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Teaching Critical Media Literacy Through Videogame Creation in Scratch Programming

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LOYOLA MARYMOUNT UNIVERSITY

Teaching Critical Media Literacy
Through Videogame Creation in Scratch Programming

by

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DEDICATION

I dedicate this work to my family.

My mom for her love

My dad for instilling in me self-discipline

My sister and her husband for their friendship

My brother and his wife for reminding me that creativity and fun are a part of life too

My nephews Luke, Matty, and Duncan for building creative futures with their lives

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ABSTRACT

Teaching Critical Media Literacy

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Critical media literacy (Kellner & Share, 2005) may better equip children to interpret videogame content and to create games that are nonviolent and socially just. Videogames are growing in popularity in classrooms. Yet educators and parents have concerns about the violent and stereotypical content they include. An earlier study based on the curriculum *Beyond Blame*: *Challenging Violence in the Media* (Webb, Martin, Afifi, & Kraus, 2009) examined the value of a media awareness curriculum. In this mixed-method study, I explored the effectiveness of a critical media literacy program that incorporated collaboratively creating nonviolent or socially-just games in teaching fourth-grade students the factors of awareness of violence, marketing, and critical media literacy. Qualitative data collected from teacher reflection notes, student journals, Scratch projects, and interviews revealed the positive effects of the program. Quantitative data supported these conclusions. This highlights the need for schools to engage students in computer programming as a means to learn academics, while educating students in critical media literacy to better enable them to navigate wisely the media saturated world in which they live. In learning programming, students engage in collaborative work, their interactions helping them to collectively create meaning for the symbols they create. Set in a framework of critical media literacy and symbolic interactionism (Blumer, 1969; Mead, 1934), this study provides an

innovative model for teaching computer programming and critical media literacy skills to students.

Key words

STEM, Common Core, digital citizenship, video games, videogames, Scratch, computer programming, critical media literacy, educational games

.

CHAPTER ONE

BACKGROUND OF THE STUDY

Introduction

Alexander (2010) found that children were motivated to spend hours playing videogames such as Minecraft, Eden, World of Warcraft, and Angry Birds. In addition, he found that videogames kept students engaged through play and immediate feedback, which motivated them to reanalyze problems and challenged them to improve to get to the next level (Alexander, 2010). Videogame programming and learning were considered a pathway into computer science and information technology careers by Fisher & Margolis (2002). Devlin (2011) found that videogames could provide an opportunity to excite students in learning curriculum and to give them the necessary time to repeat concepts in an engaging technology environment. The *NMC Horizon Report* (Johnson, Adams, & Haywood, 2011) cited videogames as the second most influential technology to have an impact on teaching, learning, research, and creative expression around the globe. Game-based learning was listed as second only to cloud computing and mobiles in terms of its potential to impact education (Johnson et al., 2011). (In the literature, both *videogame* and *video game* are used. In this study, I have used the term videogame unless I am quoting or citing a source that used video game.)

Violence, marketing, and stereotypical content in many videogames have raised concerns from educators about the practicality of using the games in educational settings (Alexander, 2010). In the last decade, the debate over whether violent videogames cause aggression in children has been at the center of media coverage surrounding school shootings. In 2011, Norway's shooter Anders Behring Breivik claimed that he "trained" on games such as World of

Warcraft and Modern Warfare *2* (Moore & Manville, 2009; Peckham, 2012). A number of studies have shown that playing violent videogames desensitized viewers to real life violence and players of games were less likely to help a victim of violence in real life (Bushman & Anderson, 2009). Another study found that children with a tendency towards physical or psychological aggression who played violent games were more likely to engage in aggression with their peers (Bartholow, Sestir, & Davis, 2005).

The controversy over whether videogames and aggression in children were related has remained at the center of media debates, as the results of some studies have not supported that link. Researchers claimed that the benefits of games outweighed the drawbacks and showed in their studies that no clear link existed between violent videogames and aggression in children (Ferguson & Olson, 2014). Ferguson and Olson (2014) found no relationship between playing violent videogames and bullying in children even if participants were clinically diagnosed with depression or attention deficit disorder. The study found that playing games actually had a slightly calming effect for children with aggression disorder who played because the games provided children with a safe outlet for expressing frustration. In a study conducted with 135 participants, prolonged exposure to playing violent games did not result in either increased aggression or a reduction in empathy (Teng, Chong, Siew, & Skoric, 2011). Whether or not games cause violence, Keegan (2013) found that it was important for children to be aware of how to analyze messages in videogames so that they could be aware of the potential messages that games sent.

Stressing the need for critical thinking, Gee (2007) suggested that unless students were "taught how to notice and critique the social values and assumptions in a game, video game players are mostly unaware of the broader social practices embedded in video game content and

play" (Sanford & Madill, 2007, p. 438). Mou and Peng (2009) found that students with limited life experience were exposed to highly addictive games that used violence, marketing, and gender and racial stereotypes to promote messages designed to sell products and values that would make children lifetime consumers.

Resnick et al. (2009) problematized how children's use of media focused on consumption of digital media rather than creation. It has become commonplace to refer to young people as "digital natives," because of their apparent fluency with digital technologies (Prensky, 2001). Indeed, researchers found many young people were very comfortable sending text messages, playing online games, and browsing the web. Does that really make them fluent with new technologies? Although young people interact with digital media all of the time, few of them could create their own games, animations, or simulations. It is as if they can read but not write. Digital fluency requires not just the ability to chat, browse, and interact, but also the ability to design, create, and invent with new media.

If children are only reading and not writing the videogame curriculum, they are missing an opportunity to create, write, and respond rather than consume. Pavlova (2005) found that with the increase in iPad and tablet technology preloaded with curriculum and games entering school sites, teaching children to create and write their own socially responsible programs and games was necessary to develop citizens who thought critically and responded to the barrage of marketing material embedded in the technological content they consumed.

One potential solution to address issues of social justice in games is to teach children to analyze videogames using critical media literacy and to create their own alternatives to

commercially marketed products. Kellner and Share (2005)[1] found that children who used the principles of critical media literacy responded to issues of social justice by creating videogames that contained counter-hegemonic messages. For young people, the difference between "playing videogames and creating videogames in regards to critical media literacy is the difference between consumption of the medium and production of the medium" (Sanford & Madill, 2007, p. 451). By creating games using critical media literacy skills, students can become aware and learn to apply the same techniques used by media professionals to promote their own socially just and nonviolent messages.

In this study, students went beyond being media consumers to engage in a critical media literacy curriculum that used Scratch[2] (Lifelong Kindergarten Group, 2009) as a technology tool for taking action by creating videogame trailers that were nonviolent and socially just. Videogame trailers are short media clips similar to movie trailers that are used to sell and promote videogames (Kafai, Heeter, Denner, & Sun, 2008). Creating videogame trailers put children in a position where they acted as content creators rather than as content consumers.

Scratch is a videogame and animation-building tool developed by the Lifelong Kindergarten Group at the Massachusetts Institute of Technology Media Lab to introduce basic programming language to children ages eight through 16 (Burke, 2012). Scratch can be accessed on the web and used at no cost under the Open Source-Share Alike license at http://scratch.mit.edu. Users can download the software or create projects in the web-based

[1] In this paper, the term "critical media literacy" refers to Kellner's and Share's construct (2005). It is one of the theoretical principles of this study and is used many times in the text. To enhance the readability of the study, the construct is attributed to Kellner and Share only the first time that it appears in each chapter. A concise explanation of the term appears in Chapter One and a more detailed one in Chapter Three.

[2] Scratch is the central program used in this study. To enhance readability of the study, the program is attributed to the Lifelong Kindergarten Group of the Massachusetts Institute of Technology's Media Lab only the first time it appears. A detailed description of how the program was used in the study is included In Chapter Three.

browser on the Scratch website. In this study, students created and shared their own videogame content by developing media and moving sprites, two dimensional characters and objects. Resnick et al. explained that in Scratch, blocks of code were stacked together to create coding scripts that control how sprites move in a game (2009). Through the use of Scratch, students created videogame stories and content, while simultaneously learning math concepts and computer science programming (Resnick et al., 2009). As part of designing games in Scratch, students applied mathematical concepts including the Cartesian coordinate system, negative and positive numbers, ordered pairs, angle rotations and measurement, logic, and inequalities (Penta, 2006).

Statement of the Problem

The increase in children's use of videogames has raised important questions about their need to be aware of the impact of these games on their behavior. Marketing to students has increased at an alarming rate as iPads and technologies have proliferated in schools (Kim & Leventhal, 2008). Williams, Martins, Consalvo, and Ivory (2009) found that these technology tools presented tremendous potential to teach, as well as tremendous potential to overwhelm children with marketing content that contained violence, marketing messages, and gender and racial stereotypes that could impact their social interactions. The amount of bullying and depression seen in children has increased with the rise in technology (Siegle, 2010). Bhat, Chang, and Linscott (2010) found that students in schools engaged in an increasing amount of antisocial behavior towards one another. The increase in lawsuits regarding technology and social media used by children and adolescents raised concerns among educators (Finkelhor, Turner, Ormad, & Hamby, 2009). Videogame software applications became increasingly

popular among children, but even seemingly harmless programs like Angry Birds raised questions about the violence and stereotypical images they saw. Some of these programs possibly were harmless, but are children who do not have as much life experience as adults able to discern the difference between real and imaginary violence? Are they able to look at a game and critically analyze the media values embedded in that game? Giles and Maltby (2004) found it essential that young children learned to be media savvy and to be aware of how the media they watch influenced their own social interaction and ideas about how they treated one another.

Many educators believe that it is important to have classroom tools to address children's understanding of these games and their impacts. Lachlan, Smith and Tamborini (2005) found that critical media literacy intervention programs gave educators a way to teach children to identify the values embedded in media and videogames so they could be aware of and make choices about what they believe is morally right or wrong in a game. Pavlova (2005) found that being able to both interpret and to create messages was empowering for today's students and enabled making alternatives to existing videogames. No other generation has had the same kind of access to media creation tools. Critical media literacy has gone beyond simply analyzing messages, and has asked students to take action by creating media. Students can create nonviolent and socially just games that send a different message. According to Ghose (2012), students used socially just games to send positive messages rather than relying on consumer messages that fed off of negative feelings of social isolation and hurt.

Devlin (2011) reported that the literature on children creating stories to learn curriculum content in game models supported the finding that to encourage children to make their own games was an alternative that should be explored. In thinking of creating nonviolent videogame stories

in Scratch, students in this study were forced to problematize and critically think about the videogame genre and redesign the types of games that are sold in the industry. Kafai et al. (2009) discovered a growing market for videogames that told a story rather than raised the violence quota to draw in gamers. Hart (2011) found that this type of program allowed children access to this market.

In this study, I used Scratch as a powerful way for students to create their own messages. Burke (2012) explained that Scratch gave students voice in the creation of content and served as a media creation tool through which the action component of critical media literacy was carried out. Sanford and Madill (2007) found that rather than having large companies be the sole creators of content sold to students, children have become aware of their own ability to have a voice and to create their own content using technology like Scratch as a constructive tool. Gainer, Valdez-Gainer and Kinard (2009) reported that in actively creating content and interpreting media messages, students needed guidance in how media creators market to them.

Kerr (2005) wrote that without knowledge of how to analyze media structures, students did not have the skill sets they needed to understand and create socially just or nonviolent content. Alexander (2010) found it important, therefore, to explicitly show students how to interpret videogame images so they could act by creating new images that contained messages of social justice rather than violence. In lessons conducted in classrooms, I found that students reenacted current media violence and stereotypes in videogame trailers they created if they were not taught to first analyze the videogames they played for violence and stereotypes. The combination of teaching students critical media literacy and helping them to apply these skills to creating socially just nonviolent videogames in Scratch provided learners with space in which they applied critical

media literacy principles and constructed their own meanings of educational content through the narratives they designed in games.

Research Question

In this study, I examined the research question: What are the effects of implementing a critical media literacy curriculum program on awareness of

- Violence;
- Marketing;
- Marketers' messages to gain profit and power;
- Users different experiences with media based on background and viewpoint;
- Corporations' branding through inclusion, exclusion, and stereotypes;
- Media producers' creative language and artifacts; and
- Media authors' purpose and perspective?[3]

Critical media literacy requires that students develop critical thinking skills to understand how exposure to popular media shapes their worldviews. To be able to examine the question above, I taught lessons in awareness of violence, marketing, critical media literacy and in Scratch programming, which allowed students to apply the critical media literacy lessons to collaboratively create nonviolent, socially just videogames.

[3] In this study, I address seven variables as noted in the Research Question. The first two are awareness of violence and marketing (A and B). The next five (C-G) are based on the concept of critical media literacy as outlined by Kellner and Share (2005) and phrased as in the Research Question. To enhance readability of the text, description of these seven factors is often shortened to "awareness of violence, marketing and the five principles of critical media literacy."

Purpose of the Study

The purpose of this study was to examine the effectiveness of a critical media literacy intervention program that included creation of their own videogames on students' awareness of violence, marketing, and the five core principles of critical media literacy. I presented lessons on awareness of violence, marketing, and critical media literacy using an adapted version of the lesson plan, Fighting Evil in Videogames (Wolfe & Fourth R, n.d.), which I used with the *Beyond Blame*: *Challenging Violence in the Media* curriculum (Center for Media Literacy, 2007) to ensure that the content was grade level appropriate for fourth-grade students (See Appendix A). After the lessons, students applied their knowledge of awareness of violence, marketing and the five core concepts of critical media literacy in creating their own socially just or nonviolent videogame trailers in Scratch programming. I analyzed teacher reflection notes taken during the Scratch and Fighting Evil in Videogames lessons (Wolfe & Fourth R, n.d.), students' journals, and Scratch projects for awareness of violence, marketing, and critical media literacy (See Appendices B, C, D, and E). I conducted follow up interviews with 15 students to further assess their awareness of violence, marketing, and the core aspects of critical media literacy to determine the impact of the combination of the Fighting Evil in Videogames (Wolfe & Fourth R, n.d.) critical media literacy curriculum and students' learning to create their own videogames (See Appendices F, G, and H). In addition, I administered pre- and posttests adapted from the *Beyond Blame Critical Media Literacy* (BBCML) test (Center for Media Literacy, 2007) curriculum to determine the impact of the intervention on students' awareness of violence, marketing, and the five elements of critical media literacy from quantitative data (See Appendix I).

Significance of the Study

As technology use increased in schools, the need to teach students critical media literacy awareness through specific, focused programs grew exponentially (Bhat et al., 2009). The transformational power of critical media literacy made it incumbent on educators to employ every effort to integrate it into the curriculum. However, educators have fully implemented few critical media literacy programs. The *Beyond Blame* curriculum (Center for Media Literacy, 2007) and the research of Webb et al. (2009) from which I adapted pre- and posttests for this study have been implemented in classrooms. Pilot studies conducted on *Beyond Blame* addressed the need for this curriculum to be implemented and studied on a much wider scale (Webb et al., 2009). However, the *Beyond Blame* (Center for Media Literacy, 2007) studies did not include teaching students to create viable alternatives to commercial videogames. The research I conducted in this study included this aspect and showed the potential to impact a broad spectrum of the educational community and serve as a model not only for how to teach critical media literacy awareness but also for how to teach students technology skills in demand in the fields of science and math that match the requirements of the common core (Dalal, Dalal, Kak, Anonenko & Stansberry, 2009).

