft*. His reasoning

was that his best friend did not like *Minecraft* because of its lack of a concrete storyline. But his best friend loves *Naruto*, and Bob believed that this mod would make *Minecraft* more appealing for his best friend, and they would be able to play together. Fin wanted to create a space mod, with no other reason besides “I haven’t seen that done before!”

Even though I had suggested the use of printouts that I prepared to create collages, they were more interested in writing and drawing on the worksheet. They were quite invested in coming up with the best ideas to change the individual blocks in *Minecraft*, and they began to crowdsource ideas. The word crowdsource combines the word outsourcing with the word crowd to denote the act of outsourcing tasks or problems to a crowd of people (Estellés-Arolas and González-Ladrón-de-Guevara, 2012). Crowdsourcing became a popular practice online after Web 2.0. As soliciting help from others from varying backgrounds became easier, crowdsourcing provided more options and solutions to a given task or problem. According to a definition set forth by Estellés-Arolas and González-Ladrón-de-Guevara, the practice of crowdsourcing requires a large crowd, which is relative to the task at hand. The crowd must be participating voluntarily for monetary, personal, or social gains. By initiating crowdsourcing, the initiator is expecting to resolve his or her problems with the help of the crowd. Here, I am using crowdsourcing to exemplify the ways in which participants pitched their problems to the group, or the crowd, and expected others to help resolve the problem. At the same time, others in the group were voluntarily and happily helping the initiator resolve his or her questions. As a result, a given problem was given full consideration by all participants, the crowd. For example, Fin asked the group what should snowballs and carts be changed into for a space theme, and everyone responded with different answers. We settled on the idea that snowballs would be

comets and carts would be spacecraft. The collaborative brainstorming session was quite productive, as everyone came to a satisfactory plan with the help of the group.



Figure 18. Paper prototyping

I proceeded to ask them to consider how the crafting formula would change given this plan and to use the cutouts for making their paper prototypes. However, they insisted that the worksheet itself was a complete prototype and they wanted to play on the computers. Seeing that they'd been rather productive the past hour and half, I decided to let them play on their own for the rest of the time. Sometime during their self-organizing, Fin accidentally referred to Jim as Dan. Jim corrected him, and I asked whether they knew each other outside of this workshop. They mentioned to me that they'd only talked once before outside of our workshop, and it was evident that they had grown to be close friends. Dan and Tom grew tired of playing after a while, and asked me to show them again how to download mods. Instead of showing it to them directly, I prompted along as they recollected their memories, and I asked them to consider the reasoning

behind their different steps. For example, when they reached the website for the mods listing, I asked them which was the correct file to download. As there were many different versions of *Minecraft*, they had to comprehend the reasoning for different versions and the importance of locating the mod version that was compatible with their version of *Minecraft*. To my surprise, they were able to figure it out without too much of my guidance and they were able to provide their reasoning for their choices.

**Reflections and modifications.** As I reflected back on this workshop, there were several highlights that caught my attention. For one, the collaborative brainstorming moment when participants were crowd sourcing for ideas was rather exciting and informative. It was exciting in the sense that it happened spontaneously. It was informative in the sense that the collaborative process very much resembled the way they were trying to solve the *Pictionary* puzzle on the first day. In other words, in that moment I saw participants playfully approach their individual puzzles with the help of others similar to how they self-organize when trying to play a game together. Another informative moment was when participants discussed with me how they perceived my role in these workshops. I was reassured that they do not consider me as an enforcer of learning. Instead, they saw me as someone who had insights about their interest and they were invested to hear what I had to offer in terms of our group inquiry. And last, I was surprised by how engaged they were with the different YouTubers, and they certainly revised my idea about affinity groups. According to my literature review, I had imagined that games-related affinity groups mostly reside around different online forums and wikis, with videos being artifacts shared along commentaries on these platforms. However, it was evident after our discussion that their primary source of gaming information came directly from these fan-made videos, and that the discussion happened on YouTube through the commenting function. Seldom

did they visit the different online wikis or forums, and when they did, they were directed there from a YouTube video.

I tried to compare these moments to find the common threads, in the hope that I could more intentionally facilitate these moments for later workshops. I realized that trust might have been the major factor here. As I had been more intentionally presenting participants with opportunities to make decisions about our agenda, I was also showing trust in their ability to discern what is important and what is worth pursuing. I had only been stepping in as a correction officer when larger structural rules had been violated, such as when the noise was too high or when they were engaging in play that might result in injuries, and they seemed to understand why those rules were in place. In return, they were investing more trust in me along with others in the group. As a result, they were willing to share information with each other and myself even if it placed them in a vulnerable position. For example, they were willing to share possible ideas for changing the *Minecraft* blocks, without the fear that their ideas would be ridiculed or rejected. Fin felt comfortable sharing his love of cuteness through LDSShadowLady, even when others in the group already declared their lack of interest in it.

However, this invested trust was not without its downside. Particularly, I felt torn when their critiques and modifications could have been further developed. I realized that their understanding of critique was still rather rudimentary, but I feared that continuing with my own agenda would turn play into homework, as at times participants were beginning to show limited interest. At the same time, I did not want to risk positioning their concerns as insignificant, and suggesting that their critique of *Minecraft* was lacking in appeal to their parents. This could have been further developed towards a critique of the generational gap. I was glad that Dan and others felt they were able to reject my proposal to continue paper prototyping and that they felt

confident with the models that they had created. However, I continued to wonder whether or not they were engaging in critical play as I defined it. After extensive reflection and consideration, I decided to continue investing trust in them. As critical play is essentially a practice of exercising one's agency, I believe in participants' ability to decide what is important and worthwhile at their point in life.

#### **Workshop 4: Modding!**

**Lesson outline.** For the fourth week, the focus was on modding, specifically, how to make resource pack mods and how to translate prototypes into reality. By this point, participants already had an idea of what their mods would look like, and the goal here was simply acquire the necessary skills to complete their mods. Originally, I had planned for two weeks of modding activities. My idea was that we would focus on learning the software interface and its different functionalities for the first week, and then implement the mod designs on the second week. However, we were forced to cancel our workshop on the fourth week due to a snow day, and I had to combine two days of modding activities into one. Given this limitation, I decided to minimize the time spent on step-by-step instructions for the purpose of exploring every single function in the program interface, and maximize the time for participants to complete all of their modifications.

To achieve the ambitious objective of learning how to use a piece of software and implement a whole set of design in one workshop, I planned for two sets of working time. During the first activity, participants would all be making the same modification to a single *Minecraft* block as me, in order to memorize the various steps involved to import, edit, and export the files. During this time, I would also introduce them to a few basic tools in the software to fasten the editing process, such as the bucket tool and the gradient tool. I also created a step-



by-step image-based tutorial that retraced my instruction for the Nova Skin Resource Pack Editor, which we would be using. In order to give more time for individuals to work, my idea was that I would only go through the instructions once. If they forgot how to operate any particular function, they could refer back to the tutorial to refresh their memories or consult with each other. The second activity was rather straightforward and individualized. They would work on their individual mods, with me moving around and providing feedback and help when needed.

**Setup.** In preparation for a tech-heavy day where we would focus on learning new software, I arrived at the library an hour earlier on this day. The room was setup without a hitch, and I did a test run of the software to be used beforehand. As Nova Skin Resource Pack Editor is a web-based editor, I was mindful of the possibility of heavy traffic on the library's public network. As a backup, I brought along a hotspot and wrote down the keys to connect to my hotspot as well the Fab Lab private network.

**Activity 1: Learning Nova Skin Resource Pack Editor.** After everybody arrived, I asked everyone to log off of *Minecraft* as we were going to begin modding. I tried to refresh everyone's memory about what we'd done up to that point, and I asked them to pull out the modding plan they had created the previous week. I explained that I was going to demonstrate how to use Nova Skin Resource Pack Editor for editing their resource packs, and I asked them to follow along closely. Everyone connected to our program website, and the participants successfully pulled up Nova Skin Resource Pack Editor. The Internet started to slow down a bit, but it was still manageable. I started by having them create a project folder and explained that everything must be saved in that folder. They successfully created their own project folder, with a lot of "hang on," "wait, what," "oooh, okay" along the way. After everyone was caught up, I asked them to pull up the default thumbnail image that represented the folder, thinking that we

could edit this thumbnail to create individualized covers to represent our mods. While Dan, Fin, and Tom were able to pull up their thumbnails, Bob, Ken, and Jim could not get theirs to load. At first I just thought that they had missed a step and asked Dan and Fin to help them, as they were sitting alongside with Bob, Ken, and Jim. However, Dan and Fin could not figure it out either. I went over and confirmed that the same process did not lead to the same results. I was confused too, and began checking the network settings, thinking that maybe there were some restrictions on the website. That was not it either, and I started to panic, as I realized I could not trouble-shoot this quickly. I decided to abandon the thumbnail editing, as it was only meant to be an addition anyway, and I reunited the group to move on to block editing. Not really sure what was going on, they happily followed along.

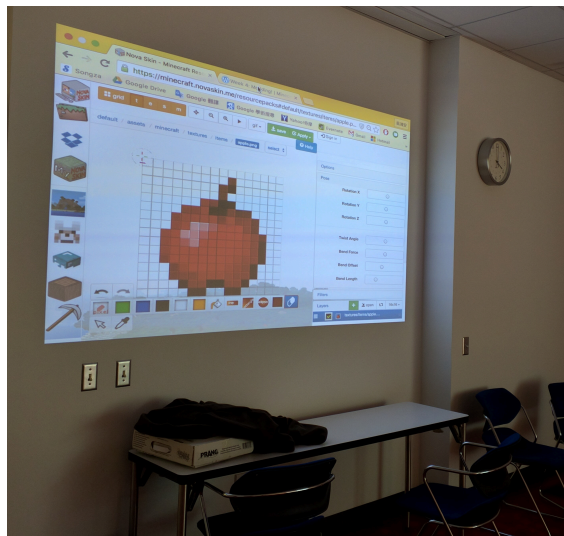


Figure 19. Apple demonstration

I picked the apple block as an example, and as soon as the image loaded, they went wild. Even though I tried to go through each tool with a demonstration, they were not paying attention. Their attention was on exploring the interface through trial and error, much like how they would with a new video game. Instead of following a tutorial, many of them explained that they could simply press each button to see what happened and learn the functions through the machine's

feedback system. Everyone was on a different step at this point, with each exploring different buttons that grabbed their attention. However, at times when the buttons did not behave and react consistently, they instantly called out to me for help. At first I decided to go along, and I tried to trouble-shoot with them to find the cause of the inconsistency. But after awhile of answering the same question over and over again, I realized the room was getting way too chaotic and their confusion was getting out of hand. I decided to stand my ground about giving a step-by-step instruction, and I asked for everyone's attention. I explained that I would go through everything at once, so we would all be on the same page; they would not need to idle while waiting for me, and I would not need to repeat myself. I told them that I knew following along was boring, but I promised that it would "just take a minute." Jim agreed strongly to this, as he had been waiting on me for a while. He added, "Yeah, come one guys, let's listen so we can all know how to do it." It was rather smooth sailing after that. We were able to go through the different filters, the redo-undo, the color editing, the bucket and gradient tool, and the zoom function.

Our smooth sailing came to an end as we began to save our edited blocks. Nobody could save properly except on my computer. I went to Bob's computer and tried to assess the situation. At the same time, since everyone was having the same problem, I asked them to work in pairs to try to solve the problem alongside me. Dan and Trez were paying attention to me when I had been trying to solve the thumbnail mystery earlier, and they instantly went to mess around with the website permissions. Even before I was able to resolve the problem, Dan and Trez eagerly announced to the group that we simply needed to revise the cookie setting to allow local data to be set in the website permissions. I was in awe and happy. I thanked them for coming up with the solution, and repeated the sets on the projector. After everyone saved their first modified block

correctly, I asked them to work individually on modifying the rest of the blocks they had planned to revise, and to consult with each other when they had a problem.

**Activity 2: Work time.** The individual work time was rather successful and surprisingly quiet. They were all intensely working through their individual blocks, with chatter only happening after a problem arose or when they achieved a milestone to solicit feedback.



Figure 20. Participants working on their mods

During this time, a couple more instances of collaborative trouble-shooting occurred. For example, Jim was experiencing an issue Dan had just experienced earlier namely locating the correct blocks to edit that. After hearing my conversation with Jim, Dan came over and explained his solution to the problem. When his solution did not work, Jim and Dan worked together to resolve the situation without my support. Realizing that they were organically engaging in collaborative trouble-shooting, I intentionally stepped aside. Later on, Fin encountered a problem with loading a block. I assessed the issue and immediately identified the problem being that he was trying to load a model file as opposed to an image file, which was the only file type we were able to edit with Nova Skin Resource Pack Editor. However, instead of directly pointing out the issue, I opted to let others take a look first. Dan and Bob worked

together and tried different ways of opening the file. After a moment of trial and error, I asked if they knew anything about file types. Bob offered, “Well I know text files are .txt and word files are .docx...” I affirmed him and asked if they knew what kind of extensions goes with image files. Dan let out a noise, “OHHH!” And then he moved his mouse over the file selection to select the correct image file to load. Fin and Bob were confused as to what had happened, and I asked Dan to explain what he had done. Dan was quite knowledgeable about the different types of file extensions, and he explained that the problem lay in trying to open a model file instead of an image file, which was the only file type that they could edit.



Figure 21. Fin trouble-shooting with Bob



Figure 22. Dan giving Jim feedback

Besides collaborative trouble-shooting, the participants were also actively soliciting each other's opinions about their work. They worked intensely on their own screen until they'd created some significant modifications or they were unsure about what to do next. Then they would turn to each other for feedback. Jim was trying to make the skin for wolves more similar to that of a German shepherd, and Dan suggested that he consult a photograph of an actual German shepherd to replicate the fur patterns. Fin was trying to make a character in *Minecraft* look more "space-like," and I suggested that he use more metallic and earth tones to convey that aesthetic. Bob made a skin for his *Naruto* character, and everyone praised him for how similar it resembled the actual anime. At one point, Jim accidentally made the wolf's skin rainbow-colored, and he eagerly connected his laptop to the projector to show everyone. Though I was not sure what was funny about it, I was happy to see how worked up everyone else became and now they bonded through that silly image.



Figure 23. Participants laughing at a glitch

About twenty minutes before our workshop ended, they asked me if they could play together on *Minecraft*. Though none of them had finished their modifications yet, most of them were close. Seeing that they'd made so much progress, I turned on the server and fulfilled their wishes. At one point during their free playtime, they wanted to play on the library's Local Area Network (LAN)<sup>10</sup> using a map that Dan had downloaded. However, they were not able to connect to Dan's laptop as they were on the library's public network, which prevented LAN games. After they could not figure out a solution, I explained to them the difference in settings between my hotspot and the library's network and asked them to connect through my hotspot's wifi. They seemed to grasp that the library's network was much more restrictive and were able to infer that we were not able to change the settings as we did not have access to the library's administrative settings. As time went on, their play got a bit heated. Dan's map allowed for PvP

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<sup>10</sup> Local area networks are a specific type of computer network. A computer network consists of "two or more computers connected by some means through which they are capable of sharing information" (Donahue, 2011, p. 1). A local area network is a computer network that is "confined to a limited space, such as a building or floor. It uses short-range technologies such as Ethernet, Token Ring, and the like. A LAN is usually under the control of the company or entity that requires its use" (p. 2).

(person versus person), and Dan was clearly dominating the game. Jim got upset, and asked that everyone collaborate to take down Dan, who he considered as “the big boss.” Dan took up the challenge and defeated everyone, including Jim. Jim got rather upset and shouted to Dan, “It’s not fair because you are always better than us.” Dan replied, “But it’s not fair that you all try to kill me and I can’t play because I am better! ” Jim snapped back, “I can only play at the library because my Internet at home sucks and I can never get better!” At this point, I interfered and restated the ground rule of no grieving. I asked that they reconsider the gameplay and find a better way to resolve their conflict than killing each other in game. Fin stepped in to be the peacemaker and suggested that they all go to his corner of the game and help him complete his ranch. Dan and Jim calmed down a bit, and continued to interact in the game until their parents came to pick them up.

**Reflections and modifications.** I was pleasantly surprised by the collaborative troubleshooting moments that had occurred at this session. The participants showed me how resourceful and resilient they were at times when I had shown trust and confidence in their ability to resolve problems on their own. That is not to say that they did not get frustrated and give up when they were at a complete loss when trying to grapple with technical problems. However, after this workshop, it was evident that many of the instructional hiccups that occurred due to technical difficulties were the direct result of my own state of mind and actions. When given clues to play with, participants were able to develop their own ways of communicating with the machines. The key lay in not trying to claim responsibility for all of their problems and simply blaming myself for not having all of the answers or adequate preparations. There will never be a day that I have all of the answers and am able to foresee every possible scenario. This was, and is, a valuable lesson for me.



At the same time, I was still unsure about the participants' criticality in terms of their modifications. There were moments when the participants gave each other some rather insightful and constructive critiques about their work, but I was again unsure if the critique rose to the level of critical play as I had defined it. However, I did notice that participants were more responsive and clearly more articulate about their modifications and the purpose behind their modifications after having to defend them against critical feedback from peers. I decided that I would use that group dynamic to my advantage on the last day critique activity and attempt to solicit more feedback to target the reasoning behind their modifications.

### **Workshop 5: Finale!**

**Lesson outline.** For this workshop, the goal was for everyone to finish executing their modification plans and explore the different modifications that each has designed for further suggestions and reflections. The key to critical play lies in seeing every iteration of the play object as malleable and available for further tinkering, as long as there are new critiques that fuel the ideas for modification. By setting aside time for us to play in each other's mods and further consider the purpose as well as the actual modifications, participants would be able to begin the cycle of understanding in critical play again as they try to decipher the changes made and the intentions behind each other's mods. At the same time, by utilizing the group's dynamic for collective brainstorming, participants might be able to see inadequacies or questions about their modifications from others' perspectives, which they could then fold into another iteration of modifications or articulate a counter argument to better support their original plan. The hope was that participants would be able to see how modifying leads back to understanding and further critiquing.

Thus, the first activity for this workshop was again individual work time. Once everyone was satisfied with their modification or when we were halfway through our workshop time, I would demonstrate the process of compiling their modifications into a resource pack to be plugged into their *Minecraft* game. The second activity would be the group critique. To begin, we would rotate around each participant's mod, with the person presenting their mod playing their game on the projector while others explored the same mod simultaneously on their own laptops. I prepared a list of questions for them to consider: What changed? What do you think the final theme is in this mod? Who do you think this mod would accommodate? How well do you think this mod exemplifies the given theme? What changes could be made to this mod to better exemplify the theme? After each play through, we would come back together to have a discussion about these questions. Once we get through everyone's mod, we would move to the empty space without laptops for a final reflection about our time together. I intended to have them consider whether they consider themselves or games in general any differently than when we began, and how they would suggest this workshop series be modified.

**Setup.** For this last day, the layout was kept the same as the very first day, with laptops arranged on the tables to form a circle. This layout allowed for participants to easily gain eye contact with each other, which seemed previously to have encouraged informal and productive dialogues. Laptops were set out for participants to get on their projects as soon as they arrived. As I prepared their laptops, I noticed that many of their edited files were saved on different locations in the file directory. I moved all of their files on to the desktop for easier access and unified storage.

**Activity 1: Work time.** As participants trickled in, they logged on to their laptops and modified away. I announced that we would finish our mods and I would show them how to

compile their edits into a playable resource pack. Fin inquired, “And other people can download it too?” I affirmed Fin and explained that if we uploaded their packs on to the community sharing sites where we’d been downloading resource packs, even others outside of our group would be able to access them. Fin looked amazed at that possibility and returned to his mod. Tom, on the other hand, was not engaged at all. I asked if he wanted to finish his plan, and he replied, “But I made all the items I wanted.” I looked and saw that he had only edited three items. I prompted, “Well, can you try to think of other things to edit to make it better adhere to your theme? With only three items changed, would you think it’s a big change and want to download it?” Others overheard our conversation and replied unanimously, “No.” Tom thought for a moment, and then he floated a few ideas for modification to the group while others continued to suggest what Tom could change next. I also refreshed their memories about the process of saving the files, and reminded them to double-check the files I had moved to the laptops, as some of them had saved it incorrectly resulting in an empty file.

Dan interrupted me as I was going through the saving process and said that he had “figured out” Nova Skin Resource Pack Editor at home. He said that it was only a beta and it only uses the old *Minecraft* version 1.8 resource pack. I affirmed him, and said “Yes, and that’s why it is so glitchy.” I took the moment to ask if they knew what “in beta” means? Everyone shouted, “Yes!” Fin said that it was the second letter in the Greek alphabet. I laughed and asked what meaning it had in software development. He replied that it often means the test version to publish for a program. I affirmed his answers, and added that beta is often used for testing among a small group of users in order to find any bugs to be fixed in the next iteration. And I related this process to the group critique that we were holding later on.

During their work time, there was a lot of laughter. Compared to the week before when they were mostly focusing on their own screen, today's mood was a bit lighter, possibly due to the fact that most of them were almost done and just soliciting feedback. I had forgotten to bring my laptop today, and Tom's laptop was hooked up to the projector for when I needed to make demonstrations. At one point, everyone noticed on the projector that Tom was trying to modify the boat textures into a car and began to comment on how to proceed. Tom had simply painted the whole block red, and Jim taunted, "If you can make it actually look like a car, I'll give you money," as Jim seemed to think that was impossible. Tom took up the challenge and worked hard on adding the wheels and different components. After a while, Tom asked everyone to look at the projector again to see his flashy new car, and he asked Jim to pay up. Everyone laughed. Dan then proceeded to remind Tom that he was only editing one side of the car, and he needed to edit all sides of the car with the different files. I confirmed Dan's suggestion, and explained to Tom that he was only editing the side view of the boat block. Tom asked how to access the different views, and Dan helped him navigate the different files.