As videogames became a new source of information and iPads/tablets and laptop computers quickly funneled into educational sties, it became critical that educators learned to use these technologies in ways that were constructive for learning (Johnson et al., 2011). Experts have identified videogames as one of the top trends in classroom technologies (Johnson et al., 2011). Johnson et al. (2011) found the need for a practical idea of how to use videogames in education and how to help children become more engaged in the curriculum through videogame design and critical media literacy.

Additional research is needed in full-time classrooms of how to integrate Scratch into the curriculum. Burke (2012) looked at storytelling in Scratch as an effective tool for coding but noted that further research was needed looking at Scratch as a form of composition and examining how it could fit into the traditional curriculum. Penta (2006) cited the need for more explicit instruction of math in Scratch and primarily thought that after-school curriculum was most suited for Scratch. Research in full-day classrooms with younger children was a way to see if Scratch could be integrated into the school day rather than limited to use in after-school settings. Research has shown that further studies also could examine how game construction could be applied to mainstream classroom learning and educational standards (Dalal et al., 2009; Kafai, 2006; Papert, 1980).

In 2011, Johnson et al. found that games were positioned like electronic books to enter into the classroom because there were a number of forces merging: classroom technology, business interests, and social network capability. As games enter the educational realm, corporate interests to make money in gaming must be taken into account. In exploring the use of critical media literacy to analyze videogame content in the marketplace, games have given students a voice in creating much needed social justice content. Sanford and Madill (2007) argued that:

> Educators need to problematize the seamless qualities of videogame play and creation and create spaces where players can step back from the powerful, immersive qualities of game play and examine values that, implicitly or explicitly, support violence, war, inequity, racism, sexism, or suffering of masses of the earth's populations. (p. 451)

Gainer et al. (2009) found that as students used Scratch to tell their stories and express their own concerns, space opened in the curriculum for them to create their own media, which increased the transformational potential of critical media literacy. In deconstructing social justice issues in videogames and reconstructing positive images in their own games, students became the "programmers not the programmed" (Resnick et al., 2009, p. 1).

Theoretical Framework

Critical media literacy and symbolic interactionism formed the theoretical framework guiding this study. Using awareness of violence, marketing, and critical media literacy, students deconstructed media messages in videogame trailers and reconstructed their own counter-media messages in the videogames they created. Thus, they were not subjugated to the powerful influences of media messages of consumerism, racism, sexism, and violence (Sanford & Madill, 2007). As students reconstructed videogame models using technology tools, they created models of learning for themselves and others that contained messages that could be interpreted for meaning by individuals with different perspectives.

Symbolic interactionism (Blumer, 1969; Mead, 1934)[4] supplemented critical media literacy as students created nonviolent symbols collaboratively in Scratch while they developed videogame models. Through the programming process, students interpreted the meaning of these games and communicated with one another to create the socially constructed reality of a nonviolent or socially just videogame (Jonassen, Strobel, & Gottdenker, 2005). Through engaging in the production of videogames and sharing media content on the Scratch website,

[4] The concept of "symbolic interactionism" (Blumer, 1969; Mead, 1934) is part of the theoretical framework of this study. To enhance readability, it is attributed to Mead and Blumer only the first time it is used in each chapter. See Chapter One for an explanation of the concept, and Chapter Two for more detail.

children became a part of the response to public pedagogy and were able to engage in the democratic process of interpreting and responding with media that voices their concerns (Tisdell & Thompson, 2007). Students using Scratch were able to create meaning of the world around them for themselves and others through the self-constructed narratives they designed for their games. Liu, Lee, Chen, Hu and Lin (2011) found that students uploaded their games to the Scratch website and shared them with other users increasing the influence and power of the digital stories they constructed to shape the reality of the world.

Critical Media Literacy

Critical media literacy requires that students develop critical thinking skills to understand how exposure to popular media shapes their worldviews. In addition to being aware of violence and marketing contained in media messages, Kellner and Share identified five core concepts about construction and use of media that made up the foundation of critical media literacy (2005). The first core concept of critical media literacy they identified was that media were organized to gain profit and power. Media creators considered how the message they created would be profitable or powerful to individuals, groups, or corporations.

The second core concept of critical media literacy identified by Kellner and Share (2005) was that different people experienced the same media message differently. Demographic factors such as age, culture, gender and socio- economic status as well as prior experience and knowledge played a role in how a message was interpreted. When different people encountered a media message, they saw, heard, thought, and felt different things.

The third core concept was that media had embedded values and points of view, which meant that every media message included some ideas and people, but excluded others. The

author of a media message thought about the types of people to whom the message would appeal and the types of people to whom it would not appeal, or who would feel excluded from the brand. Lankshear and Knobel (2003) found that critical media literacy addressed the concept that all media images constructed by an author included some representations and values and excluded others, and often used stereotypes to sell or market a brand to a particular audience. This branding of products is central to media messaging.

The fourth core concept of critical media literacy as explained by Kellner and Share (2005) was that media messages were constructed using a creative language with its own rules to attract audience attention. The creative language of media included music, action, montage of images, and voice-over narration. Media jolts, surprising or fast paced moments in games or film that generate excitement in the audience caused by a violent act, motivating language, quick film cuts, flashes of color, or exciting music were considered part of the creative language.

The fifth core concept was that an author created, shaped, and positioned all media messages through a construction process. This meant that an author sent a message for a specific purpose. Viewers identified the message the author sent and thought about why the message was addressed to a specific audience and how the message constructed ideas in society. Consumers should consider the author's background and reason for creating and sharing a message both when analyzing and when creating a media product.

In this study, critical media literacy contained an action component. It was not enough for students only to interpret media messages. They also responded and acted by creating their own media response to messages they receive. This is the key difference between media literacy of the

past and critical media literacy. This action through creation component empowers the viewer to be active rather than passive in the world of media messages.

Symbolic Interactionism

Like critical media literacy, symbolic interactionism is based on the concept of interpreting messages based on individual responses and shared interpretive realities. MacKinnon (2005) described computer-based learning as an integrated, interactive technology (IIT) model that lent itself to the theory of symbolic interactionism. Gaming programmers today meet for twenty four hour coding *gameathons* to finish games, collaborating and creating the code with colleagues. Working with a game and coding is especially beneficial when done with a partner. The *hour of code* was a similar would wide event in which four million students worked on activities in which they learned code together in December 2013. In this study, students also worked with partners creating videogames in Scratch programming, while learning Scratch in lessons and participating in the hour of code. They engaged in interactive problem solving to figure out which blocks work to create the game mechanics desired for a final effect. Children in the fourth grade who gained Scratch programming experience in this study learned and solved problems more quickly working in partners than classes which had not received the same intervention. Through this symbolic interactionism toward cocreation of a Scratch programming product, partners communicated and created the reality of a videogame.

Symbolic interactionism has been used in qualitative analysis. George Herbert Mead (1934) and Blumer (1969) were the principal theorists who lead the acceptance of symbolic interactionism as a key theory. To these theorists three major ideas formed the underlying

principles of symbolic interactionism. The first was that people interacted with objects and symbols based on the meaning that they assigned to them. The second was that people communicated with one another about the meaning of objects and symbols through language. The third was that people had their own thoughts through which they tried to interpret and understand the meanings others have assigned to an object or the meanings they have communicated with others. Prawat (1996) described reality as socially constructed. Thus, when children made media products of videogames in Scratch they drew from the social construction of reality and also constructed their own version of social reality that is then interpreted by others. In symbolic interactionism, "the process of personal meaning takes a backseat to socially agreed upon ways of carving up reality….symbolic interactionism sees meaning as a social product that arises in the process of interaction between people" (Prawat, 1996, p. 220).

In constructivist cooperative learning classrooms where students socially construct reality, there has been a symbolic interactionism component of students looking at symbols and constructing meaning, sharing the meaning with peers through language, and then thinking of the meaning their peers have constructed to give rise to the social reality of the created videogame (Johnson, D. W. & Johnson, 1996). In the context of symbolic interactionism theory, the videogame artifacts created in Scratch are viewed as socially constructed products that become part of the object world to which other individuals respond using the five key concepts of critical media literacy.

> [Individuals] engaged in joint action cannot help but attend to the ways co-participants, especially more knowledgeable co-participants, talk about and interact with objects in

> the environment. This jointly produced language and action becomes the basis for the taken-for-granted knowledge and practice. (Prawat, 1996, p. 220)

Using Scratch technology, students can create videogame symbols and social meanings for these symbols. MacKinnon (2005) found that symbolic interactionism applied to Scratch technology because "computers and technology are image laden and students in this project were working in closely knit social groups" (p.23). In this study, students looked at finding the meaning of the Scratch project, they communicated it through language, and then players interpreted their games.

Research Design and Methodology

This study was a mixed-method qualitative and quantitative study conducted in two fourth-grade classrooms at two different Catholic elementary schools. Students at one site participated in the intervention critical media literacy curriculum and videogame design, while students at the other school served as a control group. In the intervention, students learned how to deconstruct and analyze current videogame trailers for awareness of violence and marketing in games and for awareness of the five core concepts of critical media literacy using the fourth-grade level appropriate lesson plan, Fighting Evil in Videogames (Fourth R, n.d.), with the pre- and posttests adapted from the *Beyond Blame* curriculum (Center for Media Literacy, 2007). The Fighting Evil in Videogames (Fourth R, n.d.) lesson was developed as part of the critical media literacy project and is a free downloadable file available at www.youthrelationships.org. The control group did not participate in the critical media literacy instruction or build the social justice or nonviolent videogame trailers in Scratch.

I analyzed videogame artifacts and student-created Scratch projects from the intervention group for awareness of violence and marketing in games and of the five core media literacy concepts. I analyzed data from journals, teacher reflection notes, Scratch videogame projects, and follow-up interviews to assess students' understanding of violence and marketing, and for awareness of the five core concepts of critical media literacy. From this analysis of the qualitative data, I identified appropriate themes that described attitudes, concepts, and the impact of the intervention.

Comparison of intervention and control groups addressed the validity of test results. Prior to introducing programming in Scratch, I administered a pretest (See Appendix J) to students in both the control group and the intervention group to measure their knowledge of critical media literacy skills regarding violence, marketing, and the five core concepts of critical media literacy in videogames. At the end of the study, I also administered a posttest to both control and intervention groups to again measure their knowledge of violence, marketing, and the five elements of critical media literacy. The pre- and posttests were an adapted version of the test from the *Beyond Blame* (2007) curriculum provided by the Center for Media Literacy (www.medialit.com). I compared and analyzed these results from the intervention group to determine the effects of the intervention. However, because of the small size of the sample from the control group, I was unable to use those scores to address reliability issues. Consequently, I did not use data from the control group, analyze their posttest data, or compare scores on items between the intervention and control groups.

I collected quantitative data electronically using Qualtrics, a web-based survey software. I analyzed the data using SPSS Graduate Student v.22.0 to discover correlations and causal factors.

Data also included demographic information (e.g., age, ethnicity, and gender), videogame playing time information (e.g., hours per week playing videogames), and questions about the seven areas of awareness.

I helped students learn videogame design elements using lessons from the Scratch website. Students responded to questions in journals and they used storyboards to plan their game ideas for Scratch. I analyzed a representative convenience sampling of participants' journals for awareness of violence, marketing, and critical media literacy. After students created games in Scratch, I interviewed them about their games to determine their level of critical media awareness about violence, marketing, and critical media literacy in videogames. I coded interview answers and journal entries for common themes of marketing, violence, nonviolence, social justice, stimulus/emotional addiction, stereotypes, and the five factors of critical media literacy.

Limitations

Because of the complexity and number of subjects involved in human psychological studies, validity and reliability are a challenge. For this study to be reliable, it had to provide consistent measures of changes in behavior and awareness of violence, marketing and critical media literacy in comparable situations (i.e., across a group of children of approximately the same age in the same school grade). For it to be valid, the answers must have actually measured the effect teaching the critical media literacy curriculum with Scratch programming had on those students' awareness and behaviors. Limitations of the study's reliability and validity can result from students' previous media literacy, biases in sampling, inaccuracies in students' reports of their feelings, and modifications in the curriculum.

The first limitation of this study was that students may have had some critical media literacy from knowledge taught outside of the study. Media literacy lessons already may have been taught at schools or at home that may have affected the validity of the results in this study. To assure that the study was measuring the effects of the curriculum, I compared student responses to similar questions in journals and classroom discussions and on the pre/posttest as well as the quality of the Scratch projects immediately before and after the critical media literacy.

A selection bias existed in the intervention group for this study. The sample in this test was limited by which parents gave permission for their children to participate. In addition, I chose participants in this study who did not represent a random sample of the population. Since I knew the children in the intervention group, I may have had bias in how I saw results from the study when I compared and analyzed the data from before and after the intervention. Since some participants were less likely to be included than others, there were issues with the external validity of the study in terms of generalizing the results to the rest of the population. However, Glaser and Strauss (1967) allow for some limitations in the sampling group because of the flexibility of the constant comparative method of data analysis in which the nature of the data gathered is flexible and emerges as the analysis is done.

Students may also have wanted to please the teacher by answering questions in a way they thought I would prefer, thus threatening both the reliability and validity of the study. The children may have said their critical media literacy awareness was raised by creating socially just nonviolent games, but they may really have preferred to create and make violent and socially unjust games in their free time, but did not want to tell the researcher. Asking the question several different ways in interviews, class discussions, and on the pre- and posttests and assessing

the differences in the Scratch projects from before and after the intervention revealed some of the impacts of this behavior, allowing me to assess data to assure more reliability and validity.

Webb et al. (2009) tested the pre- and posttests they developed for the *Beyond Blame* curriculum (Center for Media Literacy, 2007) on large groups to assess reliability and validity. Adjusting these items to make the curriculum age appropriate and specific to this project may also have had some effect on the study's validity and reliability. These modifications included using the fourth-grade appropriate lesson Fighting Evil in Videogames (Fourth R, n.d.) and making slight changes to the wording of the pre- and posttests to make the language appropriate for nine- and ten-year olds to comprehend. I minimized the changes as much as possible to assure that the results would still parallel those from the original research.

Although the original design contained a plan to test for validity by comparing pre- and posttest scores for a control and an intervention school, differences in the sizes of the samples invalidated this comparison. So, I did not use this test of validity.

Delimitations

The scope of this study was limited because it examined only the intervention and the control classrooms. The study was limited to two school sites with the sample size being one class of 33 students and one class of 11 students. The sample population was too small to generalize results to the larger population even within similar school populations. In order to test validity and reliability of the research, future studies should repeat use of the pre-and posttest and the protocols with additional intervention and control groups (See Appendix J).

The socio-economic composition at the school sites and the limited age ranges of the students were particular factors that made the findings difficult to generalize to more diverse

populations of students. The external validity of the study was thus affected, as the findings could not be generalized to a representative sample of all fourth-grade classrooms in public and Catholic elementary schools. Replication of the study across a broad spectrum of the school population and different age groups can create results that can be more reliably generalized to guide practice in the future.

Definition of Terms

Following is a list of terms from the videogame culture I used throughout this study along with their definitions:

Videogame creation: Videogame creation is defined as a genre of gaming in which children program and create their own games in programming languages such as Scratch and Alice.

Nonviolent socially just games: Nonviolent, socially-just games are those which do not use violence, blood, and gore to solve problems. If a character is eliminated in the game, there is a moral reason for eliminating him or her such as saving the world from harm. Socially just games are games that address issues of gender or race discrimination, unfairness, or mistreatment of others. These games can also include puzzle solving, maze games and games that include a compelling story line to justify or explain the use of violence for a higher good.

Violent games: Violent games include gore, verbal aggression, weapons, needless killing, fighting, and shooting.

Videogame trailers: Videogame trailers are short two to three minute miniature movies or samplers created from excerpts from a videogame. Videogame trailers can be found on You Tube and on videogame websites. They are designed to promote and sell the games.

Jolt: Jolt is the term for a surprising or fast-paced moment that generates excitement in the audience, caused by a violent act, motivating language, quick film cuts, flashes of color, or exciting music.

Scratch: The program Scratch is a beginning programming language that uses command blocks of code that are stacked together to form coding scripts. Users create their own characters, music, narrative, and background or import characters and other media elements from the Internet to create original videogame trailers, digital stories, or animations. The coding blocks are activated by the keyboard, the mouse, or a control board "to make the character sprites come to life" (Burke, 2012, p. 37). Scratch is available on www.scratch.mit.edu.

Cloud computing: Cloud computing is using a collection of networked computers that makeup the Internet. It distributes data and applications across many computers. It includes "three broad areas of development: cloud based applications, which are designed for many different tasks and hosted in the cloud; development for creating cloud-based applications; and massive computing resources for storage and processing" (Johnson, et al., 2011, p. 10).

Mobiles: Mobiles such as cellphones and iPads are devices that are always connected to outside sources (Johnson, et al., 2011).

STEM: STEM is the abbreviation for the term Science, technology, engineering, and mathematics education standards were introduced by the Department of Education as a way to increase student interest in careers that integrate aspects of these areas (Science, Technology, Engineering, and Mathematics, 2012).

Common Core Standards: The Common Core Standards were developed by the Department of Education as benchmarks for teaching mathematics, Language Arts, and science. They include rigorous problem solving and critical thinking skills (National Governors' Association Center, 2010).

Organization of the Study

The purpose of this study was to analyze the effectiveness of a critical media literacy curriculum that incorporated creating nonviolent or socially just videogame trailers in Scratch programming on students' awareness of violence, marketing, and the five elements of critical media literacy. Students used the principles of critical media literacy awareness to create nonviolent or socially just videogame trailers in Scratch. Chapter One introduces the background, purpose, and significance of the study, research question, methodology, and definitions.

In Chapter Two, I discussed the literature on the theoretical framework of critical media literacy and symbolic interactionism and summarized the effects of videogames as found in the literature. I also included current discussions of the history of videogame creation, gender and racial stereotypes and violence in games, as well as the strategies and purposes in game marketing. I added discussion of the five key areas of critical media awareness: marketers' messages to gain profit and power; users' different experiences with media based on background

and viewpoint; corporations' branding through inclusion, exclusion, and stereotypes; media producers' creative language and artifacts; and media authors' purpose and perspective. The chapter also includes literature about the connection between videogame creation, critical media literacy, and symbolic interactionism, as well as a discussion of literature on programming and creating videogames that are nonviolent and socially just.

In Chapter Three, I described the research methods, including setting, participants, process of gaining entry to the site, sampling criteria, intervention, and methods of data collection and analysis. Specifically, I included the lessons I presented on critical media literacy and game design as the study intervention. In addition, I presented descriptions of the protocols I used to assess student journals, interviews and Scratch projects and teacher notes; and pre- and posttest items I used to assess the effects of using Scratch on students' awareness of violence, marketing, and the five critical media literacy skills.

In Chapter Four, I reported, analyzed and discussed both qualitative and quantitative data I collected during the study. The focus of this chapter is the effect of the curriculum on students' awareness of violence, marketing, and the five principles of critical media literacy. I highlighted themes which emerged during data analysis with quotes from the students' journals, class discussions, and interviews. Comparative data from the pre- and posttests supplemented the qualitative data to describe changes in students' awareness of violence, marketing and the five principles of critical media literacy as a result of the critical media curriculum that incorporated creating nonviolent, socially just videogames in Scratch.

In Chapter Five, I included a discussion of the significance of the findings, conclusions, and implications. I also included recommendations for future areas of research in the field

of videogame creation and in using Scratch as tool for developing critical media literacy awareness in the curriculum. I discussed possible curriculum elements related to videogame literacy and creation that addresses the Common Core Standards for science, technology, mathematics, and engineering.

CHAPTER TWO

REVIEW OF THE LITERATURE

Introduction

J.P. Gee (2007) found that videogames engaged children in powerful ways. In 2013, Apple reported that from June 2008 to May 2013, 50 billion types of application software (apps) had been downloaded from the Apple store (Miller, T. & Monaghan, C., 2013). Games comprised 16.98% of application software downloads, followed by educational apps, which accounted for 10.83% of all app downloads ("Most Popular App Store Categories," 2013). Educational videogames are highly marketed to and consumed by children. Wolf (2007) reported that students were being introduced to games and digital media at increasingly younger ages. They wanted to do more than just watch media; they wanted to create and interact with media (Hutchison, 2007).

Squire (2011) reported that educational games entered classrooms at a staggering pace as educators rushed to integrate iPads, tablets, and laptops into educational settings to keep up with 21st century learning goals. The rush to integrate these technologies created concerns about corporate interests selling and developing videogames that addictively stimulated children through violence and media marketed blitz campaigns (Grossman & Degaetano, 1999). Kutner and Olson (2008) found that it had become critical that students have the skills not only to critically analyze educational videogames, but also to be able to understand and design educationally meaningful games of their own that countered hegemonic marketing messages and voiced concerns about stereotypes and violence in games.

Critical Media Literacy

In this study, I examined the effects of a violence prevention videogame-creation curriculum on the development of fourth graders' critical media literacy awareness. The pertinent literature included discussion of the history of videogame creation and its relationship to the theoretical framework of critical media literacy and symbolic interactionism. The literature also included a summary of current thinking about the effects of videogames on children's thinking and behavior.

History of Critical Media Literacy

The Media Literacy 1.0 that developed in the 1980s and 1990s focused on the power and influence of broadcast media such as film, television, and corporate advertising (Torres & Mercado, 2006). In his work, *Teaching the Media*, Len Masterman (1985) argued that a new model of media literacy curriculum was needed that went beyond analyzing the power of broadcast media. Masterman (1985) argued that in order to understand how meaning operates in media, students needed to engage in its actual production using its language and representations to create media products (Hoechsmann & Poyntz, 2012). The idea of using media to reshape the public sphere emerged in the 1960s, the early years of media literacy (Hoechsmann & Poyntz, 2012). David Buckingham (2006) and Jesus Martin-Barbero (1987) held that media education could be used as an empowerment tool, but their views remained a marginal position (Hoechsmann & Poyntz, 2012). Media literacy curricula in the late nineties and early two thousands was still focused on evaluating and analyzing media text and movies and had not yet embraced the more active creation model of media production (Buckingham, 2003). Media education centered on analyzing broadcast media, radio, and magazines to determine the answers

to questions related to what was on the screen, who made it, and how the viewer responded to it; but did not focus on what counter messages could be created and how, or on a viewer response to such messages (Hoechsmann & Poyntz, 2012). Media production tools were both expensive and difficult to access. The technological advances in the late nineties and early two thousands were not yet mainstream enough for students to create media easily and inexpensively (Hoechsmann & Poyntz, 2012). In foundational media literacy texts, the interpretation of texts and the interests of their corporate producers were the central issues that dominated the field of media literacy. Media production by students was not addressed in media literacy curricula.

The 21st century brought an explosion in the expansion of communications media, and an enormous change in public access to media creation tools. With this communication expansion, arose the idea that media production should be an integral part of media literacy (Sefton-Green, 2006). A new field of media literacy that included active production of media, critical media literacy emerged. Hands-on interaction and participation in media consumption and production increasingly became the norm rather than the exception. Henry Jenkins (2006) described these practices as part of a culture of convergence. This aspect of culture of convergence was "one where there are more opportunities for young people (and others) to express themselves through digital media" (Jenkins, 2006, p. 41).

If there was "a central thread running through contemporary definitions of critical media literacy, it was that literacy should involve not only interpreting but also creating media texts" (Hoechsmann & Poyntz, 2012, p. 16). Developing citizens with critical media literacy required explicit examination of media texts in educational settings to help children gain insight into their own values and the world they inhabit, as well as instruction on how to create counter media

messages. Hoechsmann & Poyntz (2012) wrote of the media-saturated world in which children lived that went beyond what they learned from their parents and teachers. The concept of critical media literacy expanded on the standard notion of media literacy by requiring it to include media production as an integral component. Analyzing media was not enough to empower children; they also had to learn to create and respond to messages if critical media literacy was to be effective. Critical media literacy involved the ability to analyze media texts and their relationship to dominant and powerful institutions, as wells as, the opportunity for young people to use creative media production to deliver their own messages and visions of the world (Buckingham, 2006).

Roger Silverstone (2004) believed that critical media literacy must always have a moral agenda. Critical media literacy enabled young people to become active contributors to the public worlds shared in cyberspace. O'Neill (2009) wrote that young people could affect the common good through participation in media creation.

Critical Media Literacy Awareness

People generally looked at media as consumers, giving little thought to subtle media messages they experienced and their impact. Critical media literacy awareness required users to analyze videogames and other media to understand the motivations of the producers and the effects the media have on people who use it. Some of the aspects of critical media literacy that became important for people to understand were violence, marketing, and Kellner's and Share's five factors of media literacy.

Violence Awareness

Researchers looked at violence in media for its potential to create a cultivation effect in which individuals exposed to media violence experienced increased fear and saw the world as more violent than it actually was (Gerbner et al., 1993). Researchers described effects of viewing violence in media including increased aggressiveness and antisocial behavior, increased fear of being a victim, increased desensitization to violence and the victims of violence, and an increased appetite for more violence in entertainment and real life (*American Psychological Association Commission on Violence and Youth*, 1993). Grossman and Degaetano (1999) found that the violent imagery in games such as Call of Duty raised concerns about the danger of exposing young people to media violence. Kutner and Olson (2008) demonstrated a correlation between aggressive behavior and children who played violent games. Ghose (2012) reported that with the increase in videogame technology, schools experienced an increase in physical and social bullying, device addiction, antisocial skills, and a lack of personal communication skills to solve interpersonal problems (Ghose, 2012).

Marketing Awareness

Barbaro (2008) raised the concern that marketers had begun to target children with advertisements to be lifetime consumers. Marketing techniques included using gender stereotypes, violence, and connections to children's feelings to sell products. Ghose (2012) felt that children internalized and acted out these values in social groups or appeared in school with anxiety, depression, and socially isolating behaviors. Part of the solution suggested was to introduce a critical media literacy curriculum that addressed the conflict between the positive and negative sides of technology (Pavlova, 2005).

Analyzing videogame trailers can make children aware of how marketers have used violence, images, and their feelings in advertisements to sell and excite them about games. Children can make the connection between violence and stereotypes in media, and they can then think about how they act, how their peers act, and the possible real life consequences of imitating violence and stereotypes. Pavlova (2005) found that children could then respond to these messages by learning to technically create their own videogames and create alternative messages of social justice.

Kellner's and Share's Five Core Concepts of Critical Media Literacy

In their explanation of critical media literacy, Kellner and Share (2005) required that students develop critical thinking skills to understand how exposure to popular media shaped their worldviews. They listed five core concepts that constituted critical media literacy (Kellner & Share, 2005). The concepts and five related questions have become the standard for teaching critical media literacy skills and have been used by the Center for Media Literacy (2007). In this study, students used Kellner's and Share's five core concepts of critical media literacy to analyze and create videogame trailers.

Marketers' messages to gain profit and power awareness. The first core concept posed by Kellner and Share (2005) was that media messages were constructed to gain profit and power. The key question concerned the reason the message was sent. Messages are sent to create a demand for commercial products or to get people to take certain actions. An example is a violent videogame, which uses action characters to convince young boys to buy it. If a child does not buy or play the game, he is socially excluded from his peer group. In a study on the effects of videogames, the Kaiser Family Foundation (2002) found that children who played more

videogames had a greater numbers of friends, because it was important to know about certain videogames to socially interact with peers.

Users' different experiences with media based on background and viewpoint awareness. The second core concept posed was that different people experience the same media message differently. The pertinent question addressed how and why different people understood the same message differently (Kellner & Share, 2005). People from different cultural backgrounds, socio-economic groups, or genders interpreted the same media message differently. Based on their backgrounds, what might different people see, think, hear, and feel when they see a media message?

Corporations' branding through inclusion, exclusion, and stereotypes awareness. The third core concept was that media products have embedded values and points of view (Kellner & Share, 2005). The key question addressed the lifestyles, values, and points of view that were represented in or omitted from a specific message. In every message, certain people were included while others not in the target audience were excluded. Media incorporate brands and logos in their messages to appeal to a target audience in order to sell products to them. Violent images and ideas may be incorporated into a brand to excite and attract young people to play videogames. Designers incorporate elements that cause adrenaline to excite and addict viewers to the feeling playing and watching a game creates.

Branding may attract and promote violent lifestyles, values, and points of view to attract a target audience. Violence has been a common branding tool because violence is universally understood. Thoman and Wright (1995) indicated that branding was used to create stereotypes and to get young people to buy goods to fit into socially popular categories. When looking at a

media message, children should think about what is being branded, who is being included in the target audience, who is being excluded, and why.

Gender and racial stereotypes branding in videogames and the videogame industry. Stereotypes perpetuated in videogames and in the videogame industry have included discriminatory images and exclusion of females and minorities, and inclusion of stereotypical roles of males. Culture and media such as violent videogames reinforced a popular cultural script that manhood was about obtaining power through violence (Ghose, 2012). A stereotype for girls was that power can be obtained through gossip, sexualization, and manipulation of other females (Kafai et al., 2009). These media images can become the idealized roles for children who are immersed in them. Conversely, many boys have been left out of the picture when it comes to traditional educational environments. Games may hold the key to bring boys back to literacy. Carr-Chellman (2012) revealed:

> The results are startling: In the most recent set of tests administered by the Program for International Student Assessment (PISA) across 65 countries, boys scored lower than girls in basic literacy skills in every country tested. In fact, while girls caught up to boys in math, they soared ahead of boys by 39 points in reading. It would be better to look for ways to engage boys in their own learning to 'empower them rather than channeling their energy into behaviors that schools might prefer.' Three ways that gaming could be used to engage boys in learning would be to create better educational games, to use existing high-motivation games in the classroom, and to allow students to create their own games. Game integration into a K-12 environment, particularly at the elementary levels appears to be a way to include active kids and boys. Some boys as well do not fit into the

> stereotype of the sports kid or overly athletic child and this role model can be overly shown in games as well. All children can learn, and games give a voice to those who do not fit the traditional mold of factory schooling. (p. 13).