There was another moment of silliness, as Jim worked on his virtual German Sheppard dog. He continued to refer to a picture of German Sheppard that Dan had suggested to him the previous week as he edited the wolves' skin. Jim commented on how the tail resembled poop with the way it was positioned in the original file, and he proceeded to paint the tail brown. Dan glanced over and burst out into laughter. He yelled to the group, "Jim made a butthole and poop for the dog!" Everyone gathered to look and laughed. They began to collaboratively edit the image with the intention of making it funnier. As the scene got more chaotic, someone accidentally refreshed the page without saving, and Jim lost his progress for the previous 15 minutes. I feared that Jim would be upset and the situation was going to result in conflict, but

thankfully my fear did not turn into reality. Jim sighed in pain, but he also laughed in contentment at the silly moment that he had shared with others. He went straight back to redoing everything he had done previously, and everyone else went back to their laptops.

Besides laughter, there were also in-depth engagements with the modification process. In particular, Dan wanted to edit the particle effects and make the visual feedback of two objects colliding pink instead of the default yellow. However, he could not find the correct file for the particle effects and sought my help. As I approached Dan later, he had already figured out part of the solution. He explained to me that the particle effects that he was looking for were only in the 1.9 version of *Minecraft*, and he found a default resource pack online for *Minecraft* 1.9 to edit. But he was unsure how to proceed. I explained to him that he would need to use another image editing software, such as Photoshop, to complete the changes and then manually compress the files to make the resource pack. I then walked Dan through a few Photoshop functions and Dan took it from there. In the end, he was able to achieve the particle effects that he had in mind, and he was very excited that he could say he knew a bit about Photoshop.



Figure 24. Dan testing his modified particle effect

At some point during modding, Fin said, “You guys know today is the last day?” Jim made a sad face and said, “Yeah, I know, but stop talking about it.” Others whined, and Bob said, “Really?? I thought it was 6 weeks long.” I explained that we had lost one week to snow. Jim added, “I never hated snow day before but definitely hate this snow day!”

Around 4:00 p.m., I decided to end the individual work time as I wanted to make sure we had enough time to play through everyone’s mod and reflect on this past couple of weeks. I asked them to follow me step-by-step to finish compiling their mods. There were a few hiccups here and there, but we were able to get through the technical hurdles as a group.

**Activity 2: Showcase and reflection.** Dan offered to go first, so our showcase started with his mod. He prefaced by saying that his mod was not really one theme, but rather a combination of several themes. He had started out with the Star Wars idea, but he had strayed off plan, as he wanted to explore different kind of combinations. As everyone played along, I reminded them to think about the list of questions I had prepared. Bob and Tom began asking Dan questions about his mod. Specifically, what was each item meant to be and why did he choose these items to modify? Dan explained that each item he edited was a reference to a video game or anime that he really enjoyed, such as changing the sword to ninja blades for *Naruto* and the regular stick to wands for Harry Potter. As to why he chose to create this mod, he stated, “It just sort of happened. I wanted to make Star Wars at first for my family to play together, but after knowing how this works, I wanted to include everything that I like to make *Minecraft* better. So I like it more.” Bob added, “It’s like Super Smash Brothers then! With all of the different cross-overs!” Dan paused, thought for moment, and responded, “Yeah, I guess. But it’s more of element cross-over and not characters.” Others began offering him ideas for what else to

include, such as making animals like animatronics in *Five Nights of Freddy*. Dan seemed genuinely interested in their suggestions, and he even wrote a couple of them down.



Figure 25. Dan showcasing his mod

We went to Bob's mod next. Contrary to Dan, Bob had stuck with his original plan of making a *Naruto* themed mod to play with his best friend. He showed us the different tools he changed to adhere to the ninja weapons, and the armor he revised to reflect what *Naruto* Uzumaki wore in the anime series. I pushed Bob to consider further the reason why his friend prefers *Naruto* to *Minecraft*, and what other ways his friend might be engaged with *Minecraft* besides a *Naruto* mod. In response to my inquiry, Bob firmly stood his ground: a *Naruto* theme was what was needed, as his friend enjoyed the storyline and story background in *Naruto*. Bob explained that he saw a lot of similarities between *Minecraft* and *Naruto*, as they both were about working together to survive. Thus, he thought that adding the ninja elements into *Minecraft* would transform, in a way, *Minecraft* to be a playable *Naruto*. I thought about his answer, while others chimed in to praise Bob on his realistic modifications. The participants seemed uninterested in the reasons behind his mod, but hitting stuff with the new ninja weapons intrigued them. They did not have much to add in terms of what could be improved and revised,

and Bob went on to discuss his next steps with this mod. Bob was not entirely satisfied with this version, as he stated that many elements were still missing. He planned to modify the different armors in *Minecraft* to reflect the different *Naruto* characters, and he wanted to create a map replicating the Japanese buildings as seen in *Naruto*.

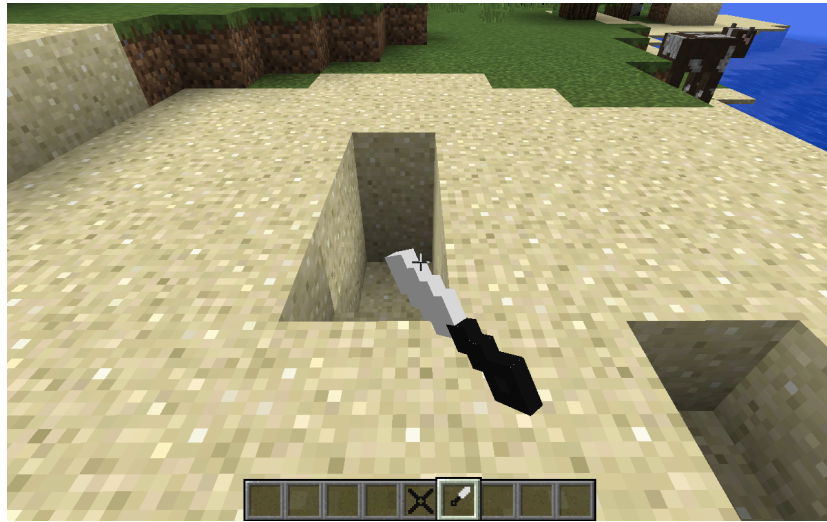


Figure 26. Bob showcasing his ninja dagger



Figure 27. Bob showcasing his ninja armor





Figure 28. Bob showcasing his ninja shuriken

Next up was Fin with his space mod for *Minecraft*. Fin did not preface his mod with anything, and simply asked us to try it. We noticed a few interesting thematic changes, such as a nutrition tube to replace an apple, which is a staple for players to regain strength in *Minecraft*. He also changed the colors to grey for most items to reflect a metallic feel in space and the skin of ghosts<sup>11</sup>. I asked Fin to talk to us about his intentions and inspirations for this mod. Fin replied, “It’s not really for a group of people like we were asked... maybe (it’s) for me. I really like space games, but they are always strategy games and I wanted to know what it would be like to survive like a person in space. You know, with the same game rules (of *Minecraft*) and all, but in space!” Dan responded, “But the gravity would be different. And would there be water still?” Fin tilted his head, and said, “Huh... I didn’t think about that...” Tom added, “Maybe it’d be easier if you imagine it with a planet, like Mars or something, and make it based on that.” They began discussing the features of different planets, and how *Minecraft*, which is based on Earth,

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<sup>11</sup> Ghosts are original creatures in the *Minecraft* universe. In this universe, Nether represents a hell-like dimension inhabited by fire, lava, and dangerous mobs, such as Ghasts. Ghasts “are huge, floating Nether mobs that shoot explosive fireballs at the player” (Official *Minecraft* Wiki, 2016). To access the Nether in *Minecraft*, players need to obtain obsidian blocks and build a portal, which is only achievable by experienced players.

would have to change to reflect the difference in atmosphere and gravity. I was quite surprised by this conversation, as I had not thought about it like that and I had long forgotten the qualities of the different planets that I learned in high school. They came to the realization that to complete some of these changes that they were proposing, they would need to edit beyond the appearances of *Minecraft* and edit the functional codes in *Minecraft*. I confirmed their suspicions and made sure to encourage them that it was possible. However, they seemed a bit disinterested after realizing how much effort it would require.



Figure 29. Fin showcasing his alien ghost

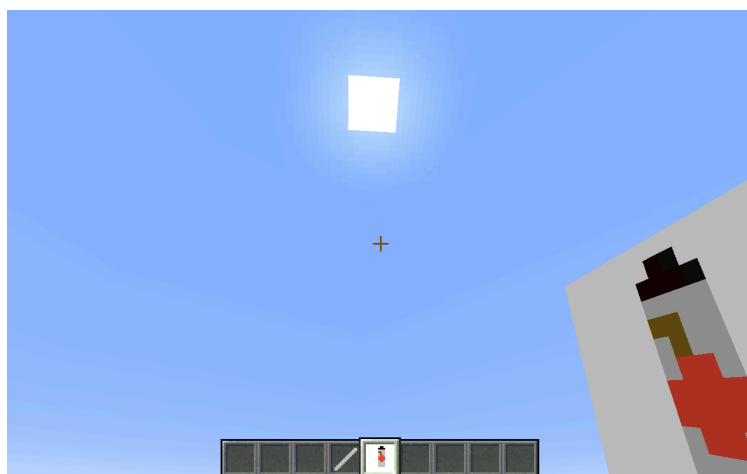


Figure 30. Fin showcasing his food tube

Tom went next, and he gave a small walk-through of his football mod on the projector. He modified boats, armor boots, and snowballs to become buses, cleats, and footballs, among other modifications. At first he just said that he thought it would be cool to make a football mod, but I recalled that he had mentioned his father as the inspiration for this mod in the brainstorming workshop two weeks ago. I prompted, “Who introduced you to football?” Tom replied that his dad was “a giant football fan”, and he grew up with football. I asked whether he intended to use this mod with his father, and said, “Well, yeah, of course. I mean, I thought of my mom and dad when we were thinking about what to make. But I don’t really know how to get over my mom’s dizziness, but I thought my dad would be pretty easily hooked with this mod.” Though I was not satisfied with his answer as his critique remained on an individual level and failed to consider it from a systemic level, I focused on soliciting comments on Tom’s modifications. They were eager to discuss the different football teams, and how the armors could become jerseys. Tom said that he had thought about that idea, but he had not got to that yet. Even though the conversation was lively, I decided to end it prematurely as we were running out of time and two more people still had not yet presented.

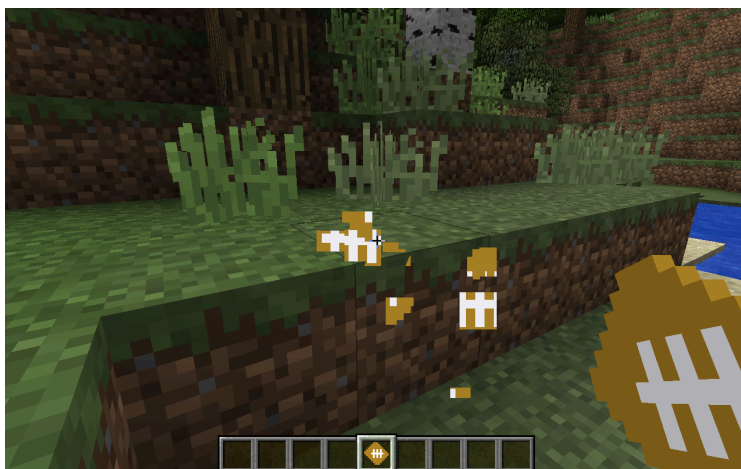


Figure 31. Tom showcasing his football

Jim went ahead with his *Call of Duty* mod and Ken followed with his “killing” mod. Their modifications were very similar in the sense that they both modified guns into *Minecraft*, and I decided to have the discussion about their mods together. Jim was very proud of his gun and bullets, while I was slightly troubled and lost as to how to proceed. I decided to ask my most burning questions: Why guns? And for what purpose did you have in mind with this mod? Jim answered that he thought guns were the key to the *Call of Duty* series, and he thought this crossover would appeal to a lot of the players engaged in the *Call of Duty* series. I asked further, “But are players who play *Minecraft* and *Call of Duty* different? Don’t the population of those two games already overlap?” Jim eagerly corrected me that *Call of Duty* was seen more as an adult game, and *Minecraft* was for “kids.” And he did not want *Minecraft* to be just a kid’s game. He wanted more adults to take *Minecraft* seriously. I was quite surprised by the way Jim was framing the generational difference between the two games, and yet was still conflicted about how I should act with my own ethical agenda. Meanwhile, Ken added that he thought introducing guns into *Minecraft* was really interesting, as it was not an option in the original game. Specifically, by introducing guns, conflicts that happen in *Minecraft* survival mode would be very different as the gameplay would be a lot faster with higher stakes. Dan added, “Then this would require coding too for a function mod. Changing the appearance did not change the actual play. Guns are not actually guns yet.” Dan was referring to the mechanics of collusion in *Minecraft*, as players would endure a lot more damage with guns as opposed to swords. Others chimed in to discuss the possible gameplay scenario with the introduction of guns, while I was still in my mind debating the criticality of this mod.



Figure 32. Jim's mod

At last, we ran out of time. I still wanted to have the participants think about the past few weeks as a whole and provide me with feedback. But instead of discussion, which would have taken a lot more time, I asked them to simply write on an exit slip about their experiences these past few weeks and whether or not they see *Minecraft* or games in general any differently now. I compiled their answers in the table below.

Name	Response
Bob	"I've really enjoyed being here and learning to mod. I see that <i>Minecraft</i> holds worlds for possibilities."
Ken	"That coding is hard."
Jim	"I think <i>Minecraft</i> has a new change and it got so much simpler to me."
Fin	"I respect people who make every complicated mods."
Dan	"I think <i>Minecraft</i> is simpler than I thought because the texture systems is simpler."
Tom	"I can make mods now. But I feel I might forget some of the things we went through."

Table 2. Exit slip response

Before they left, Jim asked if we could take a group picture together on his phone for a keepsake. We all gathered around for selfies, and everyone reluctantly said goodbye.



Figure 33. Final selfie

## Chapter 5: Discussion and Analysis

In this chapter, I analyze all of the data collected in this study to describe how I both facilitated and failed to facilitate critical play. In the process, I describe discrepancies between my observations and the existing literature on informal video game learning, and I propose several modifications to my original theoretical framework, the topology of critical play.

To begin, I start with a clarification of *criticality* that separated *critical content* from criticality in the context of this study. This clarification is fundamental to understanding the following analysis. Next, I analyze youths' participation in our *Minecraft* Modification Workshops based on the various elements in the topology of critical play, including context, subject, object, and forces of critical play. Regarding "context", I argue that an affinity group oriented towards and soliciting transgression was a necessary condition for critical play to emerge. Regarding "subject", I describe how youths' subjectivity transitioned between consumer, prosumer, and critical prosumer, and I argue that transition between these roles is dependent upon personal drive and expertise. Regarding "object", I analyze the various artifacts produced and engaged by participants in the process of critical play. I distinguish the *ways* in which play objects were utilized from essential *qualities* of the objects themselves as the defining factor of youths' criticality. Regarding the "forces of critical play", I revise my original linear and clearly bounded formulation of the need to progress from understanding, critiquing, and modifying in critical play, and I illustrate how these three steps happened simultaneously.

These analyses and adaptations inform the answers to my research questions in the next chapter.

### **Divorcing Critical Content from Criticality**

Before I delve into describing the ways in which critical play manifested and failed to manifest in terms of context, subject, and object, I need to clarify what criticality meant, or how it evolved, in this study. Specifically, I need to separate discussions around critical content from criticality itself.

To formulate my theoretical framework, the topology of critical play, I drew from critical pedagogy's analysis of criticality, which referred to the ability to understand, analyze, reflect, and critique social contexts in search of transformative possibilities (Smyth, 2011). To translate this theoretical interpretation of criticality into teaching practice, I referenced critical pedagogical approaches developed by critical media literacy scholars to formulate my action research curriculum. Following critical media literacy scholars' interpretation of critical pedagogy, I developed the curriculum for this action research along the themes of gender, race, and class. I began with critiques about the sexism and whiteness of current popular games to design the necessary context, subject, and object conditions of critical play.

However, by doing so, I was confusing *content* that was critical, such as issues around gender, race, and class, etc., that were the most popular topics among critical media literacy studies, with the act of *playing* critically, namely understanding, critiquing, and modifying social structures. Though I had specified how criticality referred to the ability to seek out transformative possibilities from a theoretical standpoint, I had mistakenly identified observable and specific critical content as my pedagogical desire, instead of focusing on criticality itself. My attempt to design a curriculum to facilitate critical play became one that tried to solicit and replicate specific instances of criticality that I had imagined based on other critical pedagogues' work.



By mistaking certain critical content as criticality itself, I struggled to find criticality in my results when pedagogical realities did not align with my pedagogical desires. As I had imagined that critiquing norms around gender, race, and class defined criticality, I panicked when participants did not relate to or generate critiques along those attributes. Instead of responding to my prompt to identify collective struggles, youth participants retreated to personal anecdotal experiences to generate critiques and modifications for individual players that did not connect with the collective struggles around gender, race, and class that I had scaffolded. Furthermore, some participants generated mods that contradicted my narratives around what a socially just modification should look like, such as Jim and Ken's violent mods. I first interpreted this as further exemplifying the problems that this action research project was designed to overcome. For the duration of our workshops, I debated with myself whether I should be more forceful in connecting participants with my perceived criticality during each reflective cycle. However, I was thankful in the end that I decided against this authoritarian idea and chose to see how participants interpreted and revised the curriculum for this action research. As a result, I was able to see that participants were in fact critically playing with contextual structures, which I examine in detail in the next sections.

Thus, the following analysis is written under the pretext of divorcing critical content from criticality. I urge readers to resist the temptation to immediately reject participants' critical play as such because it is not based on the content that they produced.

### **Context**

Through workshops and interviews with participants, I came to a key realization about the context for critical play: it invites transgression. In my previous formulation I did not differentiate the context of critical play from the context of play. As I understood the context of

critical play based on the literature, both play and critical play were situated within affinity groups, wherein “people primarily orient toward a common set of endeavors and social practices in terms of which they attempt to realize these endeavors” (Gee, 2007, p. 196). Affinity groups were the context in which players experiment with and learn the boundaries of the activity with which they are engaged. This understanding still holds true in the sense that both play and critical play operate within affinity groups. However, the difference between the context of play and critical play lies in the types of endeavors that orient each affinity group.

In the context of play, the goal of affinity groups is usually about increasing the appreciation of a particular game or genre of games and/or the reproduction of game related artifacts. For example, one prosumer in a *Minecraft* affinity group on Reddit shared their custom designed fire lighter that was inspired by *Minecraft*, and he or she received enormous praise from the community for its ingenuity (Wu, 2016). The focus is on playing games in order to learn and act according to the social conventions and ways of engagement, much as novice modders become experts by recognizing, internalizing, and acting upon the grammars, values, and boundaries of their shared affinity as illustrated in various studies (Duncun, 2009; Steinkuehler & Oh, 2012). This play is more about fitting in and less about challenging structure.

The context of *critical* play, on the other hand, is an affinity group that focuses on exploring and challenging the boundaries that structure their shared affinity. It is more about playing games to learn about and rebel against social conventions and ways of engagement based on what players can perceive as injustice. It is less about conforming to the boundaries of play as established by power structures that shape the affinity group. The goal of an affinity group for critical play is subversion. To be clear, I was aware of and prepared for the possibility of participants transgressing established boundaries around play through the use of taboo, offensive,

and problematic language. At the same time, I was also mindful about sharing the facilitator role with participants to allow for the emergence of carnivalesque experimentations, as suggested by Alvermann and Hagood (2000). However, I did not comprehend subversion as a primary focus of our workshops and failed to identify the invitation for transgression as the principle characteristics of an affinity group for critical play. After several revisions to the curriculum and reflections regarding my pedagogical approaches throughout this action research, I began to recognize the significance of an affinity group that actively encouraged transgression in the context of critical play. In the following, I will illustrate this fundamental difference between the context for play and critical play through my data.

### **Context of Play**

Prior to our workshop series, participants were already engaging in different video game affinity groups. These affinity groups varied in size, location and participant make up. In particular, all participants mentioned the importance of YouTube videos in shaping their play. YouTube was a primary location for participation in affinity groups, either to gather information about new games or to learn about ways to play a certain game. Participants shared an affinity for a certain genre of games or types of gameplay commentary with the YouTubers that they follow, and the comment section of these videos allowed followers in the affinity group to interact with each other and the YouTuber based on the materials generated in the video.