Researchers and educators have advocated videogames as a powerful tool for teaching curriculum (Gee, J. 2007; Van Eck, 2006). Videogames excite and engage students in ways that traditional curriculum does not. However, concern about stereotypes in games has raised concerns for the use of these games in the classroom. Mou and Peng (2009) stated that the potential impact of commercial games in the classroom due to stereotypes must be considered by researchers and educators.

Mou and Peng (2009) found that the majority of leading characters in games were white males. The disproportionate number of male avatars has been one reason that fewer girls played games than boys (Hartmann & Klimmt, 2006). Kafai, Heeter, Denner and Sun (2008) found that females account for only 42% of online game players, but make up 71% of those who used puzzle and card playing games. Mou and Peng (2009) also found that females and minorities were underrepresented in commercial videogames. Lachlan et al. (2005) found the exception to be black males incorporated into sports games as leading characters. Female characters increased in games, but tended to appear as assistants or in supportive roles to males (Kafai et al., 2009).

In addition to the imbalance in game character diversity, the role models these characters offer have been limited. Giles and Maltby (2004) found that children and adolescents looked to role models in media as they developed their gender role identity. However, female avatars often wore sexy, revealing attire with either extremely thin or overly voluptuous body

images, while males in games were normal or masculinized (Kafai et al., 2009). In addition, Edgett and Rupp (2012) wrote that overly masculinized males can be a problematic stereotype for males who also do not fit into traditional gender roles. Even in commercial games such as Wii Fit and in educational apps, stereotypes were included that affected the development of children's and adolescents' identities (Mou & Peng, 2009).

The lack of minorities and limits on female roles in games raised concerns because these underrepresented groups have not reaped the benefits of gaming. Cooper (2006) wrote that games were a gateway to computer literacy and technology careers. Gaming has had positive aspects related to social science and cognitive development to which females and minorities in the future would not have access if they did not participate or feel represented (Durkin, 2006; Gee, J. P., 2007; Lee & Peng, 2006; Lieberman, 2006). Clark and Gorski (2002) speculated that female reluctance to choose computer and technology classes that influence career choices could be attributed to the lack of women and minorities in games.

Media producers' creative language and artifacts awareness. The fourth core concept was that media messages were constructed using a creative language with its own rules (Buckingham, 2006). The key question has been an attempt to identify the techniques used to attract viewers' attention. Media authors have chosen visual images, changes in lighting, angle of camera shots, music, colors, and characters to create an effect on the viewer. In the most common videogames, violent acts, motivating language, quick film cuts, flashes of color, exciting music, and voice-over narration have been creative techniques used to attract a player's attention. Kellner and Share (2005) noted that critical media literate students should be able to identify the creative techniques used in videogame trailers to attract viewers' attention. They should be able

to explain their choices of critical media techniques in their own productions, and how those devices will attract the audience.

Media authors' purpose and perspective awareness. The fifth core concept identified by Kellner and Share (2005) was that all media messages were constructed. The key question focuses on the nature of the message and who created, authored, or sent this message. Critical things they mentioned to analyze included the author's background, the message they created, and their motives. Someone had to put the pieces together to construct or create the product. People created or constructed all media and made choices about what they included in their media production and message. When analyzing media products, students should be able to identify the messages being sent and the authors' reason for sending them. As creators, children should also recognize their own messages and be able to choose nonviolent social justice messages to create media products such as videogame trailers.

Critical Pedagogy, Social Justice, and Critical Media Literacy

Freire (1998) expressed that

> It is extremely urgent that the power and effects of the media should be subjected to serious debate. As educators with open minds, we cannot ignore it. In fact, we must use it, but above all, we must discuss what is going on, what is being said and shown. (p. 123)

Technology shapes ideas and visions and a critical approach is needed to analyze and determine when the media is manipulating these ideas and visions. Darder, Baltodano and Torres (2009) found that critical reading of technology was necessary because of its incredible transformative power. One huge difference between the technologies of the past decade and earlier media in the decades before has been the individual access that people have to creating

and viewing content in iMovie, Twitter, Blogs, and You Tube. This access can open people up to new views. Teachers should not only strive to transfer knowledge but also to "create the possibilities for the production or construction of knowledge" (Freire, 1998, p. 30). Critical media literacy offers students an opportunity to have their voices heard in media. This is important not only for getting students' voices out, but also for sending out messages that are critical to social justice issues. The concept of social justice requires that we identify messages of dehumanization and capitalism being marketed to humanity. Pavlova (2005) said that it also requires that we use the media to create counter messages.

The lack of critical media literacy can lead to a negative of student videogame use in which children become isolated from others or are adversely impacted by the role models offered in these games. Constant access to media, spending hours playing games such as World of Warcraft or watching Netflix marathons can isolate individuals from others. Social isolation has raised concerns regarding violence in society and in schools. Shootings at Sandy Hook Elementary school, at Santa Monica College, and in other schools were attributed to the increase in social isolation and exposure to media violence (Scharrer & Wortman, 2012). Physical and social bullying was also attributed to misuse of media (Scharrer & Wortman, 2012). Ghose (2012) acknowledged that young people who became shooters felt powerless.

Ghose (2012) stated that when children did not fit into traditional roles, some fell into a depression, anger, and disappointment. Ghose (2012) felt that society did not necessarily teach constructive ways to deal with the depression and disappointment, which these children experienced. He thought that helping children who felt the burden of social isolation and perceived insignificance by having discussions and creating videogames of social justice to

counter media stereotypes would increase awareness of problems that affect millions of children (Ghose, 2012).

Schools have faced legal battles over social media, technology use, and an increase in cyber and real life bullying. Although the area of social media has been a developing area of case law, a number of cases have held students accountable for creating violent harassing media. A case of note in terms of social media involved a student who created a hate website to ridicule a classmate. In *Kowalski versus Berkeley County Schools* (2011), the student who created the "hate website" was found to have violated the school's "harassment, bullying, and intimidation" policy (Cambron-McCabe, McCarthy, & Thomas, 2009). In another case, *Wisniewski versus Board of Education of the Weedsport Central School District* (2007), a middle school student created an icon to identify himself on AOL messaging. The icon was the drawing of a pistol firing at a man's head with dots representing splattered blood. Underneath the drawing were the words "Kill Mr.Vander-Molen," his English teacher. Another student printed out the icon and brought it to the attention of school officials. The court upheld that charges could be filed against the student who created the icon (*Wisniewski v. Bd. of Educ. of the Weedsport Cent. Sch. Dist.,* 2007). Students using social media to harass and to promote violent images were imitating media role models (Ghose, 2012).

The legal cases have been cause for concern because they indicate a trend toward destructive activity by students who are not critically aware of how powerful technology can be in terms of sending messages that are hurtful both for the student who creates them and the person who receives them. Exposure to media created desensitization to violence and harassment in young people that can be addressed by raising students' critical media literacy awareness

(Thoman & Wright, 1995). Ghose (2012) wrote that it was important that teachers guide students to address messages of social justice in the media they use, because so many children were consumed by commercial messages that promoted antisocial justice models and were using technology to harass and hurt one another. Technology education should incorporate teaching students to "challenge the economy, not only to adjust to its demands" (Pavlova, 2005, p. 213). Pavlova (2005) wrote that inclusive dialogue with students ensured that technology was not being used only to meet the standards of business efficiency and profitability with young people. Social injustice can be seen on video directly, or an idea can be quickly manipulated to cause social damage to human beings. There is so much from which to select that "we want our younger generation to be able to select wisely and well from among the increasingly complex universe of data they have available" (Kerr, 2005, p. 1012). At the same time there is room for individual and community voices that are independent of the autocratic mainstream idea, which can produce justice.

Videogames and Critical Media Literacy

Critical media literacy analyzes and addresses the power of participation and social justice issues in the media of videogames. Videogame interactive media technology came into media education debates under a hail of suspicion (Kutner & Olson, 2008). The participatory nature of videogames changed the role of the viewer from a passive audience member to the role of an active participant in media (Gee, J., 2007). As active participants, players became protagonists in the game, making decisions rather than simply watching a movie with no ability to respond. Advances in videogaming graphics and simulative worlds such as Second Life immersed gamers in virtual programming that looked and felt realistic. The military uses gaming to teach human

pilots how to fly actual drones. In the year 2000, media debates centered on a search for answers to the April 20, 1999 shooting of students and massacre at Columbine High School. In "seeking answers to the senseless tragedy of Columbine, pundits and theorists identified the shooters' interest in violent video games as a potential cause of the incident" (Grossman & Degaetano, 1999). Kellner and Share (2005) wrote that in looking at videogames, educators needed to examine game content for critical media literacy concepts and help students to create content that can counteract hegemonic messages and give students voice.

Symbolic Interactionism

Blumer (1969) and Bolster (1983) were the key theorists of symbolic interactionism, a theory that underlies critical media literacy. Blumer (1969) explained that people acted toward one another based on the meaning they assigned to objects and people. Through social interaction, meaning was created, changed, and constantly reinterpreted. Individuals "are active and dynamic beings that interact with self, others, and their environment over time deriving individual meanings that are subject to change" (Bausch, Voorhees, & Inserra, 2006). George Mead (1934) influenced Blumer. The first concept in symbolic interactionism Blumer proposed was that individuals acted based on meaning assigned to things derived from their own interaction and personal experiences. The second concept was that through language cultural meaning is created through social interaction. The third concept recognized "the importance of individual perception and interpretation of meaning and symbols" (Bausch et al., 2006). Blumer (1969) claimed that "meanings are handled in, and modified through, an interpretive process used by the person dealing with the thing he encounters" (p. 2). Cultural knowledge, especially from the Internet and technology informs one's thinking and behavior.

Thus, games are created from existing pop culture, which in turn creates culture. This is why giving people the tools and knowledge to create nonviolent social justice videogames is an important part of changing culture.

Symbolic interactionism "focuses on the role of language and symbols in the (interpretive) processes of meaning-making" (Charon, 2010, p. 53). Children are learning how to act in the culture of which they are a part, and they look at symbols on the Internet and in media for ways to behave. Students create culture out of these symbols and try to interpret from each other what these symbols mean. Students use characters, language, and dress to create meaning in videogames and make meaning from this as they play the games. Symbolic interactionism "is also a valuable theory for advertisers and marketers in their quest to understand (and ultimately increase) the spending habits of adolescent consumers" (McGee, 1997).

Domine (2002) wrote that branding was an example of how symbols were used to create a culture of meaning for humans outside of the physical. Reality was created through the shared meaning of learners in social interactions (Denner, Werner, Campe, & Ortiz, 2014). When children were interacting in pairs and deriving meaning from the symbols they created in games, symbolic interactionism served as an appropriate theoretical framework (Chung, 1997). This study looked at how videogame programming influenced student social relationships. Woods (1983) wrote:

> [People] are constructors of their own actions and meaning. Objects in the world have a social meaning and they do not always carry the same meaning for different people, nor are situations interpreted by people in the same way. (p. 123)

Symbolic interactionism defines the socially constructed reality of the world and illuminates how human's perceptions of the world perpetually create and change the meaning of this reality as individuals interact with one another.

Effects of Videogames

A considerable volume of research has been done on the effects of videogames on players. Not only have researchers looked at negative aspects of gaming such as violence and marketing, but they have studied the positive aspects in a world where the demand for technologically sophisticated workers is high.

Positive Aspects of Gaming

There are many positive aspects of videogames and children can use these aspects to create exciting and compelling games of their own that counter negative media messages. Observers saw students "involved in problem solving, rapidly discovering rules and principles and applying them to new situations, figuring and deducing the meaning and drawing conclusions about the elements of a game based on minor clues" (Alexander, 2010, p. 1831).

Games take students out of everyday life and connect them to another world with imaginary things around them. Alexander (2010) wrote that in these worlds, children felt powerful because they controlled the ideas, the interactions, the characters, and the messages sent in the virtual environment. Videogames told a story in which participants played an interactive role. The "basic beginning-middle-end structure of game narratives is also to be found in almost all the stories of the world" (Alexander, 2010, p. 1841). The videogame story structure captivates learners to commit to the game. Alexander (2010) reported a "growing consensus that the commitment to a story adds to the engagement of players and their immersion

in the game" (p. 1842). Studies have revealed that gamers "greatly prefer imaginary settings, mythical creatures, and illogical rules of conduct over more realistic games and simulations featuring familiar events and environments" (Alexander, 2010, p. 1843). Children were able to choose and explore with an array of choices of characters, sequences, and landscapes to visit (Alexander, 2010). Students were not limited by the physical world around them; they were free to imagine any possibility. The visual graphics and fast learning that quickly drew learners in could be a potent educational tool. Alexander (2010) wrote that without critical media literacy awareness, these same characteristics could be both positive and negative factors if learning has been subverted by an overwhelming interest in these aspects of the fame and an almost addictive drive to stay in the gaming environment.

Nonviolent Videogames

Nonviolent videogames exist as a genre of games that are distinct from violent videogames. These games focus on the story rather than on simple shoot-and-destroy objectives. Anthropy (2012) felt that games did not have to be thought of narrowly because they can be used to tell many different stories. Organizations such as Games for Change encourage the creation and distribution of social impact games that deal with humanitarian and educational efforts. Students can create strategy, role playing, action, maze, puzzle, simulation, or treasure hunt games without violence. Martens (2013) reported that with the increase in application software, some game companies moved away from large-scale media projects and turned to creating games that tell a compelling story without violence. I have summarized the differences between violent and nonviolent videogames as DeGaetano and Bander (1996) defined them in Table 1.

Table 1

Comparison of Messages Sent in Violent and Nonviolent Videogames

Violent Videogames	Nonviolent Videogames
Problems can be resolved quickly and with little personal investment.	Problems are solved through patience, personal initiative, perseverance, tolerance, and flexibility.
The best way to solve a problem is to eliminate the source of the problem.	Gathering information requires work, and information must be carefully analyzed in order to be of help when making informed decisions .
Problems are basically black or white, right, or wrong	Defining and solving problems involves using complex skills.
It is acceptable to immerse oneself in the videogame's rule-driven reality without questioning the rules.	A solution in one instance might not work as a solution in another instance.
Use instinctual, rather than thoughtful, responsible behaviors to react to problems.	It is important to use critical and creative thinking skills such as planning actions, organizing information, predicting outcomes, experimenting with trial solutions, evaluating ideas, and analyzing solutions and their consequences.
Personal imagination is not an important problem-solving skill.	Use imagination and thinking abilities to co-create, with the game writer's, inventive solutions.

Note. Summarized from DeGaetano and Bander, 1996.

Nonviolent games offer an alternative to violent games and can be an inspirational source for videogame creation that incorporates critical media literacy skills.

Social Justice Videogames

Socially just videogames are a genre of games focused on improving and addressing problems of social justice in society. I summarized the characteristics that Kafai et al. (2008) described as distinguishing socially just and non-socially just videogames in Table 2.