In our third workshop on paper prototyping, Fin, Jim and others shared their wealth of knowledge about the different types of YouTubers that they followed to gather information about video games and mods. Comparing the favorite videos suggested by Fin and Jim, it was clear that they had different stylistic preferences. Fin preferred cute graphics that YouTuber LDSHadowLady used in her various gameplay videos, while Jim enjoyed watching YouTuber

PewDiePie's prankster style gameplay commentary. Though participants were likely to be more involved with the specific affinity groups that they preferred, it seemed that they were at least aware of the range of different affinities on YouTube and how these groups were related. YouTube's video recommended algorithm identifies video content that users may enjoy, and many participants responded that they found new YouTubers to follow through YouTube's recommendation function. By browsing through the recommended videos, participants were introduced and exposed to YouTubers that had collaborated before or shared similar content. After surveying the range of content on YouTube, participants became sophisticated viewers and developed personal preferences for different YouTubers. For example, though Fin, Dan, and others mentioned that they did not care for PewDiePie's videos, they were familiar with PewDiePie enough to characterize his videos as "prankster style." Participants were also acquainted with "gossips" in these affinity groups; they informed me that two famous YouTubers that were in a relationship gained their large subscriber base due to "nasty and mean videos" posted about each other post break up. In one instance, where everyone beside myself laughed at PewDiePie when he made a funny face in one of the videos, I was an outsider to this affinity group who did not understand the cultural references implied whereas all the participants were insiders.

In an individual interview with Dan, he revealed that he migrated his primary play platform from a game console Wii to computers after being introduced to *Minecraft* from YouTube videos. He said, "... I started watching YouTube videos of people playing *Minecraft*, and I said, 'Woo, that would be pretty cool.' So *Minecraft* actually introduced me to computers" (Dan, personal communication, February 19, 2016). Bob, on the other hand, visited YouTube

videos when he faced challenges in video games that he could not overcome on his own. He specified,

But I've only done that a few times with very challenging ones... in one Transformers game, when I was really little. It was so incredibly [hard]... there was this giant transformer that was crashing through town. And you're just like a tiny bumblebee that keeps shooting at it. It's soooo hard. I couldn't do it even after looking at it [on YouTube]. (Bob, personal communication, February 19, 2016)

Another type of video game affinity group that participants belonged to prior to our workshop consisted of their family members and close friends, which I will refer to as in-person affinity groups. Contrary to the immense size of participants in Youtube affinity groups, in-person affinity groups were rather small in numbers and intimate regarding participants' relationships with each other. These in-person affinity groups took place in their homes or friends' homes, and interaction with members outside of this close circle only happened when questions arose that could not be resolved within the group. In terms of the shared affinity, in-person affinity groups were similar with those on YouTube. An affinity for playing video games or specific game genre was the prerequisite for membership in the group. In terms of the goals of the affinity groups, in-person affinity groups differed slightly from those on YouTube. While members learned more about video games for the purpose of entertainment in both types of affinity groups, the process was different. Whereas participants were mainly consumers in their YouTube affinity groups, it was evident that they were attempting production with their in-person affinity groups.

For Bob, his video game affinity group primarily consisted of friends. He started playing video games around four years of age after being introduced to PlayStation 4 at a friend's house.

He usually played alone, but he often exchanged information about new games, feats accomplished in games, and levels of play reached with a group of friends that he grew up with. When he did meet up with his friends, they usually spent their time playing different video games and trying out new gameplay. He also tried to involve his dad, who was a computer programmer by profession, in his video game affinity group with no success. “I’ve said, ‘let’s make a mod this weekend’ with my dad, and I asked him to help me and my friends. And he’s just like, ‘I’m sorry, I’m busy.’ And I was like, ‘Okay’ [laugh]” (Bob, personal communication, February 19, 2016). Similar to Bob, Fin’s video game affinity group primarily consisted of close friends. Due to the limited capabilities of his phone he usually played single player games, but he regularly talked about what games were fun with his close friend Katy (Fin, personal communication, February 19, 2016). Though his mother purchased his first game console for him, she was no longer in support of his video game endeavors and banned him from video games on weekdays.

Dan, on the other hand, shared an affinity for video games and *Minecraft* with his brother, father and other family members. His aunt bought him a Wii for Christmas when he was 8 years old and introduced him to video games. He often played with his brother, and together they explored new games, such as *Minecraft*. His parents were not involved at first and were even against *Minecraft*. Dan said, “My parents seem to have this instinct, I don’t know, that *Minecraft* is violent” (Dan, personal communication, February 19, 2016). To convince his parents to purchase *Minecraft*, Dan showed them videos of *Minecraft* gameplay on YouTube, and they changed their opinion. Later on, his father purchased his own *Minecraft* account to play with Dan and his brother, and together they began delving deeper into *Minecraft*. In one instance, they were trying to install a mod using the Forge mod loader, and it involved a lot of complicated

procedures that Dan and his brother did not understand. Thankfully, his father, who was a programmer by profession, resolved the issue after consulting online forum posts, or in Dan's words, "He went deep into the Internet [laugh]" (Dan, personal communication, February 19, 2016).

Despite the differences in terms of size, location, and participant makeup, the two different types of affinity groups participants were involved in prior to our workshops mainly served their purpose of socializing with others through shared interests. The common set of endeavors that participants tried to realize in these affinity groups was oriented towards exploring both what was available and possible with existing video games, which may have involved playing with the boundaries of video games but not explicitly advocating the transgression of these boundaries. For example, Dan said that his father decided to purchase his own *Minecraft* account because he thought *Minecraft* could be "educational" when they played together. Based on the wide-range of storylines and gameplay demonstrated by various YouTubers, Bob identified that "*Minecraft* is all about making your own story," and he believed that that is how he should engage with *Minecraft*. However, when participants reached certain boundaries around play, they simply moved on to the next available and achievable endeavor. For example, when Bob and his friend could not solicit help from his father to build a mod or when Fin realized that he could not play in multiplayer mode with his friends on his phone, they moved on to play other games that offered the functionalities they desired. In other words, these affinity groups served the function of socializing youths into existing video game cultures and teaching popular ways of playing. In return, participants became insiders of these affinity groups and were able to exchange information, laughter and joy with other insiders.

The affinity groups that participants mentioned demonstrated key features of nurturing affinity groups described by Gee and Hayes (2012). First of all, these groups were organized around a common passion for a video game title or a specific type of game genre, such as *Minecraft* or first-person shooters, instead of common personal attributes, such as racial or gender identities. And participants interacted in the same space despite age or expertise differences, such as Dan playing alongside his father. Secondly, participants had different forms of engagement while the roles they played were reciprocal. For example, both Dan and Bob participated in YouTube's *Minecraft* affinity group. However, Dan was using this affinity space as a way to gain expertise on modding, while Bob was more interested in strategic gameplay suggestions provided by these videos. At one point, Dan's father was a novice to *Minecraft* while Dan was the expert, and Dan utilized fan produced gameplay videos to introduce *Minecraft*'s universe to his father. At a later point, Dan became the novice and Dan's father became the expert when they were engaging in modding practices that involved his father's professional expertise. Thirdly, participants gained understanding of the broad range of knowledge involved with video games' participatory practices. Fin, Jim, and others were well versed in the various forms of modding involved with different gaming titles, and they easily identified the knowledge specialty of various YouTubers. Lastly, social interactions among participants were vibrant. YouTubers in these affinity groups garnered an enormous amount of feedback from audiences, and many participants of these affinity groups interacted with each other through the comment sections. Furthermore, Fin described how many YouTubers have asked audiences for further video ideas and how they implemented their suggestions.

Even though these affinity groups demonstrated the key features mentioned above, participants did not engage in prosumerist activities supposedly encouraged and facilitated by



these spaces. Contrary to the transition from consumers to producers in affinity groups described by Duncan (2009) and Manifold (2012), most participants in my study remained active consumers. This was especially true in the case of YouTube affinity groups. Though many YouTube subscribers do actively comment on videos to interact with others, most in this study did not interact with their affinity groups using the comment section. Besides commenting, many YouTubers would feature video responses created by their viewers in their videos as a way of interacting with the group, and yet no participants in this study had done so before. Even Jim, who proudly claimed that he wants to be a YouTuber by profession, had never attempted to create videos to share with others in his YouTube affinity groups. Instead, participants simply “lurked,” observed, and consumed everything, including the comments, on YouTube. In in-person affinity groups with family and friends, it seemed that they were a bit more active in terms of trying to transition from consumers to producers, as was observable when Bob tried to create mods with his friend. However, it was not evident that these affinity groups contributed to participants becoming active prosumers, as suggested by the literature. If anything, these affinity groups seemed to transition participants into more active and sophisticated consumers with a wealth of knowledge about the cultural references in video game cultures. In this sense, the context of play was affinity groups that socialized and educated participants into popular ways of play.

### **Context of Critical Play**

During the recruitment phase of this research, I solicited participants by framing the workshop series as one that explores modding *Minecraft* for the purpose of making it better and more accessible. My thoughts were that our shared affinity was *Minecraft*, and our endeavors would be to create social justice mods. While some aspects of my idea for our affinity group still

held true, our workshops became one that centered on inspiring endeavors geared toward transgression. As my participants had become active participants of various video game affinity groups, they had also become well adjusted to the role of consumers. It was very difficult to prompt participants to transition into the role of producers to begin with, which included hurdles that a regular consumer would not have to go through. It was even more challenging to position participants as critical producers that confronted social contexts that framed their favorite activity. I learned to adjust my expectation of criticality to something informed by what criticality and social injustice meant and looked like for my participants who only had ten years or so of life experiences. My pedagogical approaches became absorbed with recognizing, rewarding, and responding when participants developed and acted upon their own volition to transgress social expectations. In other words, our affinity group became more about learning to transgress social contexts through the case of *Minecraft* and less about creating a traditionally understood social justice mod that responded to elements of gender, race, and class, and so on.

By differentiating between an affinity group for creating social justice mods and an affinity group for transgression in the context for critical play, participants' critical play with *Minecraft* could be further expanded and analyzed. Inspired by Barthes' (1982) semiotic analysis of photographs, Rose (2012) distinguished three sites for interpreting visual materials: the "site of image itself," the "site of production", and the "site of audiencing." The site of image itself refers to semiotic analysis of the content of images; by analyzing the composition, objects and subjects portrayed, and stylistic choices, viewers can derive meanings of images through connotations. The site of production refers to the intentionality of image creators and the technological boundaries that shape images. The site of audiencing refers to the process with which the viewer interacts with images to construct meaning; this process addresses issues such

as where images are consumed, how images are accessed, and how viewers are positioned physically and culturally in relationship to images.

In Rose's (2012) terms, participants were inclined to critically play at the "site of production" and the "site of audiencing," as opposed to critically playing with the "site of image itself" (p. 21) that were the primary emphasis of my initial curriculum. In the following sections, I detail the different levels of critical play that participants demonstrated at the site of image itself, production, and audiencing.

**The site of image itself.** Throughout our workshops, participants struggled to come up with ideas that addressed my prompt of redesigning *Minecraft* for players that were alienated from the game. When I provided examples of social justice mods and showed them video clips of Anita Sarkeesian critiquing the gender stereotypes in video games, they could not grasp the critiques being made; participants were simply at odds with and unaware of the norms and values that were being critiqued. Their responses were shallow in the sense that they were unable to provide any deep reflections that related to their personal experiences about these critiques, and they simply agreed with the critiques that Anita Sarkeesian provided without contention. For example, Anita Sarkeesian pointed out that female characters were often depicted with clothing that revealed their various body parts in video games. When I asked participants if they could think of a specific title that portrayed women this way, the group could only think of one example: *Grand Theft Auto*. When I attempted to expend this critique to other forms of media, such as advertisements, participants grew silent.

Furthermore, participants were unable to apply these critiques in imagining what alternative video game content might look like. For example, one critique that Anita Sarkeesian made about popular video games was the gender assumptions about default characters. Most

protagonist characters that players could embody and assume control over were either explicitly labeled as male or were characterized by traits traditionally associated with masculinity. Female characters, on the other hand, were often positioned as supporting characters in the backstory or as damsels in distress awaiting players to rescue them. As a result, most female characters were not playable; there weren't even options for players to play. After hearing Anita Sarkeesian's argument, all participants agreed with her critique that most female characters were not playable. As Fin commented during the discussion, "I never thought of this. I guess that's kinda sad" (Fin, personal communications, February 10, 2016). However, only Zoe was able to propose the increase of playable female characters by modifying the appearances of default characters.

Although addressing problematic ideologies of gender, race, and class is a major concern for critical media literacy scholars, many scholars have pointed out the challenges of facilitating and inspiring criticality among students in media education (e.g., Alvermann & Hagood, 2000). When I was struggling with my failure to foster criticality about certain attributes among participants, I realized that this struggle to "teach" criticality is not original at all. I discovered Williamson's (1981) study, regretfully after the conclusion of the workshops, where she described the complexities she experienced when trying to teach students to see the world as ideologically constructed. Specifically, she was attempting to engage students in critical reflections regarding gendered ideologies as presented through popular media, such as romance novels, film, and pop songs. The dilemma she encountered was that her students learned and demonstrated their criticality on gender ideologies in varying ways. Some students, particularly boys, were able to command critiques about gender from an analytical perspective, as she questioned their authenticity and applicability to real life experiences. Some students, particularly girls, had personal experiences navigating gender-based ideologies, particularly that

of negotiating the tension between personal desires and identities, but they were further disempowered when interpreting their experiences in dogmatically analytical terms. Williamson suggested that teaching criticality, or ideology construction, is more nuanced and less straightforward than the memorization of facts; it is not simply teaching all students how to reach the same understanding and analysis on the same issue, which I had mistakenly attempted. Instead, students of various positionalities do not learn and experience these ideologies from the same perspective, and teachers should be addressing students based on the gap between their analytical knowledge and personal experiences.

Besides Williamson (1981), many researches have documented students' inability to critique popular cultural texts that they loved and enjoyed through pedagogical encounters (Gainer et al., 2009). For example, Puchner et al. (2015) failed to find significant differences in middle school students' perception about gender stereotypes in popular media before and after four workshops on this topic. Even in studies that proclaimed success in critical media literacy curricular experimentations, success referred to students' ability to respond to and produce media as opposed to specifically addressing crucial dimensions of gender, race, and class (Black, 2009; Schmier, 2014; Laughter, 2015). Furthermore, in situations where students seemed to be critiquing popular media texts along the lines of gender, race, and class, scholars have had a difficult time differentiating between subversion based on critical intent and transgression based on submission to problematic ideologies. In the "Elementary Bubble Project" (Gainer et al., 2009) where elementary students were prompted to "talk back" to advertisements through speech bubbles, researchers observed students using sarcasm and parody to critique the gendered subtext of the advertising messages. However, these parodies could also be interpreted as further exemplifying the extreme versions of problematic gender ideologies without actually reflecting

on its consequences. As a result, Gainer et al. could not conclude whether or not their pedagogical approaches facilitated critical awareness about gender representations in advertisements among participants.

To explain young people's resistance and inability to critically examine their favorite popular cultural artifacts, many critical media literacy scholars argued that the problem lay in educators' failure to incorporate pleasure into pedagogical considerations (Alvermann & Hagood, 2000; Gainer, 2007; Gainer et al., 2009; Laughter, 2015). By focusing on critiquing activities and objects that students derived pleasure from, teachers' risk destroying the pleasure that drew students to these artifacts in the first place and alienating students' from media education curriculum. In doing so, even when students provided politically correct responses and appeared to be in agreement with instructors about the downfalls of popular cultures, students were most likely parroting back "what the teachers want[ed] to hear and not what ...[lay] in the heart of the students" (Gainer, 2007, p. 109). Instead, Alvermann and Hagood (2000) advocated for unpacking "pedagogical implications of helping students experience the pleasures of popular culture while simultaneously uncovering the codes and practices that work to silence or disempower them as readers, viewers, and learners in general" (p. 194). Art educators incorporating critical theory to engage students with popular culture also observed similar dilemmas as critical media literacy scholars (Herrmann, 2005), and Duncum (1999) had argued for the need to acknowledge students' pleasure when addressing critical awareness.

However, the problem with pleasure, or the lack thereof, does not fully explain what had happened in this action research. I was mindful about unfolding our workshops according to participants' desires and pleasures, in hopes to avoid the top-down educational model that merely imposes educators' own critical positions onto students. Similar to suggestions made by

Alvermann and Hagood (2000) and Gainer (2007), I hinted at problematic ideologies that I've observed, but I also ensured the prompts were open ended to allow for participants to interject their personal experiences. When I did provide my opinions and sought input from participants about similar experiences, they simply did not seem to apprehend the problems I pointed out. Instead of participants actively resisting my critiques of video games that might have eliminated the pleasure of play, the dilemma for me was that they did not comprehend the politics of gender, race, and class.

Thus, in addition to pleasure, I propose to analyze young people's inability to critically engage with popular cultures along the attributes of gender, race, and class from a socialization and developmental perspective. Educators have long utilized developmental theories to explain various aspect of individual learning. Most famously, Piaget (1964/1959) established the field of developmental psychology through his research and theory on children's cognitive development in terms of assimilation and accommodation to society. Vygotsky (1978), on the other hand, used a staged developmental approach to interpret "the relationship between thought and language" (p. ix) among children. Following suit, art educators also theorized children's artistic development in a similar structuralistic manner. Lowenfeld (1957) described children's pictorial expressions developmentally in stages, while Parsons (1987) described how children think about and respond to art in terms of developmental stages. Despite the different topics, these various developmental theories are concerned with explaining how individuals progress innately in terms of stages.

In particular, I found it useful to consider participants' actions and responses in terms of Kohlberg's later theory on stages of moral development (1984). His theory consisted of moral reasoning stages that he grouped into three major levels of moral reasoning: preconventional,

conventional, and postconventional. Each describes an individual's "relationships between the self and society's rules and expectations" (Kohlberg, 1984, p. 173). Each level of moral reasoning encompasses two stages, and they serve as general descriptors for the stages encompassed. With our development from lower to higher levels, we become increasingly adequate to respond to dilemmas and situations according to our understanding of justice.

However, some stage developmental approaches to learning have been rejected, and Kohlberg's initial formulation of moral development received an enormous number of criticisms on the basis of its philosophical assumptions and the psychological methodologies used (Kohlberg et al., 1983). In response to critics, Kohlberg clarified and revised several components of his original theory (Kohlberg, 1984). Specifically, I would like to iterate four major lines of criticisms that pertain to the use of his theory in this study; I agree that these criticisms are valid, and they provide me with the opportunity to clarify and qualify the ways in which I am suggesting Kohlberg's later moral development theory can be utilized by critical pedagogues to facilitate and accommodate students' critical consciousness.

The first line of criticisms challenged the idea that individuals progress through developmental stages innately and naturally according to age (Wilson & Wilson, 1981; Parsons, 2003). I would argue that the interpretation of Kohlberg's theory as one with the premise of innate development arises from Kohlberg's desire and attempt to correlate progression with age through empirical studies. The association of stages with particular ages operates under the assumption that moral development happens innately and an individual will progress despite cultural circumstances and personal experiences. However, even Kohlberg (1984) himself argued against understanding his theory as a naturalistic unfolding of human development. He wrote, moral development is "the result of processes of interaction between the structure of the



organism and the structure of the environment,” which accounts for the variations between individuals, “rather than being the direct result of maturation” (p. 8).

I agree that individuals do not progress through Kohlberg’s developmental stages innately; it is not a “natural” process in which every individual is bound. Instead, I am utilizing Kohlberg’s theory to describe certain aspects of an individual’s socialization process and how he or she interprets the various aspects of their experiences, which are contingent upon whether they were exposed to differences through their social groups and whether differences are encouraged or merely tolerated, and so on. This implies that the social conditions for which an individual is situated and how the individual chooses to engage with said environment determine the individual’s progression through various stages.

The second line of criticisms argued that the linear and rigid progression from one stage to another is restrictive and fails to account for individuals that jump back and forth between stages (Duncum, 1999). The complication that Kohlberg’s theory does not accommodate for individuals showcasing actions or thoughts that belong to different stages results from the assumption that individuals are coherent, rational, logical, and totalizing beings. As a cognitive theory, Kohlberg believes that an individual demonstrating certain qualities of a specific stage is representative of that individual’s totalizing cognitive shift. Instead, I believe that individuals are incoherent beings that have fragmented experiences and consciousnesses as a result of intersecting identities. Under an intersectional framework, individuals do not possess “one” coherent and totalizing identity (Collins, 2015). Instead, individuals possess multiple intersecting social identities as a result of experiences filtered through their various positionalities and attributes.

Though I differ from Kohlberg on the fundamental assumption about individual identity, I would argue that it is still possible to apply Kohlberg's theory to understand moral reasoning. The key lies in qualifying the analysis as one that only focuses on a single aspect of ideological construction at a time. An individual who demonstrates a conventional level of understanding about how they should act based on their racial identity does not presuppose their ability to recognize and embody the social norms projected upon them based on their gender identity. Instead, how an individual can interpret ideological constructs should be discussed based on the specific social identity under consideration. However, this is not to suggest that I am arguing against the linear development of moral reasoning. The reason that individuals' may appear to be between stages lies in the fact that their various intersecting identities may be at different stages of development.

The third line of criticisms took issue with the claim of universal applicability and consequent disregard for contextual and cultural factors at play (Schweder, 1982). Various critics have questioned whether it is even possible to construct totalizing theories about development of all individuals as a whole (Wilson & Wilson, 1981; Duncum, 1999). By extension, many challenged Kohlberg's claim of a universally applicable theory of moral development. Gilligan and Murphy (1979) rejected Kohlberg's assumption of an achievable normative and universal moral maturity, as they believed that moral judgments are contextually specific and relative. Simpson (1974), Sullivan (1977), Habermas (1979), and Gilligan (1982) further argued that Kohlberg's idea of moral maturity assumed the value of individual rights as the primary consideration for achieving justice, which related specifically to Western philosophical traditions. Indeed, empirical studies failed to reflect the spectrum of moral reasoning across the cultural and gender lines he had assumed.