Table 2

Comparison of Social Justice and Non-social Justice Videogames

Social Justice Game	Non-social Justice Game
Game about making the world better	Game about destroying the world
Educational game that helps children learn science and math curriculum	Game that does not have educational value
Game that teaches children about my country and other countries in the world	Game that acts like my country is the only country in the world and no one else matters
Game about sharing money to help make the world better	Game about keeping all the money for yourself
Game about picking up trash and coming up with a plan to improve the environment	Game with people walking by the trash on the floor and saying it is not theirs
Game about helping people in your group or team	Game making fun of people in a group or team because you think it is funny
Game showing people being kind and nice to people	Game showing people being mean to others
Game showing people helping others if they are crying	Game showing people hitting people when they are crying
Game in which people are not judged by their skin color	Game in which people are judged by skin color
Games in which people help those who are lost or in trouble	Games in which people walk by others, ignore them, do not get involved in others' problems
Games which invites people into the game or group	Games which excludes people
Games that show that boys and girls can like all different types of sports, activities, colors, and subjects in school	Games that make fun of boys who like to read and play Legos instead of playing sports or making fun of a girl who hates pink and who likes football and math

Note. Summarized from Kafai et al., 2009.

Kafai et al. (2008) wrote that social justice games focus on making the right choice to include all people of all races and genders. They found that in social justice games, people were treated fairly and they were not marginalized for being different or liking different kinds of people and activities. Social justice games focused on making the world a better place by

reaching out to help people in need. Characters in these games stood up and did the right thing to prevent people from being hurt.

Social justice games can include educational games that teach people without using stereotypes of race and gender. They can have a storyline in which people solve problems by listening to each other and trying to understand each other instead of just making a quick judgment to eliminate the problem quickly before understanding the issues involved. If a character quickly eliminates a problem at one point in the game, he faces consequences and learns later about how the game world is affected by what happened as a result of the action he took.

Videogame Creation

Ford (2009) defined videogame creation as a genre of gaming in which people created their own games using programs such as Gamemaker and Scratch. With the development of videogame creation software such as Gamemaker, people designed game rules, scripted the game, drew characters, added music, and wrote dialogue (Fullerton, Hoffman, & Swain, 2004). Project-based educators integrated game design into the curriculum, because the coding, graphic artistry, concept design, and communication skills required to create a game fit into the problem solving and critical thinking skills that students needed to be successful in the 21st century (Quillen, 2012). Anthropy (2012) wrote that creating games stimulated students to appreciate them and to think more about their craft and designs so game creation was not a mysterious process to which only a few highly skilled programmers had access. Game development evolved to include making creative decisions using tools such as Game Maker, Gamestar Mechanic, and Twine (Kauhanen, Tran, & Biddle, 2007). Every new game was "a voice in the darkness. And

new voices are important in an art form that has been dominated so long by a single perspective" (Anthropy, 2012, p. 160).

Although most videogame research has focused on playing games, there have been a few studies examining how constructing videogames can have benefits for student learning (Dalal et al., 2009; Kafai, 1995; Kafai, 2006; Papert, 1980). Further research demonstrated that opening game creation to a wider audience and allowing voices to be heard can counteract single stereotypical models that isolate individuals and render them powerless (Anthropy, 2012).

History of Videogame Creation

Game creation has not always been accessible to everyone. Initially, videogames were created by an insular group of computer programmers, mostly engineers, who had access to computers (Anthropy, 2012). These people knew how to code in the language of computers (Anthropy, 2012). As would be expected, these early engineers designed games such as Dungeons and Dragons based on their personal interests (Baer, 2005). Salespeople marketed these early games to a mostly male audience, whose interests mirrored those of the early videogame creators (Wolf, 2012). The industry grew based on this early model, attracting mostly male players (Goldberg, 2011). The $12 million dollar cost to design a game prevented the gaming industry, much like the movie industry, from taking risks on game content that might fail (Kent, 2001). With content designed to attract males, males became the primary consumers of videogame titles (Wolf, 2007).

Another issue tied to early videogame creation and content dealt with the aesthetics of game design. Just using a mouse to point and aim and then click to shoot was a design problem.

So it took considerable extra effort and creativity for game designers to move plotlines without violence (Baetman, 2006).

In the 1970s and 1980s when personal computers were first introduced in schools, educators attempted to teach early programming skills to students. In his book, *Mindstorms*, Seymor Papert touted Logo or basic programming as a way to teach children how to program (Resnick et. al, 2009). Problems occurred, however, when children reached higher levels of programming skills. Teachers could not support them in troubleshooting the program code if something did not work. Often, instructors did not know how to take children to the next level of programming (Resnick et al., 2009). Many of the early programs also focused on completing a specific task such as programming a set of prime numbers. Children did not feel personally interested in the material and lost interest when it did not engage them (Resnick et al., 2009).

Today, the sophistication of the technology has grown to the point where students can produce as well as consume media. Educators first attempted to reintroduce children to a programming curriculum with Flash and Action script. Now with programs such as Scratch and Alice, computer programming has again become accessible to children (Resnick et al., 2009). Despite this opportunity, many of today's children have become heavy users of technology, but not creators. People still see computer engineering as something for a narrow, highly skilled population.

Future of Videogame Creation

Schott and Horrell (2000) wrote that videogame creation needed a plurality of voices that included authors from diverse backgrounds, gender orientations, and cultures. Videogames can "transmit ideas and culture from person to person as personal artifacts" (Anthropy, 2012, p. 9).

The Internet made self-publishing and distribution of games accessible to everyone, not just to publishers and programmers (Hutchison, 2007). With a wider variety of people now able to create games using the tools available, engineers have made subject matter and the designs more diverse (Hong, Fadjo, Chang, Geist, & Black, 2010). Game design tools for nonprogrammers and the free distribution of games online reinvented the videogame genre (Anthropy, 2012). Boyer (2010) wrote that games could be created even by young children, because the barriers of technical knowledge and publishing had been eliminated to make game creation accessible.

Game content and design including more prominent roles for females could stimulate female interest in the industry. In 2004, Haines found that only 16 % of the videogame workforce was female. However, there is now a market for female game designers. Integration of greater diversity and increased representation of gender and race in game design are areas in which there are opportunities to change the nature and impact of gaming. Early games developed for a female audience were based on research of stereotypical gender roles such as the most popular pink game of the 1990s, Barbie Fashion Designer, a game in which girls dressed up Barbie and printed out fashion plates (Kafai et al., 2008) In 1995, a company called Purple Moon started to design games for girls with less of an emphasis on the ultrafeminine aspects of girlhood, which resulted in games such as Nancy Drew and a friendship series that still exist today, but more female centered games are needed (Kafai et al., 2008). Anthropy (2012) found that the game industry and designers could decrease the gender and race gap and transmit ideas and construct the reality of culture by including a more diverse set of voices. Certainly, gender and racial stereotypes are an area of social justice that videogame creation can address.

Videogame Creation and Learning

Although most videogame research has focused on playing games, there have been a few examining how constructing videogames can have benefits for student learning (Dalal et al., 2009; Kafai,1995; Kafai, 2006; Papert,1980). Creating helps students construct meaning. Jonassen et al. (2005) asserted that conceptual change was a process that occurred through constructing and reorganizing personal conceptual models. Students construct meaning and knowledge through the process of using instructional tools. According to Jonassen, "model-based reasoning is engaged and fostered by learner construction of qualitative and quantitative models of the content or phenomena they are studying using technology-based modeling tools" (2005, p. 15). According to Jonassen et al. (2005), these story model experiences were necessary for learning. It was not enough for children to watch videogame trailers and analyze them based on the five core principles of critical media literacy. Children needed to create the games to truly understand how the media works and to understand the creative techniques of media and how media messages are constructed for audiences.

Digital games "have a great potential for storytelling" and for allowing the game creator to communicate his or her personal experiences (Alexander, 2010). The definition of a game does not have to be a big budget enterprise like Call of Duty or a shooting game. Anthropy (2012) defined a game as "an experience created by rules" (p. 43) The literature on children creating stories to learn curriculum content in game models supported the findings that children making their own games was an alternative that needs to be explored (Devlin, 2011). Games were described as "uniquely suited to exploring systems and dynamic relationships" (Anthrophy, 2012, p. 20). If a character in a game makes a choice, there would be a consequence to the

character's action. The player steps into the empathetic role of being another person and dealing with the choices the character made and the consequence of his or her actions. Blau et al. (2009) explained that videogame creation allowed more people's experiences to be heard, which was part of the experience of critical media literacy.

In the past, critical media literacy emphasized reading media text. It did not emphasize the production of student-generated media texts (Buckingham, 2006). Today, videogame creation tools allow students to create and make texts in ways that were not earlier available. As students create texts, they develop critical media literacy skills using and responding to media in the programming genre. Peppler and Kafai (2007) spoke of the advantage of having students write about media messages and respond to media in the texts they create because it empowered them to deconstruct product messages and critically analyze them so that they became critical consumers that were not swallowed by media culture. As students created texts, they developed critical media literacy skills by learning to use and respond to media in the programming genre.

If games communicate the values of their creators in a unique way, "then it's absolutely essential that there be more creators passing on more values, more perspectives" (Anthropy, 2012, p. 67). According to Peppler and Kafai (2007) sampling and remixing games allowed authors to have their own voice.

Resnick et al. (2009) stated that students could use technology tools such as Scratch, a simple programming language, to build story models using mathematics and computer science. These models could help them make sense of their world. They felt that Scratch was a type of videogame creation tool with which students could develop their own media products (Resnik et al., 2009). Using Scratch provides learners with the opportunity to construct their own critical

meaning of educational content through the narratives they design in games. When constructing games in Scratch, students can engage in problem solving and critical media literacy. Burke (2012) concluded that using Scratch gave students voice in the creation of content. Students can create games in Scratch which model real life situations, thus increasing critical media literacy of social justice in the real world. They then can upload these games to the Scratch website and share them with other users.

Using Scratch, students were able to create meaning of the world around them through the self-constructed narratives they designed for their games. This activity demystified game content and allowed people to be conscious consumers who can respond to and create their own games to benefit children and promote social justice values. In deconstructing social justice issues in videogames and reconstructing positive images in their own games, students became the "programmers not the programmed" (Resnick et al., 2009).

Videogame creation and learning science, technology, engineering, and mathematics. Several researchers have found that videogame creation is a way to learn important STEM (science, technology, mathematics, and engineering) skills that ensure students demonstrate college and career readiness abilities for the 21st century job market (Rogers, 2011; Trilling & Fadel, 2009). Mayo (2009) defined STEM as a culture of teaching and learning that engages students in solving real world problems. Gee and Hayes (2010) saw videogame programming as integrating science and technology with art, music, and photography in a complex problem-solving environment that fully integrated scientific, technical, and technological thinking and decisions with socioemotional intelligence to solve problems. Israel, Marino, Basham, and Spivak (2013) noted that:

> [T]o improve struggling learners' STEM performance, educators and researchers have emphasized the importance of authentic STEM learning that results in deeper understanding of science and mathematics…[Researchers expect] instructional technologies to support students' engagement and content acquisition in STEM areas. (p.54)… "Emerging research suggested that instructional technologies such as videogames (Marino & Hayes, 2012)" can support STEM instruction in a way that can be motivating to students. Gaming technologies can engage students in STEM at the convergence of education, entertainment, and social engagement (Barab, Thomas, Dodge, Carteaux, & Tuzun, 2005). Despite the promise of gaming technologies for engaging students in STEM learning, traditional mathematics and science instruction rarely made use of such technologies (Marion & Beecher, 2010). This in sharp contrast to the fact that most students, including students that typically underperformed in STEM, indicated that they engaged with commercial gaming technologies. (National Research Council, 2011). (p. 54)

The national STEM videogame challenge in which students created a videogame around STEM concepts was an example of how videogame programming could be used to provide a creative and innovative approach which makes STEM learning engaging and fun (Mote, Kafai, & Burke, 2014). Siko and Barbour (2013) noted:

> [As science education] progresses toward more inquiry-based standards, educators will need to develop a wide variety of experiences for students to express their abilities of authentic science practices. Designing a game may be one more way for students to do so. (p. 2)

Videogame creation and learning the Common Core standards. Mak (2014) found that videogame programming was a way to teach the Common Core standards in the classroom. The hour of code sponsored during computer science week underscored the use of computer programming as part of the curriculum (Martinez & Stager, 2014). Videogames integrated with the Common Core standards such as the game Quandary (Fablevision, 2013) helped students develop critical thinking, perspective taking, decision making, problem solving, and communication skills. In the game Quandary (Fablevision, 2013), players had to make difficult decisions in which there were no clear right or wrong answers, but important consequences to themselves and to others about how to build a new colony on the imaginary planet Braxos. In their interactions with other settlers in the colony, they considered facts, opinions and solutions, as in real life. Though the game's setting was a futuristic colony, the difficult situations that players encountered were translatable to the ones they were likely to face in daily life (Quandary, Fablevision, 2013). The skills players developed while playing Quandary (Fablevision, 2013) such as critical thinking, perspective taking and decision making helped them recognize ethical issues and deal with challenging ethical decision-making scenarios of social justice.

Videogames like Quandary (Fablevision, 2013) in which players create their own characters and scenarios develop deep critical thinking skills aligned with the Common Core. This goes a level deeper when children program their own characters, scenarios, and interactive game play in Scratch. Gee and others have found learning the common core as digital game design and building has been an effective approach (Gee, 2008a, 2008b; Kafai et al., 2008). Because students are already interested in games, educators can harness this to implement

Common Core skills in their classrooms by having students design, develop, and build their own digital games. Li, Lemieux, Vandermeidan, & Nathoo, (2013) argue that:

> Due to students' ongoing relationship with technology, learning by game building has encouraged researchers to perform empirical studies in the subject areas of mathematics (Kafai & Ching, 1996; Noss & Hoyles, 2006), computer science (Korte et al., 2007), and elementary science topics such as physics and mathematics (Kafai & Ching, 1996; Li, 2010). (, p. 312). In these studies, researchers analyzed and interpreted students' game-building experiences to find patterns, processes, and connections between building and learning. (p. 312).

McKee-Waddell and Harper (2013) found that teachers were striving to incorporate technology and the Common Core State Standards (CCSS) into classrooms to prepare students for careers in the areas of mathematics, English, language arts and literacy, history, social studies, science, and technical subjects. The use of technology and media skills "is blended into the CCSS as a whole. This was an intentional key design consideration as explained in the Introduction to the Standards. Research and media skills and understandings are embedded throughout the Standards" (Royer & Richards, 2013). Sardone and Devlin-Sherere (2010) found that teachers could use the media technology of programming games to teach important Common Core content.

Ketelhut and Schifter (2011) wrote that teachers were more likely to integrate videogames into lessons when an assessment system within the game such as a badge made the direct connection to the Common Core skills learned. Stirling (2013) discussed how methods were being developed to assess the Common Core in new and exciting ways. Siko and Barbour

(2013) found that at the end of a three year research project, students who created games scored significantly higher on final unit assessments than students who had not. Siko and Barbour (2013) wrote that game design projects should incorporate multiple disciplines for the content and writing of the narrative. For example, an elementary classroom could use elements of science and social studies in the games' content and narrative, with a focus on a particular writing style (Siko & Barbour, 2013). Clark, Nelson, Sengupta, & D'Angelo (2009) found that a digital badge system could offer a way to assess skills learned while creating games. Digital badging "recognizes learning and growth wherever it happens and helps people connect their accomplishments across institution types" by bringing together students' accomplishments in various learning spaces (Fontichiaro & Elkordy, 2014). For educators, "digital badges acknowledge that a learner has demonstrated knowledge or skill in a content area such as a common core standard" (Fontichiaro & Elkordy, 2014, p. 13). Fontichiaro and Elkordy (2014) wrote that game-based learning applications and courses in Scratch programming could be naturally tied to badge systems to assess common core learning.