In response, Kohlberg argued that a relative ethical position towards moral reasoning was devoid of any meaningful discussion of moral judgment, as everything would then become relative; it would have no point of reference. Instead, Kohlberg believed that a cross-cultural paradigm of moral development was still achievable through careful consideration of content and form. Specifically, Kohlberg and his supporters (1983) revised his initial theory by clarifying “the form-content distinction” (p. 6). In hopes to address cultural differences, they revisited Kohlberg's original descriptions of various stages and separated normative content from the formal properties of stages. By doing so, Kohlberg's theory of moral development became one that was focused on describing the mechanisms by which individuals learn to reason morally through socialization in culturally specific situations. I agree with Kohlberg's response that a relative ethical position evades moral reasoning altogether; by focusing on individual instances, moral reasoning becomes a personal endeavor that disregards larger social structures at work. By focusing on describing general processes involved in socialization, his theory does not entail what specific ideological constructs are being socialized, which would differ from culture to culture and individual from individual. While the controversy about culturally specific content is addressed, the main question remains: is Kohlberg's moral development theory universally applicable?

Despite the controversies around its universal applicability, I am able to claim that Kohlberg's theory, when applied with the above qualifications, proved useful and helpful to this study in the sense that it provided me with an operational framework to interpret participants' engagement with criticality. This study serves as an exploration and experiment in applying Kohlberg's model of moral reasoning to interpret and understand individuals' critical consciousness development in a particular cultural context that is similar to the one he had in

mind when developing his theory. Furthermore, I am not invested in debating the universal applicability of his theory based on my findings here, as I am not suggesting this as the one and only pedagogical and analytical approach for other critical media educators. Instead, I am suggesting his theoretical framework as one approach, among others, for critical media educators to consider utilizing in the search for ways to address the dilemma of facilitating criticality among students.

The fourth line of criticisms took issue with the lack of distinction between moral thought and moral action in Kohlberg's original formulation, where research participants' justice reasoning process was equated with their moral actions. Simpson (1974), Sullivan (1977), and Habermas (1979) argued that Kohlberg's methodological approach of interpreting research participants' responses to abstract moral dilemmas were detached from personal social relations and thus minimized the validity of his theory. In particular, Gilligan (1982) argued that Kohlberg's abstraction of moral dilemmas resulted in a moral developmental theory that valued individuals socialized to think rationally and objectively, instead of valuing individuals who reason relationally and emotionally.

In response, Kohlberg and his proponents (1983) elaborated his original theory of stages as "the basis of a theory of moral action as well as of justice reasoning" (p. 7). To account for the relationship between judgment and action, they focused on describing deontic choices made by research participants that would connect real and hypothetical dilemmas. Furthermore, they incorporated considerations for care and emotions in subsequent revisions to the theory and argued that Gilligan's (1982) moral development theory, ethics of care, only described a single component of their larger framework. In the context of this study, this criticism is largely avoided by the fact that I am analyzing participants' moral reasoning based on their actions and

productions in relationship to their personal moral dilemmas. In this case, emotional and relational considerations were just as important and present for participants as objective and rational thought. Thus, I believe that Kohlberg's categorization and descriptions of different moral levels applies to analyzing participants' reasoning processes in this study.

Having justified my use of Kohlberg in this study, I now turn to the theory of moral development itself. According to Kohlberg, the distinguishing characteristics of his three moral levels lie in an individual's relationship to social expectations, which are constructed based on socio-cultural norms and values. An individual in the preconventional level does not operate according to social expectations as much as they act to avoid immediate punishment without realizing the overarching ethical principles that shape these punishments. Societal expectations are foreign to individuals in the sense that they have yet to internalize social conventions. An individual in the conventional level, on the other hand, acts according to social expectations as he or she has internalized societal values and norms as a member of society and upholds the values and norms embedded in these behaviors "just because they are society's rules, and expectations, or conventions" (Kohlberg, 1984, p. 172). Lastly, an individual in the postconventional level accepts and acts according to society's rules only when these rules align with the individual's own moral principles, or what he or she deems as just. When societal expectations don't align with the individual's moral principles, she or he is able to transgress and transcend these conventions by acting upon her or his own judgment.

I would argue that participants in my workshop series were transitioning between the levels of preconventional and conventional in terms of their ability to understand and uphold societal norms and values along the attributes of gender, race, and class; this is why critiques of video game cultures based on abstract concepts that arise out of a postconventional level seemed

so alienating and foreign. For one, participants might not yet be consciously aware of the gendered, racialized, and classed conventional norms of play in their personal experiences as they were merely being socialized into these norms. If this was the case, then participants were in the preconventional level of understanding in terms of these attributes. They were being socialized and disciplined into these norms through a case-by-case basis and alternating their actions based on immediate feedback to avoid punishment; they had yet to understand these norms as a coherent set of directives for their personal actions. For another, participants might have had personal experiences of these gendered, racialized, and classed conventional norms of play. But with the way that I had scaffold the curriculum that referenced analytical interpretations, they were unable to bridge the gap between their personal experiences and these attributes as analytical concepts narrating collective experiences. Even if this was the case, their position in the preconventional level still stood; they were unable to connect their personal experiences of these norms with the collective experiences of others that also operated under these directives.

In terms of gender, the issue lay in participants' inability to connect their personal experiences with gender as an analytical concept. Each participant mentioned that his or her mother did not play at all and those with whom participants did play were referred to by male pronouns. Furthermore, the boys participants noticed that Zoe, who was the only person identified as a girl in our workshops, had to drop out due to parental expectations on her academic performances. Clearly, they have had personal experiences demonstrating the gendered patterns in play. However, participants were unable to weave their personal experiences with the gendered norms of play as articulated by Anita Sarkeesian. Even though they agreed with the critiques, their responses resembled that of the boy's in Williamson's (1981) study. They were

agreeing with an analytical argument without embodying it, possibly only because they were trying to demonstrate the good boy orientation to please me, the teacher-figure.

The reason that they were unable to connect the dots was possibly because I had failed to specifically address gender from their perspective as boys. According to Williamson (1981), she was able to help her boy students connect their personal experiences with gender as an analytical concept by calling them out on their oppressive, aggressive, and gendered gestures towards the girls. She directed their attention to the ways in which they were themselves complicit in the collective gender norms that they were critiquing and how they were being oppressed by it at the same time. It ceased to be an abstract, distant, and analytical exercise about womanhood as the boys' attention was directed to question masculinity and themselves as actors in these practices. In the case of this study, the examples that I brought in focused on the ways in which femininity was portrayed in video games and how these norms framed, bounded, and confined the perception of women in general and players that identified as girls. Even if these critiques were understood and internalized by participants, whom all but one identified as boys, they had little resonance with participants, as their identities were not affected; their identities as boys and how they interacted with others based on that identity through video games were not directly called into consideration.

In terms of race, racial narratives were not apparent to some participants, while others denied that race played a role in video games. In comparison to the default playable characters that players were positioned to command, non-playable characters that were positioned as evil enemies to defeat in video games often had darker skin tones. In other words, the spectrum of skin tones from light to dark was used to represent the spectrum of good to evil in many video games. When I suggested that participants consider this racial narrative in terms of the characters

of *Minecraft*, they were unable to extrapolate the pattern of skin tones representing the spectrum of good to evil. I was unsure if their silence was a result of their lack of awareness of racial narratives in general or if that they did not feel comfortable voicing how they understood their racial identities in relationship to video games as our group was composed of various racial identities. In my follow up interview with participants, I asked Dan, whom I identified as Caucasian, what he thought about our workshop. He replied that he honestly had not previously considered the critiques I had presented, particularly the racial narratives, as he doesn't really think about his racial identity at all. When I asked Fin, whom self-identified as African American, about what he loved about video games, his response suggested a color-blind perspective; "[race] doesn't matter in video games, because you can play as anyone and nobody cares about who and what are you really" (Fin, personal communication, February 19, 2016). When I pressed if he had had any experiences where he felt his racial identity mattered, Fin drew a blank.

Both Dan and Fin seemed to hold the view that race did not matter to them when they played video games but for different reasons. In the case of Dan, racial identity was not something that had even occurred to him. I suspect that he has yet to seriously consider his racial formation. His racial identity has yet to be challenged as his whiteness aligned with the often-assumed default attribute of users in various online domains (Nakamura, 2008). In the case of Fin, he clearly seemed to have experienced interactions where his racial identity was brought to his attention, though he was not able to articulate further. Otherwise, he would not have noticed the difference between being in his embodied self with visible racial markers versus being in video games as an avatar that projected an imagined identity. Though they were experiencing racial narratives projected upon them in very different ways, Dan and Fin has yet to



recognize their personal experiences as a result of a coherent set of values placed upon race as an attribute.

In terms of class, there were instances where class differences among participants became apparent through their gameplay and participation in trouble-shooting. When we were discussing the various games and gaming consoles that we had access to and played before, it was evident that only a few participants had parents that comprehended the educational potentials of video games and had the financial means to provide the latest gaming consoles and game titles. Most participants only had access to video games at the library or on their smart phones. To compensate for their lack of access to games that were popular among peers, they often resorted to YouTube videos to experience gameplay, which did not afford the interactive participation assumed in video game designs. As scholars have concluded that interactions in video games prompted players to develop various literacy based on situated knowledge, this interactive component is particularly significant from an educational perspective (Gee, 2007). Participants further embodied their class differences through their digital literacies and technological capabilities, where participants who had more access to games and different consoles appeared more knowledgeable about gaming and computing in general. Participants who had less access to games and consoles even commented on this injustice as resulting from class differences. When Jim and others were constantly defeated by Dan during *Minecraft* free play, Jim said that Dan was “much better at gaming and computer stuff” because Dan had his own *Minecraft* account and a gaming computer at home. However, when prompted, participants’ were unable to connect this outcome to an analytical concept, such as class. Instead, they were only able to observe this one instance of class divide, and they interpreted it as a result of personal and individual differences.

Participants' responses and actions relating to gender, race, and class demonstrated characteristics of both preconventional and conventional levels of thinking. Zoe demonstrated the nice girl orientation, which characterized the conventional level, by ceasing to attend our workshops that she personally enjoyed to fulfill the social expectations set forth by her family. Meanwhile, other participants demonstrated a mix of good boy orientation and an instrumental relativist orientation by attending our workshops purely out of self-interest or based on social expectations that playing video games is a good practice. Though the outcome of their actions exemplified gendered narratives around gameplay, they interpreted their reality individualistically without reference to the social expectations placed upon them, which placed them in the preconventional level. Though Jim pointed out class differences between himself and Dan, his reasoning and explanation did not arise from a perspective on class divide across various scenarios, characteristic of higher stages of conventional and postconventional levels of thinking. Instead, he held an instrumental relativist orientation that characterized preconventional thinking. Jim judged Dan's action only in relationship to Jim himself. In conclusion, I would argue that participants were merely transitioning from preconventional to conventional level as they were only beginning to interpret their actions in relationship to social expectations.

Thus, the reasons that the participants were not able to connect to and provide critiques about the exclusionary natures of video game cultures as observable in *Minecraft* lie in the fact that, as middle school students, they had not yet been fully socialized into these norms and values. Or, they had yet to be able to identify their personal experiences conforming to these norms and values as an intentional fulfillment of social expectations. They were only beginning to internalize these societal conventions.

By comparison, the reasons that I was able to relate to critiques about the exclusionary natures of video game cultures lay in the fact that I have experienced, understood, and named the various practices that structured my play with video games. In Kohlberg's terms, Anita Sarkeesian and my critiques of video game cultures were possible because of our having reached the postconventional level in our moral development with regards to attributes of gender, race, and class, etc. With ten plus years more of life experiences than participants, combined with my identity as an immigrant and woman of color who plays games, I have long internalized social values and understood the norms by which I am supposed to abide, and, consequently, I was at a place to reflect on these practices. Furthermore, as a graduate student in higher education, I am surrounded by peers, colleagues, and mentors who constantly strive to name and challenge the various socio-cultural structures that shape our lives. I was socialized to value the act of asking questions and to avoid taking normative actions for granted. In other words, I participated in a video game affinity group that was very different from what participants had experienced prior to our workshop, and I have developed the ability to question social expectations on the bases of my own moral judgment through my participation in my distinct affinity group. This affinity group consisted of gamers and scholars with shared endeavors oriented towards critiquing and transgressing the norms, grammars, and values that structured our play experiences. With that in mind, participants in this study and I saw the world, and experienced the critiques to video game cultures disparately, and it would be unreasonable at best and harmful at worst to expect participants to reach the same conclusions. Even if I had required participants to produce mods along the attributes of gender, race, and class, they would still be positioned in the pre-conventional level and would simply be following expectations prescribed to them; they

would be obeying my directions as an authoritative figure that deemed certain types of production as valuable instead of acting upon their own moral judgment.

**Site of production.** Though participants were not able to develop critiques of *Minecraft* along the attributes of gender, race, and class, some were able to develop critiques of *Minecraft* along the lines of age censorship. They considered video game marketing strategies that censor sensitive materials in games targeted towards younger players as a form of injustice. All of the prototypes and mods participants built operated under the understanding that *Minecraft* is an open-ended world. This lack of a strong narrative arc and open-endedness attracts players who enjoy the flexibility of creating their own storylines, but it alienates players who are interested in exploring storylines in games. To remedy this disconnect and respond to my prompt regarding alienation, participants' suggested superimposing a narrative on *Minecraft*. For example, Bob created a mod that was *Naruto* themed in hopes of sharing the experiences of playing *Minecraft* with his best friend, and Tom created a football-themed mod in hopes of drawing in his father.

Furthermore, Jim and Ken, were able to connect the lack of narrative to the perceived neutral tone of games that were marketed to them. They noticed that there exists a thematic difference between the types of games deemed suitable for them and the types of games rated as inappropriate for them. For example, they mentioned that the Entertainment Software Rating Board (ESRB) rated games like the *Saints Row* series or the *Grand Theft Auto* series that featured explicit language and themes of unlawful gang activities, such as stealing cars or robbing banks, as unsuitable for youth consumption. On the other hand, the games that they were able and encouraged to play, like *Minecraft* or *Roblox*, did not suggest activities that were unlawful and potentially dangerous. In other words, they picked up on the categorization of themselves as children in the larger video game marketing industry and the industry's belief that

they were unable to process certain mature content; they interpreted this practice as implying that they would be unable to differentiate good from bad or real from simulation.

From the perspective of video game industries, the practice of censoring explicit materials and creating age appropriate content for children and youths to consume may have come from a place of care for young consumers' well-being and assumptions about children's development. However, this very categorization that separated young consumers from older consumers was constructed by the participants as a means to structure the ways young users were supposed to interact and play. Compared to adult players who had full control of their choices when it came to video games, young players faced many restrictions. In participants' eyes, this very categorization separated them from adults and embodied the imbalanced power relationships that shaped their everyday lives and one that they perceived as unjust. As mentioned in the previous chapter, the mods they created were much more violent in tone than the original vanilla *Minecraft*. These modifications connected *Minecraft* to other video game titles that were often marketed towards adults; hence, Jim's *Call of Duty* themed mod and Ken's killing theme mod.

It could be argued that Jim and Ken simply enjoyed violent forms of play and that they derived pleasure from them. Their pleasure could have arisen out of their desire to be seen as adults. By engaging in these forms of play, they were showcasing their ability to process mature content, distancing themselves from childish forms of play, and signaling their membership in video game cultures where masculinity was demonstrated through violence. In other words, their mods could be interpreted as the result of socialization, for example, as a rite of passage for young boys engaged in video game cultures, where they were mimicking the way their adult role-models played. If this was the case, Jim and Ken were operating in the conventional level in

terms of their ability to recognize and obey social expectations along the attribute of gender. They had reached a systemic understanding of the social expectations placed upon boys and men, and they were attempting to fit in to the social conventions around masculinity. However, I am less inclined to argue this line of analysis, as there was not enough evidence to suggest that they were acting predominantly out of the desire to fit into conventions around masculinity. Even with the YouTubers that they preferred, the type of gameplay presented did not focus on violent forms of play. Furthermore, the adult role-models they mentioned simply did not engage in video game cultures, as they saw gaming as a waste of time.

Thus, I am more inclined to argue that Ken and Jim were focused on transgressing their conditions as children through mimicking adult play. Furthermore, this line of argument is echoed by their transgressive behaviors at the site of audiencing, which I will explore later. In this case, in Kohlberg's terms, Ken and Jim were operating at the postconventional level in terms of their ability to recognize, transcend, and transgress social expectations along the attribute of age. Unlike their understandings regarding categories of gender, race, and class, Ken and Jim were well versed in the power relationships embedded in our social constructs around age and maturity. As people who have often been corrected and regulated based on their classification as children, they were well aware of the social conventions that differentiate norms in childhood and adulthood, with children being subjected to rules set forth by adults. For example, YouTuber PewDiePie cursed "fuckkkkkk" after being pranked by his friends during play in a video that Jim selected for us to view. Participants burst out into laughter and mimicked his tone of voice to say "fuckkkkkkkk." I laughed along with them, without paying too much attention to the appropriateness of that language. After their initial response, Fin and others grew quiet, their lips pressed, and looked at me sheepishly as if they had done something wrong. Without being

corrected, Jim apologized, seemingly directly to me; he explained that he knew that “they,” referring to his peers and himself, shouldn’t use that language, and he simply forgot about the cursing component of the video when he selected it for us to watch. Reflecting back on that exchange, it captured the level of self-disciplining that participants had already internalized when interacting with adult figures. While they were submitting to conventional levels of moral behaviors in regards to maturity ratings in games, in their choice to play, they had been questioning the bases of these social expectations as they learned about the arbitrary nature of age categorization through their participation in various video game affinity groups.

During a discussion about accessibility to games in our second workshop, Ken murmured, “Yeah, I’ve watched [gameplay of] *Grand Theft Auto*, but why can’t we play it? Why is *Minecraft* [rated] PG but that’s R... we can kill [people] in both of them” (Ken, personal communication, February 10, 2016). With the prompt of our workshop, they were encouraged to explore and challenge differences in access that they had issues with in games, and they tied this to the restrictions they experienced as children. By not seeing me as a traditional authoritative figure and enforcer of social conventions, they were able to experiment with a topic that dealt with their desire to transgress the conventions around age that might have set off alarms in a regular classroom. Thus, even though participants were producing mods that I found problematic according to my own moral compass, I chose not to interfere, as their modifications were the result of their perceptions of injustice according to their moral compass. I came to recognize, and respond to, their attempt at transgression within the boundaries of our affinity group.

**Site of audiencing.** Our affinity group was physically situated at a public library. Specifically, this library had a dedicated Teen Space that segregates middle school and adolescent activities from both the adult and younger patrons, and there were specific rules of

conduct that only applied to Teen Space. Though our actual workshop was hosted in a room across from Teen Space, our affinity group was subjected to the politics of Teen Space as we were authorized to exist by the teen division of the library, and the parameters of our endeavors were shaped by its infrastructures. By infrastructure, I mean both the basic physical facilities and the social structures that are fundamental to the functioning of systems. In this section, the system was the library. The basic physical infrastructures refer to the library building, the room we were situated in, and the networked computers. The social infrastructures refer to librarians' relationships with patrons and the library's rules of conducts. My surprise came as participants began to critically examine and transgress the social conventions of the library through finding ways around the infrastructural limitations.

Prior to conducting the first iteration of this workshop series, I learned about the various restrictive measures around information technologies that the library had in place to protect the security and privacy of its systems. Though I sought out laptops from the University of Illinois with less restrictive guidelines, our workshops did not completely escape the infrastructural limitations of the library, as our workshops still utilized the library's wireless network connections to reach the World Wide Web. As in its protection of its computers, the library controlled what went in and out on their bandwidth. Certain files from certain web addresses that attempted to access certain download locations on any computer connected to the library's wireless network were denied, with *Minecraft* loaders that attempted to download game files every time the game was launched being one of them.

Though I was aware of the infrastructural limitations of the library's wireless network, I was not aware of participants' sensitivity to them. To overcome these limitations, I learned to bring my own hotspot or utilize Fab Lab's private network to perform certain activities that



would have otherwise been denied. However, at times I still had issues with trouble shooting and coming up with ways around these infrastructural limitations. In the first few weeks, I tried to solve these problems on my own, with the idea that this process was too complex to explain and that they were the result of my own lack of preparation as an instructor. During these times, our shared endeavors were stalled and participants waited on me to perform what I had thought was my job. However, some participants, such as Dan and Bob, were interested in what I was doing and even offered unsolicited advice. Though most of their advice did not lead to any significant resolution, there were a couple of instances, such as connecting to an external server, where their advice helped resolve problems. They explained that they knew about this issue as they had dealt with similar problems when they had played in Teen Space. This made me realize that by assuming a lack of ability in dealing with technological challenges, I was taking away opportunities for participants to learn about how infrastructures shaped our play and how to transgress these limitations through trouble-shooting.

After realizing how my assumptions about participants' technological capabilities were hindering their learning, I modified my pedagogical approaches around technological difficulties towards one that focused on collective trouble-shooting. This approach proved to be fruitful; participants were certainly more engaged and aware of the social conventions around video game playing in the library as shaped by infrastructures. Through their collective trouble-shooting, they explicitly named the norms and values of the institution hosting our affinity group. At times, participants even transgressed the social conventions by coming up with ways around the infrastructural limitations. For example, participants found a *Five Nights of Freddy* mod for *Minecraft* that they really wanted to try during our workshop, but this mod was not a server mod and required playing on a local area network (LAN) that connected computers directly in a

limited area. Given the restrictions around LAN access in the library's network, this type of play was prohibited. However, participants did not conform to this restriction. Instead, they figured out that they could use my hotspot as a LAN and access the mod on one person's laptop. I praised them for their ability to transgress the library's infrastructural guidelines in this instance, which implied that I was in support of their endeavors in challenging the social conventions that structured our affinity group.

Another set of transgressions that I consciously decided to endorse occurred during my instruction. As leader of the group, I had planned activities directing our endeavors. In the beginning of the workshops, participants were rather submissive towards my prompts. Seeing me as someone that the library had sponsored to lead this authorized programming, our exchanges resembled that of a classroom with me being the teacher and them being students. They followed the rules of conduct applied in other library-sanctioned programs. However, there were instances where participants violated these rules of conduct without being punished by me during play, such as when on the first day they strayed off course from my prompt and they began to realize that in our group the usual rules of conduct in the library were negotiable. In the later workshops, participants became much more vocal in regards to what they needed and wanted, and they formulated arguments that justified their requests to negotiate with me. For example, in the third week of our workshop focused on paper prototyping, I had extensive activities planned out aimed at creating a complete prototype. After completing most of the activities, they wanted to spend the precious remainder of time playing on the "real" *Minecraft* that they did not have access to in Teen Space. When I noted that they had not completed the prototype as I had imagined, they argued that although their prototype did not look like my example, it was still complete because it contained all the elements that defined a prototype. Astonished at first at

their ability to generate this sophisticated argument, I came to recognize this as an instance of them transgressing my role as the leader and the library rules of conduct. They were beginning to see themselves as equals to me in their ability to decide for themselves what was worth pursuing and the rules of conduct as malleable. Though this type of criticality was not one I had planned for, I decided to encourage it because in doing so, participants transcended their usual role as passive and submissive subjects to become confident and opinionated actors relying on their own moral compasses.

In all these transgressions, participants were either showing the potential to use, or had moved into, the postconventional level of reasoning in Kohlberg's model. Contrary to the norms and values exemplified in the content of video games that connected to the analytical concepts I had focused on, participants were already well versed in the social expectations projected upon them at the library. They knew exactly what was expected of them when they participated in a formal educational program, and they knew to some extent how the library infrastructure prohibited certain types of play. The defining factor that separated their conformity to these social conventions from a pre-conventional level to a conventional level lay in the fact that they were not simply submitting to avoid immediate punishment. Participants were aware of the reasoning and values that grounded these conventions that everyone in this social circle consented to, and they were conforming to these conventions based on their interests in participating in this social circle. Participants did not start out in our workshops with disruptive behaviors because they knew that it was in everyone's best interests to behave as expected. As participants were already able to name the various norms that shaped their behavior, they were ready to move on to challenge these conventions based on their questions about the reasoning process behind these values. With the aid of an authoritative figure who was seen as having the

legitimacy to influence these rules and who invited their challenges to these conventions, they were beginning to see themselves as members of our social circle and as having the autonomy to choose when and how to conform or transgress our social conventions.

### **Subject**

In my topology of critical play, I theorized that the subject of critical play would be players as prosumers with an active awareness of their role and position as productive agents in this social structure. However, as described earlier, I noticed a discrepancy between how participants were actually engaging in affinity groups prior to our workshops and what had been described in the literature. The bulk of our workshops were simply focused on transitioning participants from consumers to producers, and only a few were able to become prosumers with an active awareness of their role and position as productive agents in this social structure.

### **Players as Consumers**

As I've mentioned previously, participants I worked with in this project did not progress from consumers to producers by participating in various video game affinity groups during their own informal play. Instead, most saw themselves only as active players that consume the latest trends in video game cultures through their participation in affinity groups. While I understood that mod creation required higher levels of technological sophistication, it was surprising to hear that participants did not even produce content that was achievable and accessible given their current abilities, such as commenting on new games they tried, providing feedback or reviews about other's work, or taking photographs of non-digital artwork. When I asked if they were interested in producing content to be shared with their various affinity groups, they responded positively. For example, Jim and Fin wanted to create gameplay commentary videos, while Dan and Bob discussed the various mod themes that they thought were original that could contribute

to different discussion threads online during our workshops. However, they added that they never carried out their intentions. When I further inquired why they have not done so yet, their responses revolved around their technological inabilities and the lack of drive to follow through. For example, Bob and Dan had attempted to create mods before, but they stopped as they reached the limit of their understanding of the technical process involved in modding and could not solicit help in a timely manner. Fin and Jim said that their ideas remained as “thoughts” (Fin, personal communication, February 19, 2016), and they simply never had the motivation to get around to doing what they said they wanted to do.

Based on participants’ experiences, I conclude that supportive mechanisms, such as detailed tutorial guides and words of encouragements, in informal learning environments, as described in various affinity groups (Halverson, 2012; Wu, 2016), were simply not enough to push players to cross the threshold from consumers to producers. Assertions made by Gee and Hayes (2012) and Jenkins et al. (2007) about individual’s spontaneous and productive participations as a natural outcome of participatory and affinity spaces are questionable. The transformative learning experiences resulting from becoming prosumers were only viable if one assumed that players had the technological literacy and personal drive to make that happen. From the experiences of this project, only players who met those assumptions were able to access the type of supportive mechanisms that affinity groups had in place.

### **Players as Prosumers**

Given the reality that my participants had never produced anything related to their love of video games, my pedagogical approach became one that tried to actively position participants as producers and help them cross the threshold from consumers to producers. For example, even though our workshops were working toward a single final mod, I implemented activities that

prompted participants to produce their original ideas, comments, prototypes, and reflections in every session. The purpose of these simple prompts was to get participants accustomed to the act of production and help them understand the value of every input, regardless of how insignificant it might seem to them. Furthermore, seeing that lack of technological abilities was a major concern and a roadblock, when it came to the detailed procedures involving mod creation I made sure to instruct slowly and repeatedly. After the realization that trouble-shooting was a major component to learning about the technological infrastructure, collective trouble-shooting became the common practice in our workshops; in order to overcome technological problems, participants had to be persistent and utilize our collective knowledge.

In return, participants began to show confidence in their individual opinions and took pride in what they were able to produce. For example, when our workshops started, Tom was very shy about sharing any ideas and reluctant to participate in activities other than watching videos or playing games. He even refused to pick up the scissors to create a prototype as he sat, watched, and listened to others while they worked away. After my relentless prompting and talking to him individually about developing an idea, he was able to offer me a mod idea regarding his mother's motion sickness with *Minecraft*. As he continued to develop his ideas in the following weeks, he was not only able to produce a mod, he was able to justify why he decided to abandon his original idea in pursuit of the mod he actually created. In the final reflection that participants wrote in our last workshop, they all reflected on their ability as producers, and Jim even went as far as to say "I think *Minecraft* has a new change and it got so much simpler to me" (Jim, personal communications, March 9, 2016). By "new change," Jim was referring to a modding process that he recently learned, which helped him see *Minecraft* in a new light. Furthermore, in my follow up interviews one month later, Tom, Dan, and Fin each

mentioned that they had shown their artifacts produced in our workshop to friends and family and that they were satisfied with the affirmations they had received.

Despite youths' newfound confidence as prosumers, I was unsure whether they would maintain their role as producers or return to their familiar role as consumers. In the follow up interviews, I discovered that only Dan and Bob continued to produce and explore other types of mods. Fin said that he simply lost interest in *Minecraft*, while Tom said that he had forgotten some of the details and was too occupied with schoolwork to work on mods.

I realized that this engagement discrepancy between participants could be explained through their personal drives. In our workshops, I had prompted participants to identify their personal drive that tied their interests in participating in our workshops to their larger life goals and how their technological expertise needed to be improved in order to accomplish those goals. Dan, Jim and Bob had clear goals that they wanted to achieve, such as becoming video game developers, programmers, or YouTubers, and they were eager to use our workshops to overcome their self-identified lack of expertise. Furthermore, Dan and Bob had parents that were programmers by profession, which relates closely to the careers that they wanted to pursue. Their parents could provide them with directions when they sought help and intimate knowledge about what these careers would entail. Fin, Ken, and Tom, on the other hand, were not clear about how our workshops related to their lives besides the fact that they liked playing video games, and they were not strongly motivated to overcome difficulties. They did not have a clear goal that they wanted to achieve through overcoming these difficulties. Instead, when their role as producers became too demanding and challenging, it was easier and made more sense to them to simply return to their role as consumers, which they were much more familiar and comfortable with. Thus, as Dan and Bob were utilizing our workshops to serve their own purposes, their drive and

motivation translated into persistence in overcoming difficulties both during and after our workshops even without prompting. Even though participants' understanding and practices of their role as prosumers varied, they all took pride in their role as prosumers during our workshops.

### **Players as Critical Prosumers**

The question of whether participants can be considered critical prosumers with an active awareness of their role and position as productive agents in social structures is more complex. Simply put, the answer is yes and no. As mentioned in the section on context above, participants' critical play needed to be understood through the content of *Minecraft* and the site of audiencing. With regards to most participants' inability to critically play with the content of *Minecraft* as it related to social structures and conventions, most of them were not critical prosumers. However, with respect to their ability to critically play with the social structures and conventions that shaped our affinity group, most of them were critical prosumers.

With respect to *Minecraft*, most participants were not critical prosumers because they did not consider themselves as productive agents in social structures. This was exemplified by the way they conceptualized and implemented their ideas. Their mods dealt with individual experiences without realizing or connecting these experiences to larger social norms and expectations that shaped these experiences. As a result, their productions did not challenge any social conventions in ways that a productive agent would have done. For example, Tom and Bob's mods dealt with the issue of an individual person not enjoying *Minecraft*. For Bob, it was his friend that prefers *Naruto*, and for Tom, it was his father who enjoys football. Instead of elevating these personal concerns to a structural level, such as generational, stylistic, or genre differences, their mods remained at the level of personal preferences.



By comparison, I would argue that Ken and Jim were critical prosumers in regards to their critical play of *Minecraft* content. Their rationale for creating mods that were violent in tone was tied to their understanding of social conventions around age and maturity. As a result, their eyebrow raising mods acted as statements responding to and challenging the social conventions that they saw as unjust. As producers of these mods, Ken and Jim were acting as productive agents with the awareness of how their mods would be perceived in the public eye, which was also the reason why they chose the topic.

In terms of playing at the site of production and audiencing, most participants were critical prosumers because they were intentionally creating a discourse around transgressing social conventions through their actions and behaviors. They understood clearly the boundaries set for their actions in our library setting, and yet they were actively reshaping these boundaries as productive agents. Participants knew the way they were supposed to behave around an authoritative figure like myself, but they also recognized their ability to shape their own learning trajectory by formulating arguments against the prescribed syllabus.

### **Object**

In Chapter 2, I described the object of play as the physical embodiment of the rules that govern the way the player plays. In this study, the original video games produced by publishing studios that participants consumed characterized the social structures in which they were situated, while the mods of video games served as the alternative structures they had imagined and created based on their critique of the status quo. Under this formulation, I implied that only the mods that participants created were the object of critical play. However, after the conclusion of our workshops and based on the analysis of participants' critical play described earlier, this narrow understanding of the object of critical play needs to be expanded. In particular, the object

of critical play needs to include not only mods that participants created, but also cultural artifacts and mods created by others that participants consumed and utilized.

In terms of mods the participants created in general, the violent mods that Ken and Jim created exemplified their frustration of being labeled as a child, their aspiration to socialize with other adult players, and their desire to “blow things up” (Ken, personal communication, March 9, 2016). Here, the original vanilla *Minecraft* characterized the social structures that participants were situated in, with creation and non-violent gameplay as the social expectation and boundaries that confined their play experiences. By creating a mod that overwrote *Minecraft*'s narrow gameplay to include guns and armor, Ken and Jim were creating an alternative structure, one that demolished the original content hierarchy between adults and children, for *Minecraft* players to exist in. Dan's petition is an example of a cultural artifact. Through this tool, Dan and others were playing with the formal ban on *Minecraft* that the library issued by creating an official document that challenged the social structures set forth by the ban. This petition described participants' critique of the change in status quo at the library and the ways in which this change is unreasonable and unwelcome, and it created an intervention for the alternative social structures that participants desired.

In terms of mods created by others but consumed by participants, I am referring to the various third-party websites that host alternative versions of *Minecraft* and the various mods that participants got to play by hacking the normative ways to play at the library. Even though the official *Minecraft* was inherently inaccessible in Teen Space, their eagerness to play enabled them to transgress this social convention by seeking out resources online that directed them to accessible and playable modified versions of *Minecraft*, which in turn loosened the library's expectations around *Minecraft* for a period of time. Here, the inaccessible official *Minecraft*

exemplified the social structures with which participants were faced. Their actions to seek out an accessible and modified *Minecraft* created an alternative social structure for them to inhabit and spoke to their critiques of the status quo at the library. At the same time, by hacking my hotspot for the purposes of playing on LAN, participants were transgressing the infrastructural guidelines that exemplified the library's expectations around play. Here, the infrastructural guidelines became the original object of play, and participants' act of hacking ways around it spoke to their critique of the narrowly defined way to play safely in the library.

The key to understanding the object of critical play seemed to be to focus less on the object itself and more on the contextual ways that the object was applied or approached. The object itself does not define whether or not it was a critique of the status quo, as there are no essential qualities that would define it as an alternative social structure. Instead, it is the way the object was approached, used and interpreted by a subject that would characterize it as an object of critical play.

### **Forces of Critical Play**

In Chapter 2, I reviewed past and present play theories, and I asserted that the forces of construction/deconstruction lay at the heart of play. Based on this interpretation, I proposed a three-step iterative and recursive cycle to explain how players transition from construction to deconstruction and back to construction while engaging in critical play. The purpose of this proposition was to help me devise a framework for critical play that engaged both forces of construction and deconstruction to scaffold my curriculum. Thus, the first two sessions of our workshops focused on understanding, the third session focused on critiquing, and the last two sessions focused on modifying.

In theory, the processes of facilitating critical play through transitioning players from understanding, critiquing, and modifying made sense; it helped me see clearly the steps that we needed to take and in what order, which translated into each session having a clear focus. However, in practice, this neatly folded three-step process didn't play out the way I had imagined. Participants did not engage in the process of understanding, critiquing, and modifying *Minecraft* linearly; participants seemed to be understanding, critiquing, and modifying the object and context simultaneously, or at least transitioning back and forth without a clear and prefixed directionality. This observation seemed to be the result of my unintentional assumptions built into the original proposition around the three steps. Specifically, I had separated the content that youths were engaging with, namely social structures, from the technicality of modifications, namely the process of how to create a mod, into the steps of understanding and modifying. And by starting with activities targeted at understanding that worked towards later activities that targeted modifying, I was separating the process of understanding social structures from experimenting with the object of play that exemplified the said social conventions, when in reality the two steps co-existed.

During the first two sessions, most participants struggled to devise concrete examples of the social conventions to which they were conforming. In the third session, they also struggled to produce their own critiques as they were unsure what they could change. Instead, participants seemed to have understood better than myself that they could not imagine what is possible unless they had seen an example or a demonstration of the processes involved. For example, on the very first day, participants asked me to show them how to make a mod. And whenever they noticed example mods installed on the laptops, participants played through them immediately.

However, in the last two sessions I comprehended the importance of engaging participants in the process of modifications as a way to understand social conventions. Participants began to generate many more ideas about how to reconfigure *Minecraft* based on their new understanding of how graphics were designed and designated in *Minecraft* resource packs. They were able to better justify their critiques based on what they realized they could achieve. For example, Tom struggled in the first three sessions to develop an idea for his mod, and he left the third session with a vague idea of changing *Minecraft* into black and white for his mother who experienced motion sickness with video games. After I demonstrated the modification process on the fourth session and he followed along with a few other experiments with Nova Skin Resource Pack Editor, he changed his original idea to a football mod. He realized that he could translate the motion of throwing snowballs in *Minecraft* into the throwing of a football. He was able to understand how *Minecraft* connected arbitrary images with abstract functions through the process of modifying, and he was only able to assign new meanings to these abstract functions that catered to his critique of *Minecraft* after he experienced how mods worked.

Another example of how the process of modifications was integral to participants' understanding of social conventions could be found in Dan's mod. Dan started out wanting to create a *Star Wars* mod but soon ventured off experimenting with different types of modifications, such as modifying particle effects that weren't even part of our original activity. Though the final mod he presented on the last day was only a modge podge of his different experimentations, he disclosed to me in the follow up interview that he was working on an extensive *Minecraft* mod to make objects in the game playable characters. For example, players would be able to command and control the various animals that are currently operated by AI in

*Minecraft*. He considered the fact that only humans were playable characters did not make sense as other animals can also think. His post-workshop endeavors taught me that he could not have critically played with *Minecraft* until he understood how technological boundaries shaped the meaning of the game, which only happened in the midst of or after he had experimented with different modification procedures. In summary, I argue that it is impossible to comprehend abstract social structures embedded in video games without engaging with the technological boundaries of video games. Prosumers can only develop their criticality towards play after experimenting with video games' technological boundaries that exemplify social conventions.

The idea that the ability to understand something is intertwined and co-constituted with the act of making it is not new. Decades ago, Eisner (1972) argued that the practice of making and producing a particular art form for an extended period will allow the practitioner, or artist, to develop her or his aesthetic perception in terms of that art form. Due to the process of cognitive differentiation, she or he will be able to notice and discern others' work in further detail as they have experienced the limitations and affordances of the medium in their own practice. In other words, practitioners can appreciate others' work in its entirety as they have made similar executive decisions in their own practice. In comparison, people who only look and consume others' work cannot understand the various intricacies involved, as they have not cultivated the same sensibilities. Eisner's argument still applies today and to this study, with video game being the medium that exemplified social conventions for players to appreciate and modify.

However, critical media literacy scholars have yet to consider the significance of Eisner's argument in their theorization. Although many critical media literacy scholars have advocated for the inclusion of production in critical media literacy lessons, they did not recognize the value of production in relationship to cultivating students' critical awareness of media (e.g. Kellner &

Share, 2007; Black, 2009; Gainer et al., 2009; Morrell, 2012; Thevenin, 2012; Garcia et al., 2013). Instead, the argument for including media production as a central component of critical media literacy emerged from the hope for students to create alternative media messages that resisted mainstream media representation of problematic and oppressive ideologies. As a result, the production component was often seen as simply technical and procedural, or as a way to get the message out, and it did not directly influence or contribute to students' ability to critique media messages.

Contrary to critical media scholars, I found that producing, or modding, played a central role in helping participants understand the social conventions around play and games, and it was the necessary condition for participants to begin imagining other possible outcomes with the same medium and further develop their critiques accordingly. This finding echoed Buckingham's (2003) argument that "there are certain kinds of understandings that can only be fully achieved through the experience of production" (p. 133); students are able to expand "their capacity to imagine new possibilities" only after they have become "more proficient in technical skills" (p. 182). By "certain kinds of understanding," Buckingham referred to how students might use "media critically and creatively" (p. 176) beyond abstract and distant analysis. By extension, my argument is that a pedagogic/curricular approach to critical play should spend minimal time at the beginning with the process of understanding in the topology of critical play.

The mods that participants produced did contain critiques about their status quo, but those critiques were not the ones I had intended. My initial activities targeted at helping them recognize the social structures they were operating under played little role in soliciting their ideas. In other words, they had already understood various social expectations through their personal experiences, which I could not have provided them through our short time together. Our

workshops simply helped them explicitly name the social conventions they were critiquing, craft their arguments and justifications for these critiques, and translate their various critiques into alternative solutions through prompts and direction. For example, Jim was already sensitive towards the ways his play of *Minecraft* had been labeled as childish, and our activities in the first two sessions contributed little to this understanding. However, through the prompt to devise a justification for his desire to play games that would transition his label from child to adult, he was able to describe the various ways that he saw this label as arbitrary and a form of control. Dan had experienced the ban on *Minecraft* at the library prior to our workshops, and he learned about the concept and process of petitioning outside of my planned activities. However, after our session targeting critiquing what they saw as unjust practices of video game play, or the lack thereof, he was able to use a petition to challenge the ban on *Minecraft* and imagine possible alternative social structures. In summary, minimal time should be spent on the process of understanding when trying to facilitate critical play, as the process alone does not provide the type of experiences that would warrant an internalized critique.

In conclusion, I suggest the following revision to the theoretical and practical components of critical play. Theoretically, the three detailed steps describing the forces of construction and deconstruction must not be understood linearly and exclusively from each other. Instead, the process of understanding, critiquing and modifying operates simultaneously with each component feeding into the others without clear directionality or boundaries. The descriptions of each process are only characteristics that do not essentialize what the process involves. In practice, this translates into devising activities that try to embody all three processes at the same time, or at least recognizing how they interact. In the next iteration of this workshop series, I would include activities that solicit all three steps beginning in the first session, which



would enable youths to experience multiple engagements with understanding, critiquing, and modifying throughout the workshop series.

## **Chapter 6: Conclusion**

This chapter is twofold. In the first section, I begin with a response to the main research question and two supplemental research questions set out for this study. By summarizing the findings in previous chapters, I explain how critical play of video games can be facilitated among youth through technological, conceptual, and positional considerations. In addition, I discuss how the type of affinity group and the process of understanding and modifying contribute to participants' development of critical play. In the second section, I articulate the implications of this study. I argue that a developmental approach toward criticality is required for educators attempting to facilitate critical consciousness among students.