Conclusion

The literature presented here discussed the field of critical media literacy, symbolic interactionism, and computer programming in schools. Gaps in the literature indicate that more research is needed on teaching critical media literacy skills and computer programming skills in an integrated fashion. Research is needed on using games and Scratch programming in educational settings, as well as on incorporating videogame creation as a method of teaching STEM and Common Core standards.

CHAPTER THREE

METHODOLOGY

Introduction

The purpose of this mixed-method study was to determine if a critical media literacy (Kellner & Share, 2005) curriculum, which included creating nonviolent social justice games in Scratch, affected students' awareness of marketing, violence, and the five principles of critical media literacy. (See Chapter Two for a detailed explanation of the five principles of critical media literacy.) The final study participants were from the fourth grade at a Catholic school in Los Angeles. I selected participants for journal and interview analysis based on a representative convenience cluster sample. I taught students critical media literacy lessons and Scratch lessons, and then facilitated their creation of games in Scratch. In the study, I determined students' awareness of the study elements before and after the intervention based on both qualitative data obtained from teacher reflection notes during and after lessons, student responses in journals, interviews about students' videogame trailer projects in Scratch, and quantitative data from pre- and posttests administered to both control and intervention groups, and analysis of the resulting data. I coded and organized data into themes of awareness of violence; marketing; marketers' messages to gain profit and power; users' different experiences with media based on background and viewpoint; corporations' branding through inclusion, exclusion, and stereotypes; media producers' creative language and artifacts; and media authors' purpose and perspective. I designed analysis of these data to provide insight to teachers about using computer programming to teach critical media literacy skills to students in schools.

Purpose and Research Questions

Videogames excite learners of this generation who are exposed to more hands-on media than ever before. Games have incredible potential for learning, but they may also contain violence, marketing, and stereotypes that concern parents and educators. Many educators believe that it is important to have classroom tools to address children's understanding of these games and their impacts. This study investigated the research question: What are the effects of implementing a critical media literacy curriculum program on awareness of

- Violence;
- Marketing;
- Marketers' messages to gain profit and power;
- Users' different experiences with media based on background and viewpoint;
- Corporations' branding through including, excluding, and stereotypes;
- Media producers' creative language and artifacts; and
- Media authors' purpose and perspective?

Study Design and Limitations

The study was a mixed-method qualitative and quantitative study with a concurrent triangulation data design (Cresswell, 2009). Krathwohl and Smith (2005) wrote that "mixed-method studies provide a higher level of validity and reliability than studies using a single data gathering method" (p.89). In this design, I collected qualitative data from teacher reflection notes, journals, interviews, and Scratch projects. To triangulate these data, I analyzed the quantitative results from pre- and posttests based on a test previously used in other studies. Even with this mixed-method study, threats to reliability and validity came from possible deviations

from results of the original test because of age-appropriate modifications, effects of other media literacy instruction, misleading answers from participants, sampling limitations, and lack of a viable control group.

Tool Legitimacy, Study Reliability, and Validity

In this study, I based the pre- and posttest, the observation protocol, and interview questions on the themes of awareness of violence, marketing, and the five core concepts of critical media literacy that are part of the curriculum, *Beyond Blame*: *Challenging Violence in the Media* (Center for Media Literacy, 2007). The validity and reliability of the instruments was enhanced by the fact that the pre- and posttest has been used in prior studies. Webb et al. (2009) conducted a pilot study in which they used the *Beyond Blame Critical Media Literacy* curriculum (BBCML) (Center for Media Literacy, 2007) and developed a pretest/posttest to measure critical media literacy awareness. (See Chapter Two for explanation of the BBCML curriculum and test.) Results from the initial pilot study were published in the article "Media Literacy as Violence Prevention" (Webb et al., 2009). The *Beyond Blame* (Center for Media Literacy, 2007) curriculum was the subject of a longitudinal study by UCLA from 2007-2009 (Webb, et al., 2009). That study used the curriculum with 20 middle schools from seven school districts in Los Angeles County. In this study, I used the pre- and posttest in a way similar to the Webb et al. (2009) study. I used a curriculum, pre- and posttest, teacher reflection notes, journal, and interview protocols that have been tested in other schools to enhance the reliability of the results in this study.

Modifications to the test and protocols. Differences in the elements of the pre- and posttest between this and earlier studies brought reliability into question. Originally designed for

the sixth grade, the *Beyond Blame* curriculum (Center for Media Literacy, 2007) was mixed with the fourth-grade curriculum to make it age appropriate for participants in this study. I replaced the public service announcement creation portion of the *Beyond Blame* program (Center for Media Literacy, 2007) with programming of socially just nonviolent videogame trailers in Scratch. Modifications in design were appropriate as the curriculum could be used with any media lesson and any media creation medium. I made slight changes to the pre- and posttest to specify questions about videogames. This was appropriate because the curriculum stated that the pre- and posttest could be used to evaluate critical media literacy for any media product. However, these modifications to the *Beyond Blame* curriculum (Center for Media Literacy, 2007) and pre- and posttest to make the curriculum age appropriate and specific to this project may also have had some effect on the study's validity and reliability.

Inconsistency in responses. In addition to possible problems with test reliability and validity, students may also have wanted to please the teacher by answering questions in a way they felt I would prefer in interviews and on the test. The children may have said that creating socially just nonviolent games raised their critical media literacy awareness, but they may have preferred to create and use violent and socially unjust games in their free time. This also could have affected the validity and the reliability of the study. However, using multiple sources of information including the tests, journals, class discussion comments, teacher observations during class, and analysis of Scratch projects should have uncovered conflicting answers in this area. Glaser and Straus (1967) noted that probing deeper on these conflicting answers was one way to uncover themes that were not originally identified in the research plan.

Other sources of critical media literacy education. This year at the intervention school, a critical media literacy curriculum entitled *Common Sense Media* was taught for the first time in grades K-8. Digital citizenship was taught primarily in computer classes. It is possible that some of the students' knowledge of critical media literacy came, not from the lesson or creating Scratch projects, but rather from the sources outside the study not available to students in the control group. In addition, parents and others have become concerned about the effects of violent videogames, as incidents involving violence in schools have brought this theme to their attention in the news. This has resulted in discussions about media literacy with children outside of school. It is possible that the test could have identified changes based on these activities rather than the intervention. Gathering quantitative data immediately before and after the intervention, and qualitative data throughout based on questions specific to the curriculum should have ensured a link between change in student answers and the intervention.

Sampling Limitations

The study was ultimately conducted at only one school site, so findings could not be generalized to the larger population. Further studies comparing multiple classrooms at schools with different demographics would increase the reliability and validity of future studies.

A selection bias existed in the intervention group for this study. The sample in this study was limited by which parents gave permission for their children to participate. In addition, I chose participants in this study who did not represent a random sample of the population, as is most appropriate for single method quantitative studies. Since I knew the children in the intervention group, I may have had bias in how I saw results from the study when I compared and analyzed the data from before and after the intervention. Since some participants were less likely to be

included than others, there were issues with the external validity of the study in terms of generalizing the results to the rest of the population. However, Glaser and Straus (1967) allowed for such selection bias for qualitative studies because of the anecdotal nature of much of the data gathered, and the constant comparison method of creating emerging themes instead of simply testing hypotheses.

Control Group

The initial design, I intended to compare pre- and posttest scores from control and intervention groups to test validity of the results. The purpose of using a control group was to test the variation in score changes during the time of the intervention between students who experienced the curriculum and those who did not. The hypothesis was that the attitudes and knowledge of the intervention group would change because of the intervention, but those of the control group would remain the same in the absence of the intervention. Ultimately, the control group sample was too small to be useful in the study.

Study Setting

The setting of the study was two Catholic Archdiocesan K-8 schools in the Los Angeles area. In the intervention school, I was the principal. Practical limits on the time available required me to do the investigation at the site where I was employed. I received formal permission from the Assistant Superintendent to conduct the research and intervention in the fourth-grade classroom at the site.

Intervention Group School

According to the annual school census, the intervention group school had an enrollment of 310 students, consisting of 173 boys and 137 girls. The student body population was comprised

of 212 Caucasians, 55 Latinos/Hispanics/Chicanos, 23 Filipinos, eight Asian/Pacific Islanders, four African Americans, and eight multiracial children. The majority of families were middle to upper middle-income families, with most parents employed in white-collar professional jobs. In many families, both parents worked full time and utilized the school's before- and after-school child care programs. The ethnicities of the fourth-grade students according to the school census were three Latino/Hispanic/Chicano, five Filipino, one multiracial, and 24 Caucasian. (To protect the privacy of both schools and all participants in the study, the specific source of these data sets remains confidential.)

Control Group School

To avoid contamination of the control group with information about the curriculum, I selected a school for the control group from which teachers and students were unlikely to have contact with the students receiving the intervention. Although the sample was too small to assign the intervention randomly, the characteristics of the schools were similar in terms of their racial and gender distributions.

The school in which the control group was located was one to which I could gain access to administer the pre- and posttests. According to the school census, the school had an enrollment of 620 students, consisting of 286 females and 342 males. The student body population was comprised of 532 Caucasians, one Latino/Hispanic/Chicano, and 91 multi-racial children in a wealthier area of Los Angeles. The majority of families were middle- to upper-income families with most parents employed in white-collar professional jobs. The fourth-grade class, which served as the control group had eleven children.

Gaining Entry to the Site and Sampling Criteria

Before I began any contact with parents or children about the study or the intervention process, I received formal permission from the assistant superintendent to do the research. Once I obtained Institutional Review Board (IRB) approval, I sent a contact letter to parents of the children at both the control and intervention schools explaining the purpose and method of the study and asking permission for their child to participate. I attached an IRB informed parent consent form, a child assent form, and the experimental subjects' bill of rights (See Appendices K and L). I offered to meet with parents personally to further explain the study and assure them of privacy if there were any questions or concerns. I also assured them that nonparticipation would not impact the children negatively. So that all children in the intervention group had the same experience, I read the assent form to all of the children in the class, and I asked those who were participating to sign an assent form in addition to the assent forms for children already obtained from parents.

From the students who participated in the intervention group, I used a convenience sample because I conducted the study at the site at my place of employment. I received parent permission and only gathered and analyzed data from students with signed student assent and parent consent forms, although the entire fourth-grade class was taught the critical media literacy curriculum as part of their regular school day curriculum in language arts, mathematics, and science. In the study research and results, I included only students who received permission and who signed the assent forms. I then took a convenience sample of students to interview about their Scratch projects.

Intervention

As a way to address students' attitudes to commercially produced games, I taught critical media literacy and Scratch lessons, and then asked students to create their own games in Scratch. In addition to teaching the lessons, I assigned students to write their reflections in journals, and I wrote teacher reflection notes during and after lessons. I also conducted interviews with students about their Scratch projects. Students took a pretest a week before the study and a posttest a week after the study to determine the extent and nature of change in student awareness of violence, marketing, and the five factors of critical media literacy.

Week One

The goal of the first week was to gain a preintervention assessment of student knowledge of violence, marketing, and the five elements of critical media literacy. Staff at the schools administered the Videogame Violence and Critical Media Literacy pre- and posttest at both school sites (See Appendix I). I gave the students a set of preintervention journal questions to answer after taking the survey (See Appendix B).

Week Two

The goal of the second week was to give students the tools to create their own video games and to determine the nature of the games they would create. After administering the pretest and preintervention journal questions, I taught eight miniature lessons each emphasizing a particular programming skill in Scratch. I asked students to create games both before and after the week of critical media literacy intervention lessons to identify differences in the types of games students created before and after the critical media lessons. Every miniature lesson was supported by one to three sample digital stories selected from the Scratch website

(http://scratch.mit.edu), which exemplify a particular videogame storytelling element or critical media literacy skill (i.e., jolts, music, character selection) featured in the lesson. This helped students learn the coding scripts they needed to make characters move in the desired way in the story for their videogame trailer. Topics included introducing a character, teaching your character to do something, introducing a second character, making some noise using sound effects, and finishing the story.

Access to the Scratch program was the key to the success of this assignment. Scratch is available at no cost from http://scratch.mit.edu. Before students came to the computer lab, the computer teachers at the intervention site downloaded Scratch version 1.4 (Lifelong Kindergarten Group, 2009) so that every computer had a version of Scratch on which children could work. The Scratch website included examples of games created by students (See Figure 1).

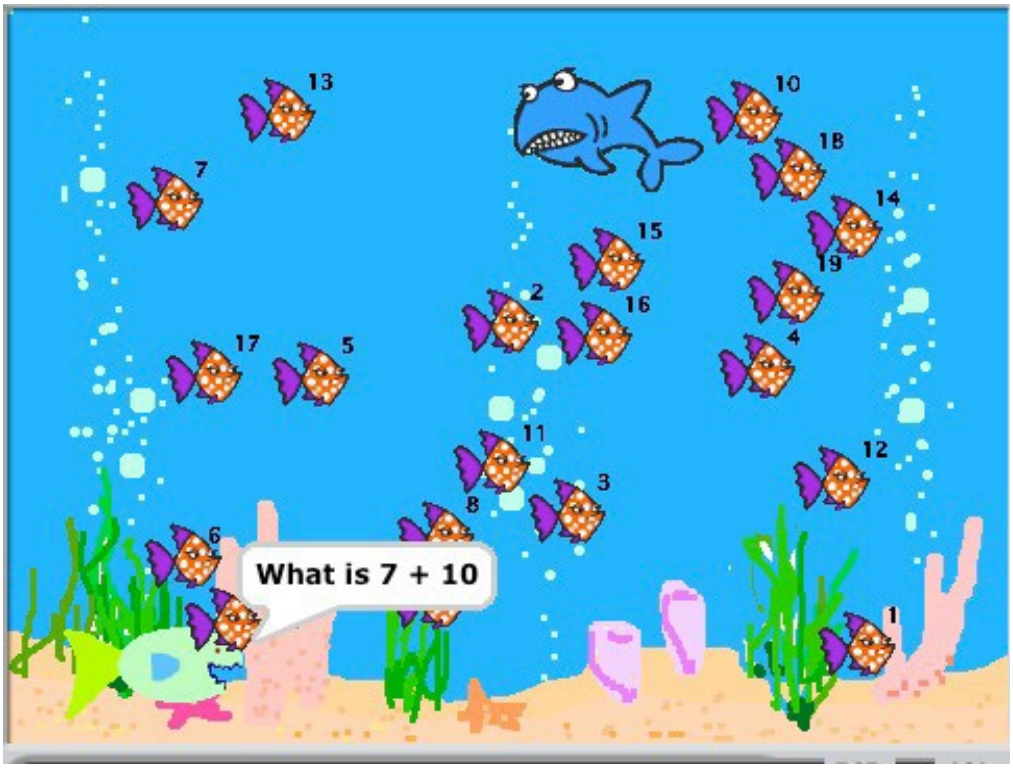

Figure 1. Screen View of Sample Scratch Game. This single screen view is part of the tutorial used as an example of the types of nonviolent videogames people can create in Scratch programming. Adapted from Lifelong Kindergarten Group, 2009. Used under the Creative Commons Share Alike license. Available from http://scratch.mit.edu

Students worked in pairs on Scratch projects so that they could collaborate to create videogames and because of the limited number of computers in the computer lab. The fourth-grade teacher and I randomly assigned the pairs. Having students work in pairs was consistent with symbolic interactionism where Denner et al. (2014) found meaning was socially created through people's interactions with others (Denner et al., 2014).

I introduced the lesson on how to add characters and make them say something. They began with the start-up screen for Scratch (See Figure 2).

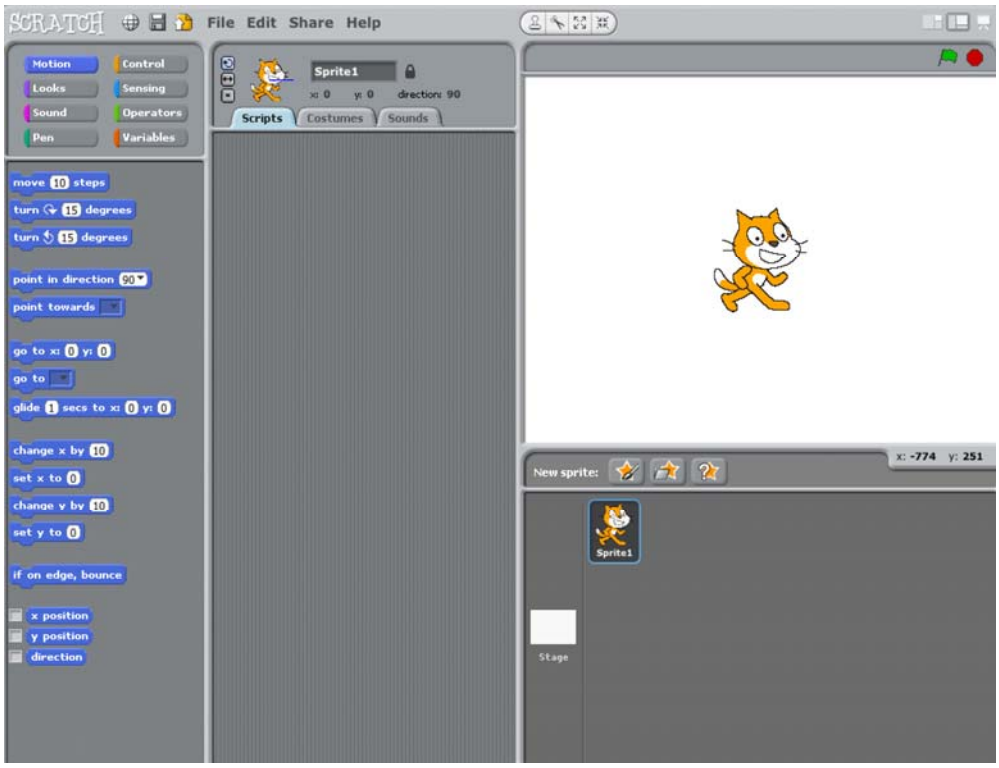

Figure 2. Start Up Screen for Scratch Program. This is view of initial screen for the Scratch creation program. This screen has links to the various elements students can use to construct videogames. Adapted from Lifelong Kindergarten Group, "Get Started", 2009. Used under the Creative Commons Share Alike license. Available from http://scratch.mit.edu/projects/editor?tip_bar=getStarted

Students then followed directions on the Say Something card (See Figure 3.) to create their first Scratch project.

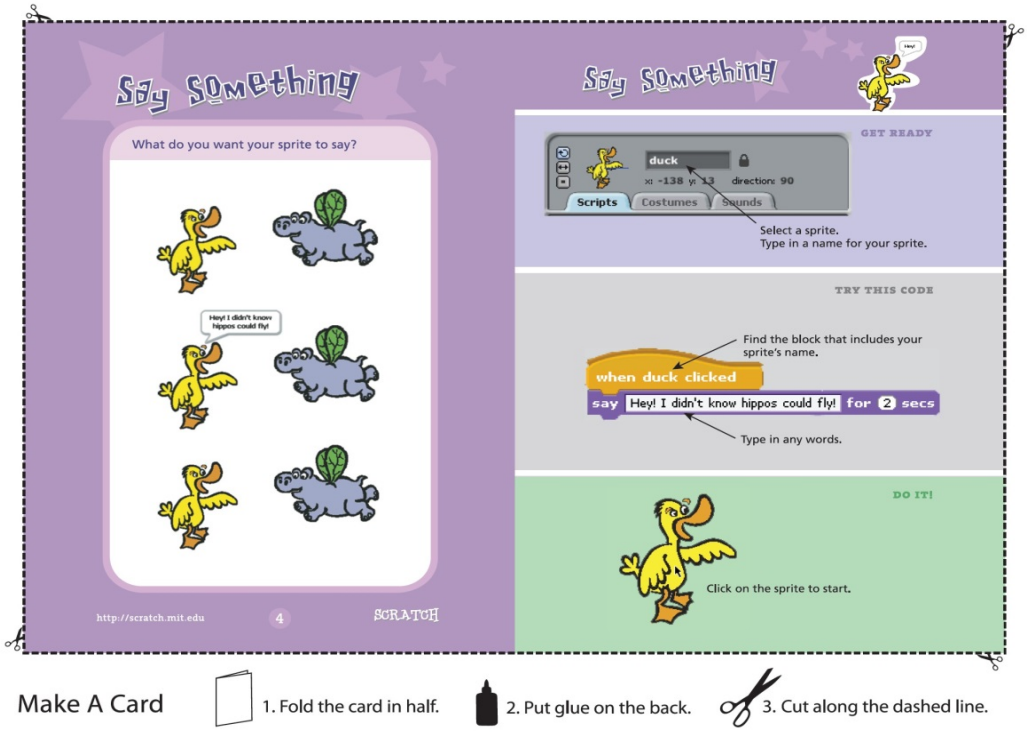

Figure 3. Say Something Programming Card for Scratch Instruction. I gave this card to children in the intervention group to supplement Scratch instructions. The card includes views of screens in the Scratch program with instructions for the steps to take to make their sprites make sounds. Adapted from Lifelong Kindergarten Group, "Say Something", 2009. Used under the Creative Commons Share Alike license. Available from http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/04_saysomething_v14.pdf

Students then used that card and the rest of the set of Scratch cards (See Figures 4-11) as references for creating their own games.

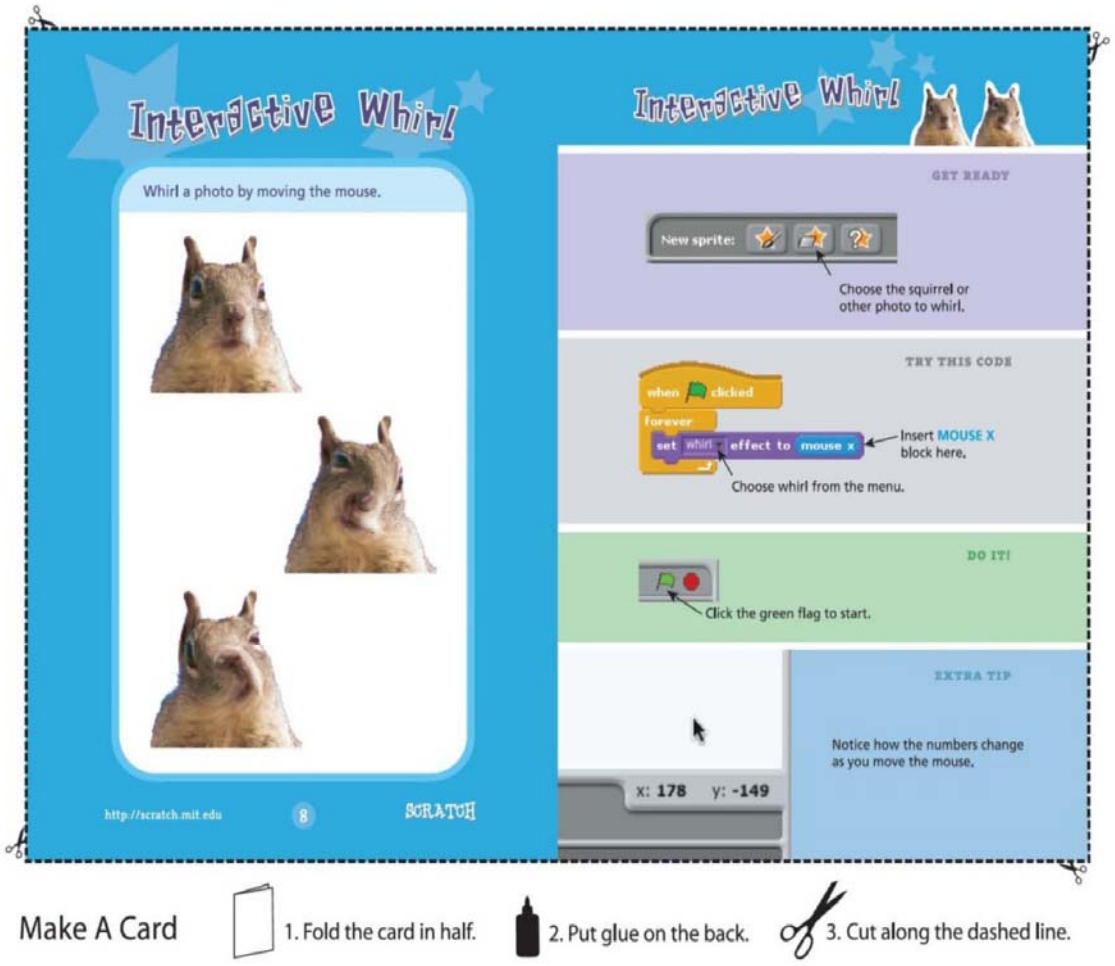

Figure 4. Interactive Whirl Card for Scratch Programming Instruction. I gave this card to children in the intervention group to supplement Scratch instructions. The card includes views of screens in the Scratch program with instructions for the steps to make their sprites turn around. Adapted from Lifelong Kindergarten Group, "Interactive Whirl", 2009. Used under the Creative Commons Share Alike license. Available from http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/08_interactivewhirl_v14.pdf

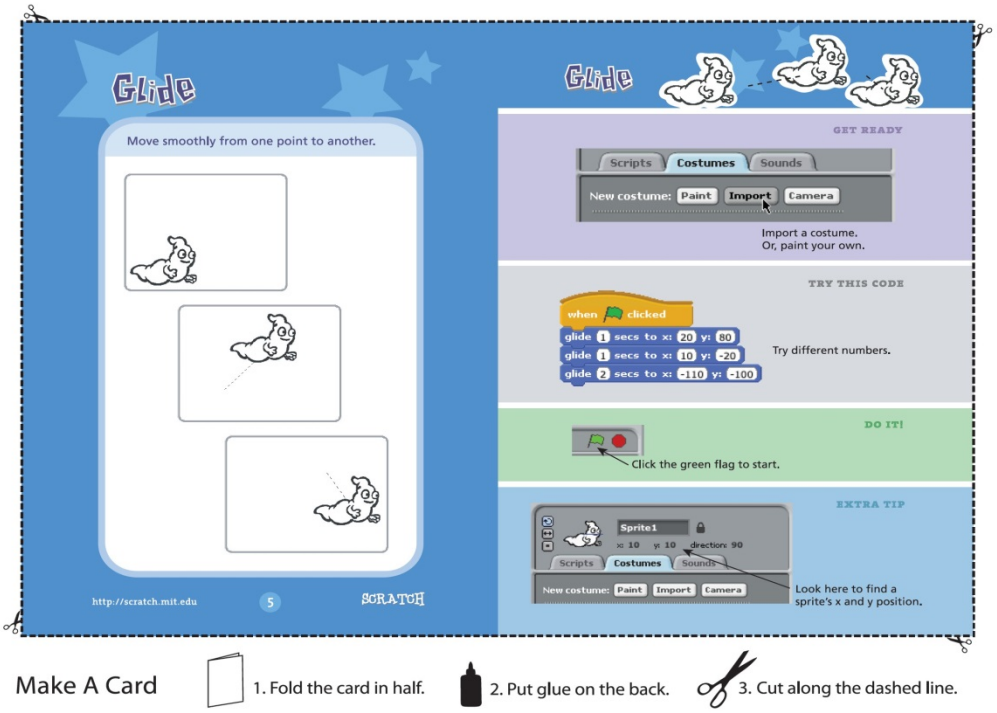

Figure 5. Glide Card for Scratch Programming Instruction. I gave this card to children in the intervention group to supplement Scratch instructions. The card includes views of screens in the Scratch program with instructions for the steps to make their sprites move forward. Adapted from Lifelong Kindergarten Group, "Glide", 2009). Used under the Creative Commons Share Alike license. Available from http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/05_glide_v14.pdf

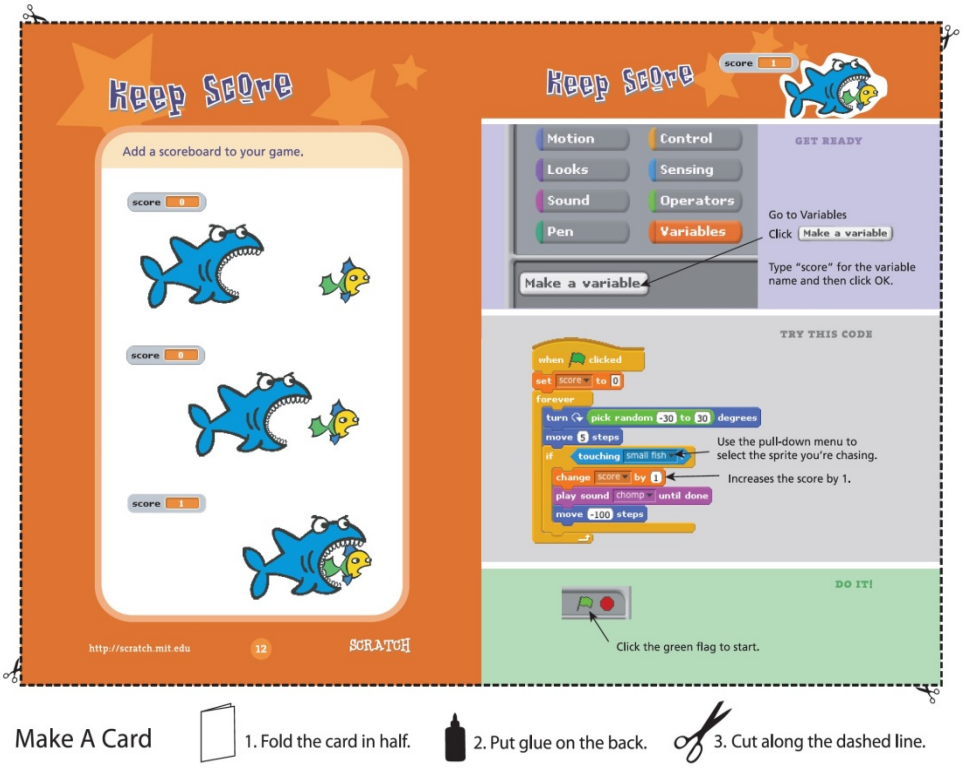

Figure 6. Keep Score Card for Scratch Programming Instruction. I gave this card to children in the intervention group to supplement Scratch instructions. The card includes views of screens in the Scratch program with instructions for the steps to keep score for their game. Adapted from Lifelong Kindergarten Grou, "Keep Score", 2009. Used under the Creative Commons Share Alike license. Available from http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/12_keepscore_v14.pdf