### **Discussion of research question**

#### **Main Research Question: How Can I Facilitate Critical Play of Video Games Among Youths in a Library Setting?**

Several factors influenced my ability to facilitate critical play among youths in a library setting. Besides the importance of intersecting learning with pleasure that has been stressed among various critical media and art educators, there were technological, conceptual, and positional factors at play in this action research. Specifically, the technological capabilities of the facilitator and participants, the moral developmental differences between the facilitator and participants, and the roles that the facilitator and participants played in the pedagogical exchanges were of particular significance. In the following, I discuss these three factors that shaped the outcome of this study.

**Technological.** The first point of contention lay in the technological capabilities of the facilitator and the participants. As an instructor attempting to facilitate the critical playing of video games, my own technological capabilities along with the support I received to implement

such a curriculum largely influenced the outcome of this study. In 2004, Delacruz conducted a study to examine teachers' working conditions in terms of technology use, and she outlined several challenges that teachers faced when attempting to incorporate emerging technologies into classrooms. Though her study was over a decade ago and she was specifically referring to challenges for K-12 teachers, I found two challenges she described particularly applicable to this study. They provided useful connections for me to explain the technological capabilities that I needed as an instructor in order to facilitate critical play of video games among youth.

The first challenge that Delacruz (2004) outlined was the lack of human infrastructural support for teachers when incorporating emerging technologies into classrooms. Though administrative management in schools were deeply invested in the exploration of experimental curriculum with technologies, the lack of human infrastructure to support these types of endeavors in terms of trouble-shooting or maintenance placed teachers in a position with more than they had bargained for; teachers were expected to not only develop curricula that incorporated emerging technologies but also to possess the technological proficiency to resolve any issues related to the computers that they were using. In the case of this study, though the Teen librarians were extremely supportive and excited for the implementation of this game-based pedagogy, they did not possess the technological proficiency to assist me during the development and implementation of my curriculum. Furthermore, as the IT department personnel at the library refused to provide additional assistance to my workshops, I also lacked sufficient human infrastructure support at the site of my "classroom." Though I was able to obtain technical assistance from the University of Illinois to provide and maintain the physical hardware used for this study, at the actual site of the pedagogical exchange I was left to fight on my own. As a result, I took on the role of what Delacruz calls the "techie-teacher" (p. 12) along with my role as

the facilitator. I was not only responsible for the implementation of my curriculum but also in charge of the maintenance and trouble-shooting of the machines that we used to ensure the continuance of our workshops.

Though I was able to overcome the lack of human infrastructure support, I would caution against the normalization of “techie-teachers,” as this practice places tremendous responsibility on teachers. It assumes that teachers will acquire the necessary technological proficiency in their own time. Though I was not particularly technologically savvy in terms of video game development software, due to years of interacting with both Mac OS X and Windows OS I was sufficiently fluent in basic computer literacy. In return, I was able to conceive of this curriculum after further research and exploration of others’ game-based pedagogical approaches. Even under these conditions, I still struggled to implement the curriculum that I had envisioned. Thus, it would be unreasonable to assume that every teacher would possess the necessary technological capabilities to carry out pedagogical experimentation with emerging technologies without proper human infrastructure support, which provides not only technology maintenance and trouble-shooting but also training.

The second challenge has been categorized by Delacruz (2004) as “other disparities” (p. 13). By other disparities, Delacruz was referring to the various contextual factors that shaped the outcome of pedagogical exchanges. For example, “equipment broke down, programs did not work when planned, server networks were down” (p. 13). In my case, these disparities might be contextually specific, but they hint at a larger working reality for many teachers, including myself: technology rarely works. This is not to say that technological devices that we employ pedagogically don’t actually function. Rather, it is that these devices often do not function according to our plans and preparations. As humans we do not think entirely computationally,

and computer machines do not respond according to human intuitions. As a result, this disparity is manifested as a breakdown in human computer communication. In the context of this study, this breakdown happened on multiple occasions. Delacruz did not directly address how teachers have responded to this in the middle of instruction, but I developed my own procedures and pedagogical approach when it happened. At the beginning of our workshops, I placed the pedagogical exchanges between participants and myself on pause while I tried to resolve the breakdown on my own. However, as I realized that this approach was taking away valuable lessons about human computer interaction from participants, I decided to employ collective trouble-shooting. This practice was a shift away from the assumption that pedagogical exchanges only occur in certain planned situations with computer devices working properly, and instead focused on the breakdown itself as an integral part of learning with emerging technologies.

For participants, the shift toward collective trouble-shooting provided them with the opportunity to extend their technological capabilities beyond the simple manipulation of software for achieving a linear outcome. Instead of me Googling remedies to resolve roadblocks, participants were required to partake in the process that methodically identified the issue at hand and to discover possible solutions along with other participants and myself. With each of us having a different working knowledge about how computers worked, our contributions to this process provided a better understanding of the medium we were manipulating. In other words, participants were presented with the need to better comprehend the foundational computer infrastructure that allowed their software to work. They not only had to understand the concepts of file directories, file types, upload, and download, but also to apply these concepts to resolve conflicts along the road to their intended destination. Furthermore, this foundational understanding of the medium was also a key for participants to develop critiques of art works,

namely video game titles, using this medium. I have argued this in the previous chapter, and I reiterate it in the section below on the first supplemental question.

**Conceptual.** The second point of contention lay in the moral developmental differences between the participants and myself. To facilitate the critical playing of video games among youth, I, the facilitator, had to recognize the moral developmental differences between my participants and myself and to develop pedagogical approaches that accommodated participants at their moral developmental levels. As I have described in the previous chapter, in the early planning stages of this action research I failed to separate critiques of certain content from criticality itself. As a result, I superimposed critiques about gender, race, and class about video games from my postconventional understanding of these concepts as an adult from a privileged background onto participants in the preconventional and conventional levels as adolescents with various racial and economic backgrounds. As participants were only beginning to learn and recognize the systematic implications of social conventions around gender, race, and class, they were unable to critically play with video games through these attributes.

However, criticality as theorized in critical play for this study refers to the ability to understand, analyze, reflect, and critique social contexts in search of transformative possibilities (Smyth, 2011). Gender, race, and class are only sets of attributes that can be utilized to understand social contexts, and there exist other sets of attributes that can be applied to critical play. The key to critical play lies in the player being able to recognize the power relationships as manifested through various collective and social attributes. Then, the player may begin to develop transformative possibilities using these attributes beyond the existing status quo, which requires the player to exercise postconventional moral reasoning.

For concepts and attributes for which participants had limited understanding, I did not expect participants to immediately reach a postconventional perspective and to play with them critically through modding. Instead, I focused my pedagogical approach on helping participants identify personal anecdotal experiences in gaming that could be further explained in the frameworks of gender, race, and class. As Williamson (1981) concluded in her study, the purpose of learning about ideological constructs as an analytical exercise is not an end and goal in it of itself. Instead, ideological frameworks are only meaningful and useful to students when being operationalized and utilized by students to interpret their daily experiences. By extending to a systematic interpretation of how these collective attributes applied in our society, participants were at least better situated on a conventional level with these attributes and began to connect their personal experiences with others' struggles. This was important because participants were only able to critically play with these attributes after they had sufficient familiarization with them on a conventional level.

On the other hand, I tried to cultivate and help participants further refine attribute, namely age, that they were already familiar with and would like to transform. In other words, I revised my initial modding agenda to accommodate the emerging agendas that participants were already thinking about from a postconventional level of moral reasoning. Similar to Williamson (1981), I noticed that critical considerations of ideological constructs by participants only emerged when they were actively and consciously caught up in the tension between their personal desires and social expectations. As a facilitator, I recognized and worked with the power dynamics in game titles and learning institutions that participants were struggling with, even though they were not as significant from my point of view. I had to resist interpreting their experiences and ideas for

transformation with attributes with which I was familiar, and I had to develop the sensibilities to the social constructs that they brought to the table.

**Positional.** The last point of contention lay in the roles that the participants and I played in our pedagogical exchanges. In our exchanges, our roles were fluid, and none of us remained in one position, which exemplified a key characteristic of a nurturing affinity group identified by Gee and Hayes (2012). At different points during our workshops we were each consumers, producers, critical prosumers, experts, and novices. The only position that differentiated me from participants was my role as the facilitator. As a facilitator of critical play I had to generate, frame, and scaffold a pedagogical environment so that participants felt comfortable and able to assume the role of consumers, producers, critical prosumers, experts, and novices.

My main challenge as the facilitator was to transition participants who identified strongly as consumers into the role of producers, who contributed their own points of view into creating and modifying what they were used to consuming. Initially, I had thought my main purpose as the facilitator was to initiate critical discussions among participants, who were already producers, in order to help them transition into critical prosumers. However, unlike the youth prosumers studied by Gee (2007), Duncum (2011), Manifold (2012), Steinkuehler and Oh (2012), and Gee and Hayes (2012), participants had not assumed the role of producers of video games or other video game-related cultural artifacts prior to this study. Even though the affinity groups that participants partook demonstrated key features of an affinity group that facilitated participatory practices (Gee & Hayes, 2012), they did not see themselves as contributors to the video game cultures that they were consuming. Instead, they were primarily savvy consumers who were well versed in content produced by other prosumers in various video game affinity groups; consuming was their main form of engagement with these affinity groups.



Therefore, the main threshold I attempted help participants cross was the barrier between consumption and production, which was not only technical but also authorial. Even though participants were well versed in video game cultures, they did not see the value of their expert positions from an educational standpoint. In their study on affinity groups with active participatory practices, Gee and Hayes (2012) stressed the importance of reciprocal roles among participants. The fluidity of positions supposedly leads to participants being able to recognize their value and ability in assisting others', which in turn builds confidence about their technical abilities. At the same time, providing and receiving feedback to and from peers about their prosumer practices enables participants to develop their own authorial position, style, and intent. Thus, I intentionally focused on facilitating reciprocal roles among participants and myself. To do so, I tried to emphasize moments when participants acted as experts, scaffold activities that required their personal input, and reposition myself away from a traditional teacher role.

At the same time, participants associated me with other educational and authoritative figures in other aspects of their lives. They followed my prompts and waited for me to provide content for them to consume. However, this dynamic began to shift as I demonstrated flexibility toward our agenda, interest in emergent ideas, and curiosity about their participation in video game cultures. I wanted to and made it apparent to them that I was interested in pooling their "specialist knowledge" (Gee & Hayes, 2012, p. 138) about what was significant for their learning trajectory. I intentionally provided encouragement to participants when they were transgressing my role as the leader and validated their input about the direction of our endeavors.

Furthermore, by reframing technological breakdown as a shared responsibility and engaging everyone in collective trouble-shooting, participants began to take on the role of, or become, experts. By doing so, I facilitated an environment in which participants did not have to

seek permission to produce. Instead, they were seeking validation and feedback from both each other and myself in their development of authorial intent. They were not only producing mods, but they were also producing an agenda for their own learning trajectory.

### **Supplemental Question 1: How Does the Process of Understanding, Critiquing, and Modifying Contribute to the Development of Critical Play Among Youth?**

In this study, the processes of understanding, critiquing, and modifying each provided a significant function that when taken together allowed participants to play critically. By going through the process of understanding values presented in video games, participants began to name experiences that they found oppressive and problematic through connecting personal narratives with experiences of others with whom they shared similar attributes. Without processing their experiences through the lens of social expectations and conventions that exposed power structures at play, participants would not have been able to identify what it was that they were transgressing. Through the process of modifying, participants not only acquired the necessary tools and skills to mold their play experiences but also attained a comprehensive perspective of how different power structures were exemplified through designed choices. By seeing games as malleable artifacts and themselves as producers of these artifacts, participants were able to develop critiques to their existing play experiences with concrete ideas for attainable changes. Lastly, through critiquing, participants were able to imagine and play around with what alternative structures might look like in terms of their engagement with video games. By practicing voicing their opinions instead of consuming without question, the process of critiquing provided a space for participants to refine their initial perception of injustice into articulated suggestions with foreseeable ways to modify their play experiences.

Each of the processes was essential for participants to play critically. In instances where participants omitted a process, they failed to play critically. For example, most participants not only did not fully understand gender, race, and class as analytical concepts, but they also did not comprehend these attributes as coherent sets of directives guiding their lived experiences. As a result, no one was able to critically play with *Minecraft* through those attributes. Even though Tom and Bob did create a thematic mod, they omitted the step of critiquing that would have helped them articulate their reasoning for transgressing the narrative structures of *Minecraft*. As a result, their mods were not evidence of critical play as they only manifested a personal preference without connections to collective attributes.

It is important to note that participants who played critically did not traverse through the process of understanding, critiquing, and modifying linearly. Instead, participants developed their ability to play critically through traversing back and forth between understanding, critiquing, and modifying. As articulated above, these processes overlap and are dependent on each other. By modifying, participants gained greater understanding of the structure of video games and inspiration for how to modify them. By understanding video games and video game cultures, participants were able to develop a critique and modify their play experiences based on them. By critiquing, participants were able to refine their opinions about how they understood video games and use their ability to modify video games to imagine what alternative play structures looked like for them. Each process fed into another. And participants were not able to play critically by going through each of these processes only once. Instead, they often jumped from one process to another. This finding is particularly significant in this study: the theorization that participants were able to play critically because of their non-linear and non-directional engagement with the processes of understanding, critiquing, and modifying.

## **Supplemental Question 2: How Does Learning in an Affinity Group Influence The Development of Critical Play among Youth?**

Through this study, I came to the conclusion that the development of critical play among youth is not contingent upon just any affinity group. To develop the ability to play critically, youth had to be immersed in an affinity group that focused on transgression as its shared endeavor in order to learn and experiment with the value of breaking and modifying social expectations.

An affinity group provides youths with boundaries and rules of conduct with which to interact (Gee, 2007). It also provides direction for how members are expected and encouraged to interact with their shared video game affinity (Steinkuehler & Oh, 2012). Studies on video game affinity groups have found that responding to, adding to, and remixing of existing video games was a common practice among affinity group members (Gee, 2007; Duncan, 2009; Halverson, 2012; Gee & Hayes, 2012). The prosumerist activities described by these studies allowed players to comment on and shape the discourse about existing video games and video game cultures. By circulating cultural artifacts that they produced, players were interjecting their points of view and imaginations inspired by existing games into the domain of video games and influencing how other players perceived this domain. Their commentary was often celebratory, but at times the cultural artifacts they produced contained critiques (Wu, 2016), which could be interpreted as critical play. In instances where players' prosumerist activities contained critiques of video games and video game cultures, the affinity groups in which they participated were challenged. Fellow players had to learn to respond to these alternative perspectives, which might lead to reshaping the video game culture.

However, I would argue that critical play does not occur organically in all affinity groups. Prior to this study, participants were involved with several different video game affinity groups that contained features supposedly encouraged and facilitated prosumerist activities (Gee & Hayes, 2012) on their own accord. Yet, none of them ever pursued prosumerist activities, let alone played critically. Instead of active prosumers, participants were socialized into sophisticated consumers of video games through their participation in different affinity groups. They became savvy in choosing what video games and groups to engage with based on personal preferences, and they were well versed in the various memes and inside jokes of their groups. In other words, they became familiar with the rules of conduct and the social expectations of participation in these affinity groups, which did not encourage and tolerate extreme transgressive behaviors. Similar to the apprentice in Steinkuehler and Oh's (2012) study, participants in this study were focused on adopting the socially expected ways of interacting with other players in those groups, as opposed to challenging the master's, or the expert's, wisdom about what is right and wrong. Participants were not socialized to think critically about their practices in video games, produce artifacts that reflected their positionality, and share it with a group of people who would benefit from such difference, which is the basis of critical play. If participants disagreed with the affinity group based on the rules of conduct, they simply chose, or consumed, another affinity group that better suited their personal taste.

In this study, an affinity group that consisted of participants and myself was established. In the beginning, I had identified our affinity group as one that created social justice mods for *Minecraft*, and our rules of conduct were oriented toward that endeavor. However, recognizing that participants were not responding to this endeavor in the sense that I presented it and were interacting with me as an authoritative figure, I began encouraging all types of transgression that

participants had shown a tendency toward in the hope of soliciting participants' true opinions. In this process, participants began to develop the ability to argue for what they believed was in their best interests and connect their interests with attributes that were beyond their individual experiences. By setting the tone that I was not an enforcer but actually a challenger of social norms that they usually have to abide by, participants began disclosing to me what they, as middle school students who mostly play video games at the library, perceived as injustice and how they have been transgressing behaviors that were expected of them. Some challenged their label as children, while others challenged the arbitrary library policy as enforced through network infrastructures.

As an affinity group, our shared endeavors became the transgression of oppression that each of us had identified through our play experiences. This echoed Williamson's (1981) argument that critical pedagogy is not about enabling students to deconstruct ideological constructs, such as gender, race, and class. Instead, it is about directing students to question their own premises as individuals caught in crisis and no longer taking their realities for granted. "It hardly matters... *what* you teach, as long as it lead to this questioning [of our own premises]" (p. 83). Clarifying, questioning, and at times resisting norms around play and games became the social expectation for us in our affinity group. And through collective trouble-shooting and dialogue, participants helped each other to either refine their intentions for transgression or overcome technical challenges that prevented transgression. As a result, participants were all transformed into prosumers who were willing and comfortable sharing and creating video games-related artifacts that represented their opinion about this domain, however rudimentary or superficial. Some participants even became critical prosumers, and they were beginning to play with *Minecraft* critically. They were able to see the game as a complicated system related to the

society at large with values and rules, and they intentionally modified the given system to address the experiences they desired. Seeing that participants were not even developing their own voice through their general affinity group participation, I argue that critical play could only arise out of a particular type of affinity group. Only an affinity group that encouraged the transgression of social norms and expectations around play seemed to provide the necessary conditions for critical play to emerge and develop.

### **Revisions to the Minecraft Modification Workshops**

As action research methodology suggests, a reflexive teaching practice involves a spiral process. This means that each teaching moment provides an opportunity for the practitioner to reflect on the experience for ways to improve and imagine revisions to the ways in which he or she teaches. As the last iteration of the spiral process in this action research, I provide a list of revisions to the Minecraft Modification Workshops for future iterations of this curriculum and research. Specifically, based on the findings of this study and for the purpose of facilitating critical play, I would suggest the following revisions to the ways in which the Minecraft Modification Workshops was designed, structured, and carried out.

First of all, I would suggest moving away from designing the curriculum based on separating the process of understanding, critiquing, and modifying. Instead, the curriculum should focus on scaffolding activities that involve at least two of these processes throughout the curriculum. In this action research, I found that participants began to develop further understandings of the technological boundaries that shaped Minecraft and critiques of these limitations once they began their production of modifying Minecraft. However, as the process of modifying was only emphasized during the last two weeks, they were unable to investigate further these limitations and to refine their critiques of Minecraft as it relates to these limitations.

The result of this action research allowed me to further theorize the interconnectedness of the various processes in the topology of critical play, which led to this suggestion for future iterations. In practice, this might include activities on the first day that engage participants in downloading, installing, and playing various mods created by others, which would involve the process of critique and understanding. After playing as the default character of various games, another possible example would be a skin production activity where participants are prompted to design an alternative avatar that is the complete opposite from existing avatars. This would engineer an opportunity for participants to observe on their own the various similarities between default characters, instead of consuming these comparisons made by others in a critique video format. The key lies in imagining and designing activities that would engage participants in the process of understanding, critiquing, and modifying simultaneously.

Second, I would suggest including other forms of production, besides modifying video games, to the curriculum. These productions should be geared towards what other prosumers have been producing in their respective affinity groups to which participants are a part. The reason for this suggestion lies in the discovery that most participants were only engaging in consumption through their leisurely play with affinity groups. As they had yet to transition into prosumers, it was even more difficult to transition them into critical prosumers. Given this understanding, I argue that it is of particular significance to include production activities that require a lower threshold of technological and conceptual sophistication for participants. This would provide them with the opportunity to transition into the role of prosumers without the fear of their capabilities to manipulate video games and the pressure of justifying each and every design choice with a critique. In practice, this translates into activities that involve participants commenting and providing feedback on their favorite YouTube videos, participants producing



and sharing simple play through videos of their favorite games, and participants contributing their personal play experiences to the wiki pages of various games. The key lies in structuring activities that emphasize participants' outputs in ways that is legible to other prosumers and comparable with other prosumer activities with which they are familiar.

Third, I would suggest structuring opportunities for the facilitator to gather more information about participants' personal experiences and so that participants could interpret their personal experiences in relationship to their analytical attributes, both during the workshops and outside of the workshops. Furthermore, an emergent curriculum needs to start with and be based on the particular lenses that participants shared. This suggestion comes from the understanding that criticality is separate from critical content. It is impossible to play criticality unless the critical content provided in the curriculum is aligned with participants' personal experiences. Thus, to develop participants' criticality the curriculum needs to reflect and move forward from how participants interpret their lived experiences. In the case of this study, I failed to identify the moral developmental differences about various social attributes between participants and myself, which resulted in a curriculum that attempted to impose onto participants content that I considered critical. Instead of focusing on the portrayal of femininity in video games, I should have revised my curriculum to focus on the masculine forms of play that participants have yet to name but were beginning to be socialized into. In future iterations, I would like to include a survey component where participants would document how they reflected on their lived experiences through the lens of various social attributes prior to the start of the workshops. Furthermore, I would design the curriculum based on participants' composition and survey results. At the same time, I would continue with the interview process with participants where they reflect on their participation throughout the workshops, similar to what I have done here but

expand it to include all participants. The key lies in carrying out the workshops in ways that reflect participants' personal experiences and how they interpret their realities currently.

Last but not least, I would suggest extending the length of the workshop program. In this action research, it was not until the third session that participants began transgressing my role as the teacher facilitator and sharing with me their various transgressive behaviors, which indicated an understanding of our shared affinity towards transgressing social norms. And it was not until the fourth and fifth sessions that most participants began commanding their role as prosumers and a few participants began to demonstrate characteristics of thinking as a critical prosumers. While part of this outcome might have resulted from the ways in which various processes were structured throughout the curriculum, time for participants to develop trust with each other and myself was still a major factor. Given this understanding, I would suggest extending the workshop program by at least two more sessions to account for the time that participants took to become acclimated with each other, myself, and the setting.

### **Implications of this Study**

For art educators and educators in general attempting to facilitate and raise critical consciousness among students, this study implies the need to consider criticality through a developmental lens. In practice, this translates into interpreting and providing students with developmentally appropriate critical discourses. By developmentally appropriate, I mean analytical frameworks of attributes that align with students' personal experiences. Only then will students be able to operate with these attributes on a postconventional level and practice their own criticality.

Many art educators and critical media educators that strive to facilitate and raise critical consciousness about media among students have faced a dilemma. The dilemma is whether or

not it is possible to solicit criticality among students through pedagogical exchanges (Buckingham, 2003; Herrmann, 2005; Sefton-Green, 2006; Duncum, 2009; Gainer et al., 2009). This dilemma was captured in the classrooms of Williamson (1981) and Turnbull (1998). Williamson (1981) noticed a discrepancy between “analytical knowledge” and “personal experience” (p. 80), where critical discourse operated purely as an analytical exercise for privileged students. Students who had personal experiences with the subject being critiqued, on the other hand, were silenced by the critical discourse that was meant to liberate them. Turnbull (1998) echoed this complexity of criticality. She described how ethnic minority students in her classroom transgressed their own cultural oppressions at home that were considered problematic in Feminist discourses.

The dilemma of teaching criticality arises because criticality does not manifest in the same way for individuals occupying different positionalities (Buckingham, 2003). At the same time, the leftist teacher’s pedagogical desire to liberate students from oppressive social structures is trapped in the very same social structures, namely engineered and established educational encounters, that they wish to educate students to dismantle. As a result, students usually respond in one of two ways. One, students acquire the “critical discourse” (p. 325) preached by the teacher that allows students to embody the “political correctness” (p. 319) of teachers, which marginalizes the pleasures students’ derive from consuming and engaging with cultural artifacts. In this instance, it is unclear whether students actually develop their own critical consciousness or if they are simply parroting back what they imagine the teacher wants to hear. Two, students reject the critical discourse imposed upon them as they see it as the propaganda of authoritative educational institutions that misalign with their own realities. In this instance, it is unclear

whether students are actually submitting to their own oppression or they possess a critical consciousness that allows them to discern for themselves what they believe in.

In response to the dilemma of teaching criticality when criticality is manifested in complex ways, Tavin (2014) and Kline (2016) argued for the abandonment of criticality as the lens and pathway to liberation. Echoing Williamson's (1981) observation that critical discourse became a marker of distinction among students, Kline (2016) argued that "traditional resistance offered by critical media literacy and other similar pedagogical projects is inefficacious" because these efforts "are transformed into signs to be consumed in late capitalism and are thus neutralized" (p. 642). Instead of offering other pathways, Kline was pessimistic of any chance at liberation from cultural hegemony and simply advocated for the abandonment of critical media literacy altogether. Tavin (2014), on the other hand, argued that art educators teaching students to be critical and uncover the hidden messages of visual culture was driven by a "will to see" (p. 438). This "will to see" was part of the legacy of enlightenment, which assumed the value of knowledge acquired through analysis, reason, and rationality. By trying to see through rationality, educators and students will never be able to uncover the unseen that is driven by irrationality and that truly needs to be seen. Instead, Tavin argued for embracing stupidity as the way to approach "formations of the unconscious as headless pieces of knowledge, disruptive eruptions of meaninglessness against the comfortable backdrop of established reason" (Nobus & Quinn, 2005, p. 4, as cited in Tavin, 2014, p. 439). In summary, both Tavin (2014) and Kline (2016) believed that it is impossible to dismantle the master's house, namely capitalism and cultural hegemony, with the master's tools, namely criticality and rationality. Instead, they argued for embracing stupidity and irrationality as the new frontier for educators.

However, I am skeptical of the argument that teaching criticality is a lost cause and

embracing stupidity is the only alternative. For one, stupidity and irrationality seem reasonable in theory, but what would that look like in practice? For another, how would students benefit from this radical alternative that disregards existing social structures altogether when the reality is that students are still and will continue to be living in the master's house? This position seems to reject society and all established social conventions completely, which offers little for students living with, and enjoy consuming, social conventions via popular media.

Instead, I argue that the dilemma that educators face when teaching criticality through media can be addressed and accommodated by considering criticality developmentally. The idea of interpreting an individual's learning trajectory through a staged developmental lens is not new. As I have articulated in the previous chapter, many educational theories have been established, and empirical studies have been conducted to explain individuals' progression in terms of how they perceive and carry themselves in relationship to other people or objects.

Even though staged developmental approaches to learning are not new, critical media educators and art educators teaching criticality have yet to consider students' development in terms of the social conventions in which critical discourse operates. In this study, I argue that the dilemma of trying to teach criticality for me was derived from a failure to distinguish criticality from critical discourse. Criticality is complex in the sense that it manifests differently for actors in various positionalities. In return, there is no critical discourse that could represent the critical consciousness of everyone.

Using Kohlberg's (1984) theory on moral development, I was able to explain why criticality looked different between participants and myself based on the critical discourses that we were able to command. Participants were not able to connect with critiques about video game cultures on the basis of gender, race, and class because their analytical knowledge of these

attributes did not align with how they interpreted their personal experiences currently. Furthermore, I failed to help them connect their personal experiences with these analytical attributes, which would have positioned them on the conventional level that may lead to a postconventional understanding about these ideological constructs. On the other hand, participants had already reached a postconventional level of understanding about their label as children, and they were able to connect to a critical discourse around age as their personal experiences were aligned with their analytical knowledge about this attribute. Thus, I am still hopeful and believe it is possible to teach criticality. Based on this study, the key to comprehending and addressing the complex ways that criticality manifests in pedagogical exchanges is by considering the distance between students' personal experiences and analytical knowledge.

### **Contributions of this Study**

In conclusion, I summarize six contributions of this study.

First, this study challenged the ideal learning trajectory about players engaging with video game cultures assumed by scholars in the field of Games and Learning. With evidence on the lack of prosumer practices among my participants prior to this study, I rejected the argument that players would naturally engage in participatory practices through their involvement with affinity groups.

Second, I expanded Flanagan's (2009) theory on critical play by developing and revising the theory of critical play as a pedagogical framework for critical pedagogues utilizing game-based pedagogies in various disciplines.

Third, I confirmed the significance of production in understanding socio-cultural contexts as articulated by Buckingham (2003) and Eisner (1972). Furthermore, by analyzing this

argument in dialogue with studies in critical media literacy, I expanded critical media scholars' argument about production. Here, the purpose for engaging students in media production was no longer simply as a means to the end of creating and circulating alternative messages.

Fourth, I confirmed the complexity of teaching criticality as articulated by Williamson (1981), Turnbull (1998), and Buckingham (2003) with this study on a specific medium: video game. They argued that criticality is positionally specific and what it means to be critical is dependent upon an individual's intersecting social identity formation. In the context of teaching criticality, this means that the goal of critical pedagogues should be to identify the personal experiences of specific students and provide them with analytical concepts that are useful and connected to their specific experiences.

Fifth, I explored the possibility of analyzing youths' lack of critical engagement with certain analytical concepts from a moral developmental perspective. Previously, art education and critical media literacy discourses had focused on analyzing the difficulties of teaching criticality through the lens of pleasure. The main argument was that students were rejecting to critically engage with their favorite popular media artifacts because the critical pedagogical approaches utilized failed to take into account the pleasures that students derived from consumption. This dissertation analyzed and explained the same dilemma experienced by other critical pedagogues from a developmental lens.

Last but not least, I briefly explored collective trouble-shooting as a pedagogical approach for digital literacy. The practice of collective trouble-shooting also held implications for digital media educators bombarded with the responsibility of maintaining technologies and adapting to their evolutions. I am interested in further exploring this line of inquiry in my future research.

## References

- About Feminist Frequency. (n.d.). Retrieved from <https://feministfrequency.com/about/>
- Abt, C. (1970). *Serious games*. New York, NY: Viking Press.
- Alexander, A., & Ho, T. (2015). Gaming worlds: Secondary students creating an interactive video game. *Art Education*, 68(1), 28-36.
- Allen, F. (2011). *Education: Documents of contemporary art*. London, England: Whitechapel Gallery/MIT Press.
- Alvermann, D. E., Moon, J. S., & Hagood, M. C. (1999). *Popular culture in the classroom: Teaching and researching critical media literacy*. Newark, DE: International Reading Association and the National Reading Conference.
- Alvermann, D. E., & Hagood, M. C. (2000). Critical media literacy: Research, theory, and practice in "New Times". *The Journal of educational research*, 93(3), 193-205.
- Alvermann, D. E., & Hagood, M. C. (2000). Fandom and critical media literacy. *Journal of Adolescent & Adult Literacy*, 43(5), 436-446.
- Barthes, R. (1982). *Camera Lucida: Reflections on photography*, translated by R. Howard. London: Jonathan Cape.
- Berlak, H. (1985). Testing in a democracy. *Educational Leadership*, 43(2), 16-17.
- Black, R. W. (2009). Online fan fiction and critical media literacy. *Journal of Computing in Teacher Education*, 26(2), 75-80.
- Bogost, I. (2011). *How to do things with video games* (Vol. 38). Twin Cities, MN: University of Minnesota Press.
- Boyle, A. (2007, March 18). Mind game enlivens students across U.S. *The Daily Nebraskan*. Retrieved from <http://www.dailynebraskan.com/mind-game-enlivens-students-across-u->



[s/article\\_8770c834-d289-52d5-a6c8-b6fac8c98263.html](https://doi.org/10.1080/00131644.2013.877083)

- Buckingham, D. (2003). Media education and the end of the critical consumer. *Harvard Educational Review*, 73(3), 309-327.
- Buckingham, D. (2003). *Media education: Literacy, learning and contemporary culture*. Malden, MA: Polity Press.
- Bulut, E. (2013). Seeing and playing as labor: Toward a visual materialist pedagogy of video games through Walter Benjamin. *Review of Education, Pedagogy, and Cultural Studies*, 35(5), 408-425.
- Caillois, R. (1961). *Man, play, and games*. New York, NY: The Free Press of Glencoe.
- Chien, M. (2012). *Digital media's transformative role in education: Beyond potential to essential*. (Order No. 3549740, University of Denver). *ProQuest Dissertations and Theses*, 401. Retrieved from <http://search.proquest.com/docview/1284157134?accountid=14553>. (1284157134).
- Coleman, S., & Dyer-Witheford, N. (2007). Playing on the digital commons. *Media, Culture & Society* 29, 934-953.
- Collins, P. H. (2015). Intersectionality's definitional dilemmas. *Annual Review of Sociology*, 41, 1-20.
- Cover, R. (2008). Gaming (Ad)diction: Discourse, identity, time and play in the production of the gamer addiction myth. *Game Studies*, 6(1). Retrieved from <http://gamestudies.org/0601/articles/cover>
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Crogan, P. (2011). From the military-industrial to the military-entertainment complex. *Gameplay*

*mode: War, simulation, and technoculture*. Minneapolis, MN: University of Minnesota Press.

Context. (n.d.). In Merriam-Webster Dictionary. Retrieved from <https://www.merriam-webster.com/dictionary/context>

Costikyan, G. (2002, June). *I have no words & I must design: Toward a critical vocabulary for games*. Paper presented at Computer Games and Digital Cultures Conference, Tampere. Tampere, Finland: Tampere University.

Crawford, C. (1982). *The art of computer game design*. Retrieved from [http://www-rohan.sdsu.edu/~stewart/cs583/ACGD\\_ArtComputerGameDesign\\_ChrisCrawford\\_1982.pdf](http://www-rohan.sdsu.edu/~stewart/cs583/ACGD_ArtComputerGameDesign_ChrisCrawford_1982.pdf)

Czitrom, D. J. (1982). *Media and the American Mind: From Morse to McLuhan*. Chapel Hill, NC: University of North Carolina Press.

Delacruz, E. (2004). Teachers' working conditions and the unmet promise of technology. *Studies in Art Education*, 46(1), 6-19.

Dewey, J. (1938/1997). *Experience & education*. New York, NY: Touchstone

Dickie, G. (1997). *Introduction to Aesthetics: An analytical approach*. New York, NY: Oxford University Press.

Directory definition. (2006). In The Linux Information Project. Retrieved from <http://www.linfo.org/directory.html>

Donahue, G. A. (2011). *Network warrior* (2nd ed.). Sebastopol, CA: O'Reilly Media, Inc..

Duncan, S. C. (2009). *Gamers as designers: Online communities as informal design spaces for learning and literacy*. (Order No. 3400040, The University of Wisconsin - Madison). *ProQuest Dissertations and Theses*, 262. Retrieved from

- <http://search.proquest.com/docview/305034131?accountid=14553>. (305034131).
- Duncum, P. (1988). To copy or not to copy: A review. *Studies in Art Education*, 29(4), 203-210.
- Duncum, P. (1999). A case for an art education of everyday aesthetic experiences. *Studies in Art Education*, 40(4), 295-311.
- Duncum, P. (1999). A multiple pathways/multiple endpoints model of graphic development. *Visual Arts Research*, 25(2), 38-47.
- Duncum, P. (1999). Primary art pedagogy: Everything a primary generalist teacher needs to know. *Australian Art Education*, 21(3), 15-23.
- Duncum, P. (2003). Instructional resources: Visual culture in the classroom. *Art Education*, 56(2), 25-32.
- Duncum, P. (2004). Visual culture isn't just visual: Multiliteracy, multimodality and meaning. *Studies in Art Education*, 45(3), 252-264.
- Duncum, P. (2009). Toward a playful pedagogy: Popular culture and the pleasures of transgression. *Studies in Art Education*, 50(3), 232-244.
- Duncum, P. (2011). Youth on YouTube: Prosumers in a peer-to-peer participatory culture. *The International Journal of Arts Education*, 9(2), 24-39.
- Duncum, P. (2015). A journey toward an art education for wired youth. *Studies in Art Education*, 56(4), 295-306.
- Dyer-Witheford, N., & de Peuter, G. (2009). *Games of Empire: Global capitalism and video games*. Minneapolis, MN: University of Minnesota.
- Eisner, E. (1972). *Educating artistic vision*. New York, NY: MacMillan Publishing Co. Inc.
- Estellés-Arolas, E., & González-Ladrón-De-Guevara, F. (2012). Towards an integrated crowdsourcing definition. *Journal of Information Science*, 38(2), 189-200.

- Evans, J. & Pellegrini, A. (1997). Surplus energy theory: An enduring but inadequate justification for school break-time. *Educational Review*, 49(3), pp. 229-236.
- Feldman, D. H. (1994). *Beyond universals in cognitive development* (2<sup>nd</sup> ed.). Norwood, NJ: Ablex Publishing.
- Flanagan, M. (2009). *Critical play: Radical game design*. Cambridge, MA: The MIT Press.
- Freedman, K. (2003). The importance of student artistic production to teaching visual culture. *Art Education*, 56(2), 38-43.
- Freedman, K., Kallio-Tavin, M., Karpati, A., & Papp, L. (2013). Visual culture learning communities: How and what students come to know in informal art groups. *Studies in Art Education*, 54(2), 103-115.
- Freire, P. (2000). *Pedagogy of the oppressed*. New York, NY: Bloomsbury Publishing.
- Freud, S. (1920/2010). *Beyond the pleasure principle*. Seattle, WA: Pacific Publishing Studio.
- Frey, L., Botan, C., & Kreps, G. (1999). *Investigating communication: An introduction to research methods*. (2nd ed.). Boston, MA: Allyn & Bacon.
- Fuchs, C. (2012). Towards Marxian Internet Studies. *TripleC: Journal for a Global Sustainable Information Society*, 10(2), 392-412.
- Gainer, J. (2007). Social critique and pleasure: Critical media literacy with popular culture texts. *Language Arts*, 85(2), 106-111.
- Gainer, J. S., Valdez-Gainer, N., & Kinard, T. (2009). The Elementary Bubble Project: Exploring critical media literacy in a fourth-grade classroom. *The Reading Teacher*, 62(8), 674-683.
- Gainer, J. S. (2010). Critical media literacy in middle school: Exploring the politics of representation. *Journal of Adolescent & Adult Literacy*, 53(5), 364-373.

- Garcia, A., Seglem, R., & Share, J. (2013). Transforming teaching and learning through critical media literacy pedagogy. *Learning landscapes*, 6(2), 109-124.
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York, NY: Basic Books.
- Gee, J. P. (2007). *What video games have to teach us about learning and literacy*. New York, NY: Palgrave Macmillan.
- Gee, J. P., & Hayes, E. (2012). Nurturing affinity spaces and game-based learning. In C. Steinkuehler, K. Squire & S. Barab (Eds.), *Games, learning, and society: Learning and meaning in the digital age* (pp. 129-153). New York, NY: Cambridge University Press.
- Gee, O. (2013, January 9). Swedish school makes *Minecraft* a must. *The Local: Sweden's news in English*. Retrieved from <http://www.thelocal.se/20130109/45514>
- Ghast. (n.d.). In Official *Minecraft* Wiki. Retrieved November 12, 2016, from <http://minecraft.gamepedia.com/Ghast>
- Gill, D. V. (2009). Usefulness of video game experience for students learning and creating digital 3-D. *Visual Arts Research*, 35(2), 109-121.
- Gilligan, C., & Murphy, J. M. (1979). Development from adolescence to adulthood: The philosopher and the dilemma of the fact. *New Directions for Child and Adolescent Development*, 1979(5), 85-99.
- Gilligan, C. (1982). *In a different voice*. Cambridge, MA: Harvard University Press.
- Gramsci, A. (1971). *Selections from the prison notebooks* (Q. Hoare & G. N. Smith, Trans.). New York, NY: International Publishers.
- Graphical user interface. (n.d.). In Merriam-Webster. Retrieved from <https://www.merriam-webster.com/dictionary/graphical%20user%20interface>
- Groos, K. (1898). *The play of animals*. New York, NY: D. Appleton and Company.

- Habermas, J. (2015). *Communication and the evolution of society*. New York, NY: John Wiley & Sons.
- Halverson, E. (2012). Participatory media spaces: A design perspective on learning with media and technology in the twenty-first century. In C. Steinkuehler, K. Squire & S. Barab (Eds.), *Games, learning, and society: Learning and meaning in the digital age* (pp. 244-268). New York, NY: Cambridge University Press.
- Hardt, M., & Negri, A. (2000). *Empire*. Cambridge, MA: Harvard University Press.
- Harris, J. (2007, September 26). Game design essentials: 20 open world games. *Gamasutra*.  
Retrieved from  
[http://www.gamasutra.com/view/feature/130319/game\\_design\\_essentials\\_20\\_open\\_php](http://www.gamasutra.com/view/feature/130319/game_design_essentials_20_open_php)
- Hayes, E. R., & Duncan, S. C. (2012). *Learning in video game Affinity Spaces*. New York, NY: Peter Lang New York.
- Henricks, T. S. (2006). *Play reconsidered: Sociological perspectives on human expression*. Champaign, IL: University of Illinois Press.
- Henricks, T. S. (2015). *Play and the human condition*. Champaign, IL: University of Illinois Press.
- Herrmann, R. (2005). The disconnect between theory and practice in a visual culture approach to art education. *Art Education*, 58(6), 41-46.
- Hetrick, L. J. (2013). My desire for art education. *Studies in Art Education*, 54(3), 273-276.
- Hill, S., Abercrombie, N., & Turner, B. (2000). *The Penguin dictionary of sociology*. New York, NY: Penguin.
- Huizinga, J. (1950/1955). *Homo ludens: A study of the play element in culture*. Boston, MA: The Beacon Press.

- Hutchison, D. (2007). Video games and the pedagogy of place. *The Social Studies*, 98(1), 35-40.
- Illingworth, V. (1997). Dictionary of computing. Oxford University Press, Inc..
- Inhelder, B., & Piaget, J. (1959/1964) *The early growth of logic in the child: Classification and seriation*. (E. A. Lunzer and D. Papert, Trans.) London, UK: Routledge and Kegan Paul.
- Ito, M., Baumer, S., Bittanti, M., Boyd, D., Cody, R., Herr-Stephenson, B., & Horst, H. (2009). *Hanging out, messing around, geeking out: Living and learning with new media*. Cambridge, MA: MIT Press.
- Lowenfeld, V. (1957). *Creative and mental growth* (pp. 12-27). New York: Macmillan.
- Jackson, J. (2009). Game-based teaching: What educators can learn from videogames. *Teaching Education*, 20(3), 291-304.
- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York, NY: New York University Press.
- Jenkins, H., Purushotma, R., Weigel, M., Clinton, K., & Robison, A. J. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. Cambridge, MA: MIT Press.
- Keifer-Boyd, K., Amburgy, P. M., & Knight, W. B. (2007). Unpacking privilege: Memory, culture, gender, race, and power in visual culture. *Art Education*, 60(3), 19-24.
- Kellner, D., & Share, J. (2005). Toward critical media literacy: Core concepts, debates, organizations, and policy. *Discourse: studies in the cultural politics of education*, 26(3), 369-386.
- Kellner, D., & Share, J. (2007). Critical media literacy is not an option. *Learning Inquiry*, 1(1), 59-69.
- Kendall, D. (2012). *Sociology in our times*. Belmont, CA: Wadsworth Cengage Learning.

- Kesler, T., Tinio, P. P., & Nolan, B. T. (2016). What's our position? A critical media literacy study of popular culture websites with eighth-grade special education Students. *Reading & Writing Quarterly*, 32(1), 1-26.
- Kline, K. (2016). Jean Baudrillard and the limits of critical media literacy. *Educational theory*, 66(5), 641-656.
- Kohlberg, L., Levine, C., & Hewer, A. (1983). *Moral stages: A current formulation and a response to critics*. New York, NY: Karger.
- Kohlberg, L. (1981). *Essays on moral development: The philosophy of moral development* (Vol. 1). New York, NY: Harper & Row.
- Kohlberg, L. (1984). *Essays on moral development: The psychology of moral development* (Vol. 2). New York, NY: Harper & Row.
- Kücklich, J. (2005). Precarious playbour: Modders and the digital game industry. *Fiberculture Journal*, 5. Retrieved from <http://five.fibreculturejournal.org/fcj-025-precarious-playbour-modders-and-the-digital-games-industry/>
- Laughter, J. (2015). ELA teacher preparation 2.0: Critical media literacy, action research, and mashups. *Contemporary Issues in Technology and Teacher Education*, 15(3), 265-282.
- Manifold, M. C. (2012). From amateur to framauteur: Art development of adolescents and young adults within an interest-based community. *Studies in Art Education*, 54(1), 37-53.
- Masterman, L. (1990). *Teaching the media*. New York, NY: Routledge.
- Marino, M. T., & Hayes, M. T. (2012). Promoting inclusive education, civic scientific literacy, and global citizenship with videogames. *Cultural Studies of Science Education*, 7(4), 945-954.



Mechanism. (n.d.). In Merriam-Webster Dictionary. Retrieved from <https://www.merriam-webster.com/dictionary/mechanism>

*Minecraft* Wiki: Resource pack. (n.d.). Retrieved from [http://minecraft.gamepedia.com/Resource\\_pack](http://minecraft.gamepedia.com/Resource_pack)

*Minecraft* Wiki: Resource pack. (n.d.). Retrieved from <http://minecraft.gamepedia.com/Skin>

Morrell, E. (2012). 21st - Century Literacies, Critical Media Pedagogies, and Language Arts. *The Reading Teacher*, 66(4), 300-302.

Muñoz, Y. J., & El-Hani, C. N. (2012). The student with a thousand faces: from the ethics in video games to becoming a citizen. *Cultural Studies of Science Education*, 7(4), 909-943.

Muros, B., Aragón, Y., & Bustos, A. (2013). Youth's usage of leisure time with video games and social networks. *Communicar*, 20(40), 31-39.

McChesney, R. (2013). *Digital Disconnect: How Capitalism is Turning the Internet Against Democracy*. New York, NY: New Press.

McGonigal, J. (2011). *Reality is broken: Why games make up better and how they can change the world*. New York, NY: Penguin Group.

McLaren, P. (2007). *Life in schools: An introduction to critical pedagogy in the foundations of education (5<sup>th</sup> ed.)*. Boston, MA: Pearson Education, Inc..

McPherson, T. (2012). Why are the digital humanities so White? In M. K. Gold (Ed.), *Debates in the digital humanities*. Minneapolis, MN: University of Minnesota Press.

Michael, D. R., & Chen, S. L. (2005). *Serious games: Games that educate, train, and inform*. New Dehli, India: Muska & Lipman/Premier-Trade.

Nakamura, L. (2000). Race in/for cyberspace: Identity tourism and racial passing on the Internet.

- In D. Bell (Ed.), *The cybercultures reader* (pp. 712-720). New York, NY: Routledge.
- Nakamura, L. (2008). *Digitizing race: Visual cultures of the Internet*. Minneapolis, MN: University of Minnesota Press.
- Object. (n.d.). In Merriam-Webster Dictionary. Retrieved from <https://www.merriam-webster.com/dictionary/object>
- Overby, A., & Jones, B. L. (2015). Virtual Legos: Incorporating *Minecraft* into the art education curriculum. *Art Education*, 68(1), 21-27.
- Parks, N. S. (2008). Video games as reconstructionist sites of learning in art education. *Studies in Art Education*, 49(3), 235-250.
- Parlett, D. (1999). *The Oxford history of board games*. Oxford, UK: Oxford University Press.
- Parsons, M. (1987). *How we understand art: A cognitive developmental account of aesthetic experience* (pp. 20-26). Cambridge, NY: Cambridge University Press.
- Parsons, M. (2003). Endpoints, repertoires, and toolboxes: Development in art as the acquisition of tools. *The International Journal of Arts Education*, 1(1), 67-82.
- Patton, R., & Kenyon, M. (2010). Physical computing and video game art education. In R. W. Sweeny (Ed.), *Inter/Actions/Inter/Sections* (pp. 190-196). Reston, VA: National Art Education Association.
- Patton, R. M. (2011). *Games as artistic medium: Interfacing complexity theory in game-based art pedagogy*. (Order No. 3483732, The Pennsylvania State University). *ProQuest Dissertations and Theses*, 258. Retrieved from <http://search.proquest.com/docview/902629696?accountid=14553>. (902629696).
- Patton, R. M. (2013). Games as an artistic medium: Investigating complexity thinking in game-based art pedagogy. *Studies in Art Education*, 55(1), 35-50.

- Piaget, J. (1962). *Play, dreams and imitation in childhood*. New York, NY: W. W. Norton & Company.
- Plencner, A. (2014). Critical Thinking and the Challenges of Internet. *Communication Today*, (2), 4-19.
- Postman, N. (1985). *Amusing ourselves to death*. New York, NY: Penguin Group.
- Postman, N. (1993). *Technopoly: The surrender of culture to technology*. New York, NY: Vintage Books.
- Praiser, D. A. (1980). Copying the “+1” phenomenon: How do children benefit from copying adult work? *Canadian Society for Education through Art Annual Journal*, (11), 31-35.
- Puchner, L., Markowitz, L., & Hedley, M. (2015). Critical media literacy and gender: Teaching middle school students about gender stereotypes and occupations. *Journal of Media Literacy Education*, 7(2), 23-34.
- Pulos, A. (2013). *Farming and fighting as practice and pedagogy: A procedural field analysis of digital games*. (Order No. 3604575, The University of New Mexico). *ProQuest Dissertations and Theses*, 251. Retrieved from <http://search.proquest.com/docview/1475247132?accountid=14553>. (1475247132).
- Resnick, M. (2007). Sowing seeds to a more creative society. *International Society for Technology in Education*, December/January, 18-22.
- Rodesiler, L. (2010). Empowering students through critical media literacy: This means war. *The Clearing House*, 83(5), 164-167.
- Rose, G. (2012). *Visual methodologies: An introduction to researching with visual materials*. London, England: SAGE.
- Rubin, V. L., & Camm, S. C. (2013). Deception in video games: Examining varieties of grieving.

*Online Information Review*, 37(3), 369-387.

Salen, K. & Zimmerman, E. (2004). *Rules of play: Game design fundamentals*. Cambridge, MA: The MIT Press.

Sanford, K., & Madill, L. (2007). Understanding the power of new literacies through video game play and design. *Canadian Journal of Education*, 30(2), 432-455.

Scharrer, E. (2005). Sixth graders take on television: Media literacy and critical attitudes of television violence. *Communication Research Reports*, 22(4), 325-333.

Schiller, N. (2008). A portal to student learning: What instruction librarians can learn from video game design. *Reference Services Review*, 36(4), 351-365. Retrieved from <https://research.wsulibs.wsu.edu:8443/xmlui/bitstream/handle/2376/1468/PortaltoStudentLearning.pdf?sequence=1>

Schmier, S. (2014). Popular culture in a digital media studies classroom. *Literacy*, 48(1), 39-46.

Schulzke, M. (2012). Using video games to think about distributive justice. *Journal of Interactive Technology and Pedagogy*(2). Retrieved from <http://jitp.commons.gc.cuny.edu/using-video-games-to-think-about-distributive-justice/>

Schweder, R. (1982). Review of Lawrence Kohlberg's essays in moral development. *Contemporary Psychology*, June, 421-424.

Sefton-Green, J. (2006). Chapter 8 youth, technology, and media cultures. *Review of Research in Education*, 30(1), 279-306.

Shaw, A. (2010). What is video game culture? Cultural studies and game studies. *Games and Culture*, 5(4), pp. 403-424.

Sicart, M. (2014). *Play Matters*. Cambridge, MA: The MIT Press.

Siegler, R. (2006). *How children develop, exploring child develop student media took kit +*

- scientific American reader to accompany how children develop*. New York, NY: Worth Publishers.
- Simpson, E. L. (1974). Moral development research. *Human development*, 17(2), 81-106.
- Smyth, J. (2011). *Critical pedagogy for social justice*. New York, NY: Continuum International Publishing Group.
- Sperry, C. (2012). Teaching critical thinking through media literacy. *Science Scope*, 35(9), 56-60.
- Squire, K. (2011). *Video games and learning: Teaching and participatory culture in the digital age*. New York, NY: Teachers College Pres.
- Steinkuehler, C., & Oh, Y. (2012). Apprenticeship in massively multiplayer online games. In C. Steinkuehler, K. Squire & S. Barab (Eds.), *Games, learning, and society: Learning and meaning in the digital age* (pp. 154-184). New York, NY: Cambridge University Press.
- Stemler, Steve (2001). An overview of content analysis. *Practical Assessment, Research & Evaluation*, 7(17). Retrieved October 11, 2015 from <http://PAREonline.net/getvn.asp?v=7&n=17>
- Subject. (n.d.). In Merriam-Webster Dictionary. Retrieved from <https://www.merriam-webster.com/dictionary/subject>
- Suits, B. (1990). *Grasshopper: Games, life, and utopia*. Boston, MA: David R. Godine.
- Sullivan, E. V. (1977). A study of Kohlberg's structural theory of moral development: A critique of liberal social science ideology. *Human Development*, 20(6), 352-376.
- Sutton-Smith, B. (1997). *The ambiguity of play*. Cambridge, MA: Harvard University Press.
- Sweeny, R. W. (2010). Pixellated play: Practical and theoretical issues regarding videogames in art education. *Studies in Art Education*, 51(3), 262-274.

- Taylor, P., & Carpenter, S. (2007). Digital kids, art and technology. *Visual Arts Research*, 33(2), 84-95.
- Taylor, T. L. (2009). *Playing between worlds*. Cambridge, MA: The MIT Press.
- Thevenin, B. (2012). Critical media literacy in action: Uniting theory, practice and politics in media education (Unpublished doctoral dissertation). University of Colorado, Boulder.
- Trolling. (n.d.). In Urban Dictionary. Retrieved November 10, 2016, from <http://www.urbandictionary.com/define.php?term=trolling>
- Turnbull, S. (1998). Dealing with feeling: Why Girl Number Twenty still doesn't answer. In D. Buckingham (Ed.), *Teaching popular culture: Beyond radical pedagogy* (pp. 88-106). London, UK: UCL Press.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wien, C. A. (2008). *Emergent curriculum in the primary classroom: Interpreting the Reggio Emilia approach in schools*. New York, NY: Teachers College Press.
- Williams, R. (1961). *The long revolution*. London, UK: Chatto & Windus.
- Williams, R. (1974/2003). *Television*. New York, NY: Routledge.
- Williamson, J. (1981/2). How does Girl Number Twenty understand ideology? *Screen Education*, 40, 80-87.
- Wilson, B., & Wilson, M. (1981). As I see it: The use and uselessness of developmental stages. *Art Education*, 34(5), 4-5.
- Whitton, N. (2014). *Digital games and learning: Research and theory*. New York, NY: Routledge.
- Wittgenstein, L. (1953/1967). *Philosophical investigation* London, England: Blackwell.

- Wu, H. (2016). Video game prosumers: Case study of a *Minecraft* affinity space. *Visual Arts Research*, 42(1), 22-37. Champaign, IL: University of Illinois Press.
- Young, K. (1998). *Caught in the net: How to recognize the signs of Internet addiction and a winning strategy for recovery*. New York, NY: John Wiley & Sons.

## Appendix A: Institutional Review Board Approval Letter

UNIVERSITY OF ILLINOIS  
AT URBANA-CHAMPAIGN

Office of the Vice Chancellor for Research

Office for the Protection of Research Subjects  
528 East Green Street  
Suite 203  
Champaign, IL 61820



January 14, 2016

Paul Duncum  
Art & Design  
143 Art and Design Bldg  
408 Eat Peabody Drive  
Champaign, IL 61820

RE: *Critical Play in Game-based Art Pedagogy*  
IRB Protocol Number: 16442

Dear Dr. Duncum:

This letter authorizes the use of human subjects in your project entitled *Critical Play in Game-based Art Pedagogy*. The University of Illinois at Urbana-Champaign Institutional Review Board (IRB) approved, by expedited review, the protocol as described in your IRB application. The expiration date for this protocol, IRB number 16442, is 01/11/2017. The risk designation applied to your project is *no more than minimal risk*. Certification of approval is available upon request.

Copies of the attached date-stamped consent form(s) must be used in obtaining informed consent. If there is a need to revise or alter the consent form(s), please submit the revised form(s) for IRB review, approval, and date-stamping prior to use.

Under applicable regulations, no changes to procedures involving human subjects may be made without prior IRB review and approval. The regulations also require that you promptly notify the IRB of any problems involving human subjects, including unanticipated side effects, adverse reactions, and any injuries or complications that arise during the project.

If you have any questions about the IRB process, or if you need assistance at any time, please feel free to contact me at the OPRS office, or visit our Web site at <http://oprs.research.illinois.edu>.

Sincerely,

LeaAnn Carson, MS  
Human Subjects Research Specialist, Office for the Protection of Research Subjects

Attachment(s)

c: Hong-An Wu



## Appendix B: Parental Consent Form

### **Description and Purpose of the Research**

Hong-An Wu is conducting research in partial fulfillment of the requirements for the degree Doctor of Philosophy in Art Education at the University of Illinois at Urbana-Champaign. This research consists mainly of an action research, which involves observations and interviews, as well as interpretation and analysis of information gleaned from these activities. The general purpose of action research is to learn how educational practices may be improved through constant reflection and revisions after each educational encounter. This action research aims to understand how youths may be facilitated to play video games critically through learning how to modify video games in the *Minecraft* Modification Workshop.

### **Voluntary Nature of Participation**

Participation in this research is completely voluntary. If you wish to withdraw your child's involvement or your child wish to withdraw from the workshop at any time, you may do so without any repercussion by contacting the researcher.

### **Confidentiality**

You may ask, "will my study-related information be kept confidential?" Yes, but not always. In general, we will not tell anyone any information about you. When this research is discussed or published, no one will know that you were in the study. However, laws and university rules might require us to disclose information about you. For example, if required by laws or University Policy, study information which identifies you and the consent form signed by you may be seen or copied by the following people or groups:

- The university committee and office that reviews and approves research studies, the Institutional Review Board (IRB) and Office for Protection of Research Subjects;
- University and state auditors, and Departments of the university responsible for oversight of research;

In this study, every effort will be made not to reveal personally identifiable information in publications based on this research. To accomplish this, no records will be created or retained that could link your child to personally identifiable descriptions, paraphrases, or quotations. Your child's actions or things they say may be presented without specific reference to your child, reference only by pseudonym, or combined with the actions and words of other participants.

If you (or your child) disclose actual or suspected abuse, neglect, or exploitation of a child or a disabled or elderly adult, the researcher or members of the study staff will report the information to Child Protective Services, Adult Protective Services, and/or a law enforcement agency.

### **Risks and Benefits**

Your child's participation in this project should not involve risks beyond those of ordinary life. You or your child will not be paid for their participation in this research project. However, by participating in this research through the workshop program, your child may acquire the ability to use variety of digital editing software to modify video games. Your choice for your child to participate or not will not impact their relationship with the researcher or with the other people around them in the Champaign Public Library in any way.

### **Explanation of Procedures**

Your child's participation in this project will involve 6 workshop sessions with each session

lasting 2 hours and 3 short 30 – 60 minute interviews about their experiences playing video game and participating in the workshop. The investigator will take notes on their remarks, artifacts produced in the workshop, and experiences that they choose to share. Artifacts to be collected include photographs of the workshop in progress, screenshots of your child’s creation on the computer, or photographs of physical games that your child has created. Your child will have an opportunity to review the investigators notes to clarify that everything they say is recorded accurately.

### Contact Information

If you have any questions, concerns, or complaints about this research project, please contact the Responsible Project Investigator (RPI) or Project Investigator (PI):

- Paul Duncum, Art Education, 217-333-9852 or [pduncum@illinois.edu](mailto:pduncum@illinois.edu) (RPI)
- Hong-An Wu, Art Education, 217-979-8040 or [hwu34@illinois.edu](mailto:hwu34@illinois.edu) (PI)

If you have any questions about your child’s rights as a participant in this study, please contact the University of Illinois Office for the Protection of Research Subjects (OPRS) at Suite 203, 528 East Green Street, Champaign, IL 61820, 217-333-2670 or via email at [irb@uiuc.edu](mailto:irb@uiuc.edu).

### Consent Statement

I have read and understand the forgoing description of this research project, including information about the risks and benefits of my child’s voluntary participation.

Please check the appropriate boxes below:

- I grant permission for my child to participate in the *Minecraft* Modification workshop and be interviewed by the researcher.  Yes  No
- I grant permission for my child’s artifacts to be photographed and disseminated through publication or conference presentations.  Yes  No
- I grant permission for my child to be audio taped and photographed.  
 Yes  No

Please print your child’s name: \_\_\_\_\_

Please print your name: \_\_\_\_\_

Your signature: \_\_\_\_\_ Date: \_\_\_\_\_

There are two copies of this form. Please sign both. Return one to the researcher and keep one for your records.

## Appendix C: Participant Assent Form

### **Description and Purpose of the Research**

Hong-An Wu is a teacher that is conducting research in partial fulfillment of the requirements for the degree Doctor of Philosophy in Art Education. This research aims to better understand how video game players can play video game critically through learning how to modify video games. By interviewing you and observing your creation in this *Minecraft* Modification workshop, this research will learn from you about how to use video games in educational settings.

### **Voluntary Nature of Participation**

Participation in this research is completely voluntary, meaning that you don't have to participate if you don't want to. If you want to withdraw from the workshop at any time, you may do so without any consequences by contacting Hong-An Wu.

### **Confidentiality**

This research will make sure that your identity is not revealed in reports of the research. The things you make and the things you say in this workshop will be shared through the paper written about this workshop, but there will not be any links to your identity. The researcher will use a fake name to represent you in the research paper.

### **Risks and Benefits**

There are no risks beyond what you experience in ordinary life. You will not be paid for your participation in this research project. However, by participating in this research through the workshop program, you might learn more about modding *Minecraft*. Your choice to participate or not will not impact your relationship with Hong-An Wu or with the other people around you in the Champaign Public Library in any way.

### **Explanation of Procedures**

Your participation in this project will involve 6 workshop sessions with each session lasting 2 hours and 3 short 30 – 60 minute interviews about your experiences playing video game and participating in the workshop. Hong-An Wu will take notes on what you say and the things you make in the workshop. You can check Hong-An's notes to clarify that everything you said or did is recorded accurately.

### **Contact Information**

If you have any questions, concerns, or complaints about this research project, please contact the Responsible Project Investigator (RPI) or Project Investigator (PI):

- Paul Duncum, Art Education, 217-333-9852 or [pduncum@illinois.edu](mailto:pduncum@illinois.edu) (RPI)
- Hong-An Wu, Art Education, 217-979-8040 or [hwu34@illinois.edu](mailto:hwu34@illinois.edu) (PI)

If you have any questions about your child's rights as a participant in this study, please contact the University of Illinois Office for the Protection of Research Subjects (OPRS) at Suite 203, 528 East Green Street, Champaign, IL 61820, 217-333-2670 or via email at [irb@uiuc.edu](mailto:irb@uiuc.edu).

### **Consent Statement**

I have read and understand the forgoing description of this research project, including information about the risks and benefits of my voluntary participation.

Please check the appropriate boxes below:

- I grant permission to participate in the *Minecraft* Modification workshop and be interviewed by the researcher.  Yes  No
- I grant permission for my artifacts to be photographed and shared through publication or conference presentations.  Yes  No
- I grant permission to be audio taped and photographed.  Yes  No

Please print your name: \_\_\_\_\_

Your signature: \_\_\_\_\_ Date: \_\_\_\_\_

There are two copies of this form.

## Appendix D: Interview Questions

1. Why do you like to play video games?
2. When did you started to play video games? Who introduced you to it?
3. How often do you play video games? Where do you play video games? Do you usually play alone or play with others? Who do you play it with?
4. What are some of your favorite games? What are some games that you dislike? And why do you like/dislike them?
5. Besides playing the game, do you talk about games with other people? If you do, whom do you talk to about video gams? What do you talk about? Have you ever tried to look for what other people say about video games online?
6. How did you learn to play *Minecraft*?
7. What do you know about “modding”? Have you ever made a mod before?
8. Have you ever tried to install a mod for any games before?
9. What do you think about our workshop so far? What is your favorite activity?
10. What’s something that you didn’t think much about until we had our workshops?