Figure 7. Change Color Card for Scratch Programming Instruction. I gave this card to children in the intervention group to supplement Scratch instructions. The card includes views of screens in the Scratch program with instructions for the steps to design the color scheme for their game. Adapted from Lifelong Kindergarten Group, "Change Color", 2009. Used under the Creative Commons Share Alike license. Available from http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/01_changecolor_v14.pdf

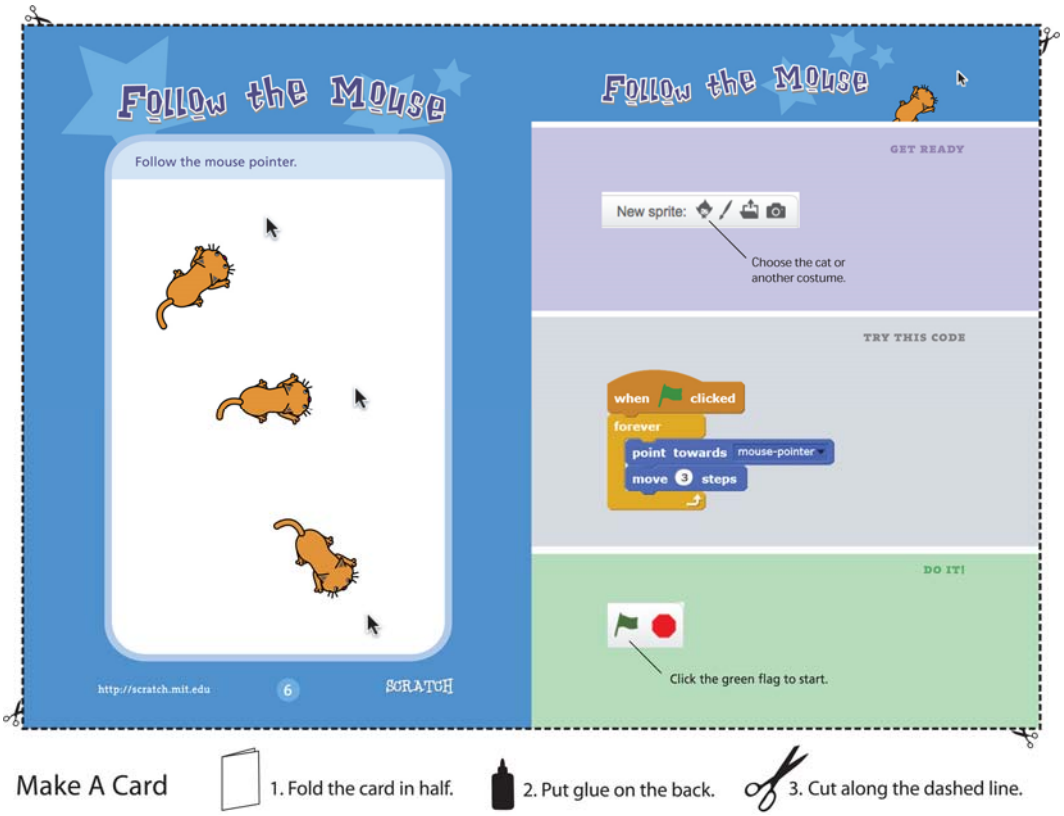

Figure 8. Follow the Mouse Card for Scratch Programming Instruction. I gave this card to children in the intervention group to supplement Scratch instructions. The card includes views of screens in the Scratch program with instructions for the steps to program the mouse to use in the game. Adapted from Lifelong Kindergarten Group, "Follow the Mouse", 2009. Used under the Creative Commons Share Alike license. Available from http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/06_followthemouse_v14.pdf

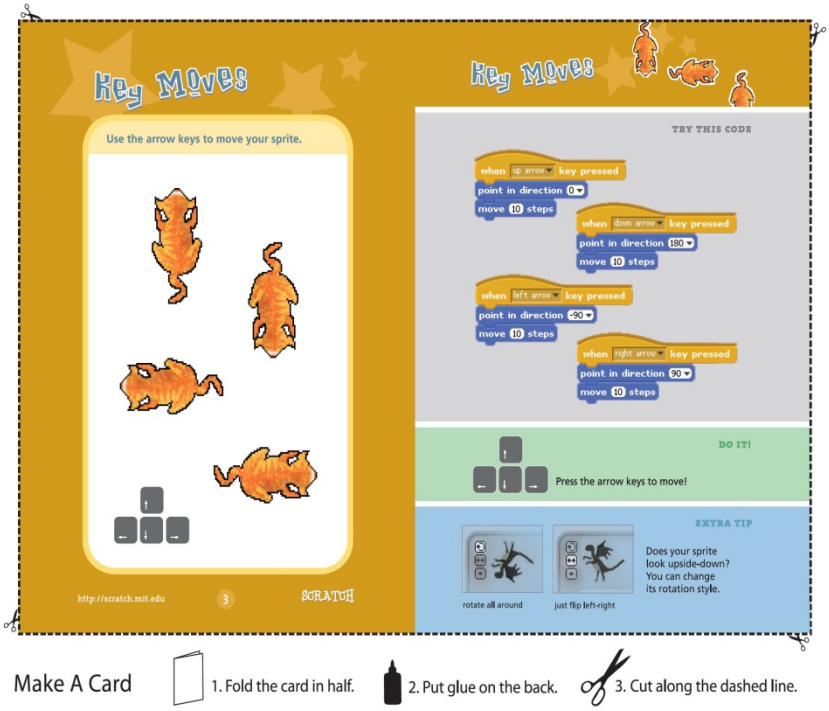

Figure 9. Key Moves Card for Scratch Programming Instruction. I gave this card to children in the intervention group to supplement Scratch instructions. The card includes views of screens in the Scratch program with instructions for the steps to design how to use the keyboard for the game. Adapted from Lifelong Kindergarten Group, "Key Moves', 2009. Used under the Creative Commons Share Alike license. Available from http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/03_keymoves_v14.pdf

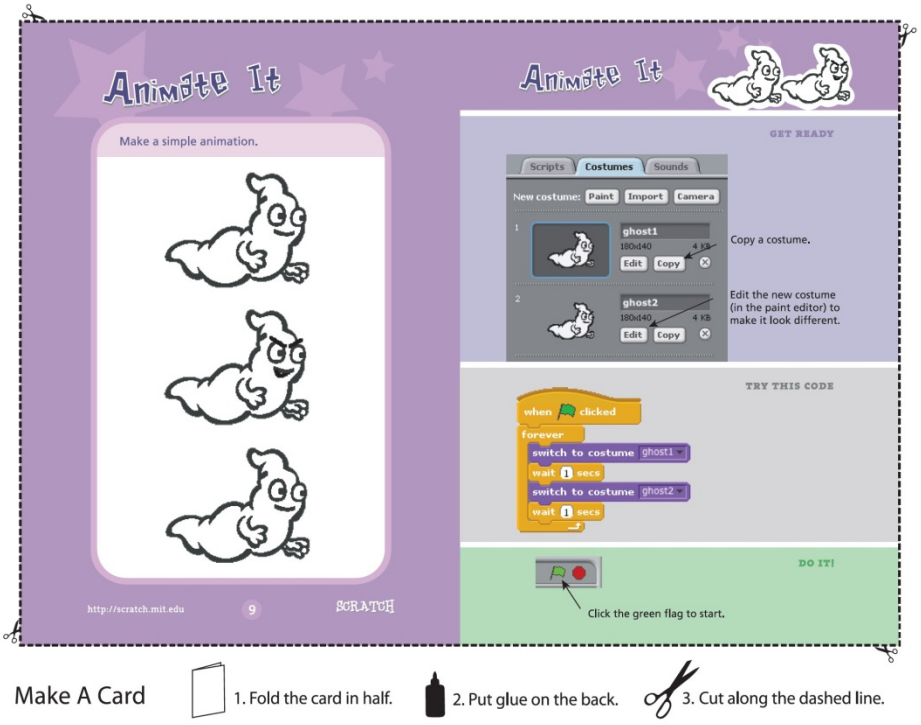

Figure 10. Animate It Card for Scratch Programming Instruction. I gave this card to children in the intervention group to supplement Scratch instructions. The card includes views of screens in the Scratch program with instructions for the steps to animate the characters in the game. Adapted from Lifelong Kindergarten Group, "Animate It," 2009. Use under the Creative Commons Share Alike license. Available from http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/09_animateit_v14.pdf

Figure 11. Move to a Beat Card for Scratch Programming Instruction. I gave this card to children in the intervention group to supplement Scratch instructions. The card includes views of screens in the Scratch program with instructions for the steps to design dancing movements for the sprites in the game. Adapted from Lifelong Kindergarten Group, "Move to a Beat," 2009. Used under the Creative Commons Share Alike license. Available from http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/02_movetoabeat_v14.pdf

After teaching the children with the Scratch cards, I gave each group their own set of Scratch cards and told them that they could use them to create their own videogame Scratch projects. I took teacher reflection notes as I observed the children and the games they created.

Week Three

After teaching the students to create their own videogames, I used the critical media literacy lesson, Fighting Evil in Video Games (Fourth R, n.d.) to help students understand how videogames are generally structured to capture their interest. This critical media literacy lesson

was developed by a consortium of researchers and professionals that promotes healthy youth relationships. The lesson can be accessed at no cost at http://youthrelationships.org/documents/media/gr4-6-sensationalized superheroes.pdf. The lesson Fighting Evil in Videogames is the fifth in the elementary unit, Sensationalized Superheroes (Fourth R, n.d.), which has been designed to teach fourth-, fifth-, and sixth-grade children critical media literacy skills necessary to analyze and understand media violence and marketing of videogames. The lessons in the unit can be taught independently. The lesson included discussion of attitudes toward methods of fighting evil, definitions of terms used in videogame production, and critical analysis of videogame trailers.

I introduced the lesson by asking students if fighting evil with compassion and integrity was less exciting than using bombs, blades, and guns, using examples of both approaches. Students then viewed the videogame trailers to understand the codes and conventions of the medium. For example, jolts per minute was one technique they saw that authors used to construct media messages applying a creative language with its own rules. As a class, we did a deeper analysis of the videogame medium by comparing the jolts per minute found in favorite videogames so students gained an understanding of how the jolts per minute related to attracting and appealing to a target audience.

Next, I introduced through discussion the following definitions and wrote them on the board:

- Videogame: A type of game existing as a controlled software, usually run by a videogame console or a computer, and played on a video terminal or television

screen. It is controlled by a paddle, joystick, joy pad, mouse, keyboard, or a combination of any of these input devices.

- Videogame trailer: A miniature movie or sampler created from excerpts from a videogame, designed to promote and sell the game. Videogame trailers tell the story of a videogame in a highly condensed form, with maximum appeal.
- Jolt: A surprising or fast-paced moment that generates excitement in the audience, caused by a violent act, motivating language, quick film cuts, flashes of color, or exciting music.

I lead a discussion to help children understand that most videogames are designed to gain profit and/or power. I asked them what features they expected to see in a videogame trailer. I helped them understand that these features are the creative language used to construct media to capture audience attention. Referring to the definition of *jolt* on the board and videogame trailers they may have seen, the class brainstormed a list of examples. The list included:

- Violent acts,
- Motivating language,
- Quick film cuts,
- Flashes of color, and
- Exciting music.

I explained to students that they would be watching a number of videogame trailers and asked their opinions of the purpose of the trailers. The class then watched the following E-rated, age-appropriate videogame trailers:

- Ben 10 Alien Force Rise of Hex Gameplay (Konami, 2010)
  http://www.gametrailers/js005/ben-10-alien-force--the-rise-of-hex
- Hydro Thunder Hurricane Trailer (Microsoft Game Studios, 2010)
  http://www.gametrailers.com/games/5rgftj/hydro-thunder-hurricane
- Nancy Drew Trail of the Twister Trailer (Her Interactive, Inc., 2010)
  http://www.herinteractive.com/shop-games/nancy-drew-trail-of-the-twister/
- Monster High (THQ, 2011)
  http://www.youtube.com/watch?v=pCF3wRnTa0o
- NBA 2K13 (2K Games, 2012)
  http://www.gametrailers.com/games/d6koej/nba-2k13/videos-trailers

As a class, we then did a deeper analysis of the videogame medium by using the concept of jolts per minute to explore creative techniques awareness. Students compared the jolts per minute found in favorite videogames to understand how this method attracted and appealed to a target audience. In their journals, students kept a record of the number of jolts per minute they counted as they viewed the trailers a second time.

Students then viewed each trailer multiple times focusing on

- Violence;
- Marketing;
- Marketers' messages to gain profit and power;
- Users' experiences based on background and viewpoint;
- Corporations' branding through inclusion, exclusion, and stereotypes;

- Media producers' creative language and artifacts such as jolts, music, voice over narration, quick cuts, characters, colors; and
- Authors' purpose and perspective.

The class considered how these factors attracted audiences. Students shared their observations with the class and in their journals and discussed again how media messages were constructed using a creative language with its own rules.

Next, I gave students a journal packet with critical media literacy questions regarding videogames. Students responded to questions in a journal. I evaluated the journal entries using the journal, interview, and teacher reflection protocol (See Appendix J). We discussed as a class how different people experience the same media messages differently and the embedded values and point of view in media.

Week Four

During week four, students began using the Scratch program and the cards shown in Figures 3-11 to develop nonviolent or social justice videogame trailers. I told students that they would be creating an exciting nonviolent/social justice videogame trailer. I shared charts discussing social justice games and the differences between violent and nonviolent games. The students and I discussed what made a game violent or nonviolent.

Next, I asked children to brainstorm ideas for their game in teams of two. I explained to students that creating a videogame is like writing a story. The story could be about anything real or imaginary. The game could be about a hope, a dream, or a fear you have. The story could be about an event in their life such as learning to do something, getting a pet, or finding a lost object.

Storyboards have helped students to have a single vision of a composition (Hui, 2011; Kelleher & Pausch, 2007). Burke and Kafai (2012) used storyboarding to teach Scratch programming. Storyboards have helped primary school children outline and refine their narratives (Burke, 2012). Similar to Burke and Kafai (2012), I used storyboards to teach Scratch programming and to introduce students to creating their own storyboards for videogame and game trailer design. In this approach, students drew out their ideas in a series of sequential images, each of which is built upon the previous picture. They used dialogue bubbles and the accompanying captions to further capture the essence of each scene (See Figure 12)

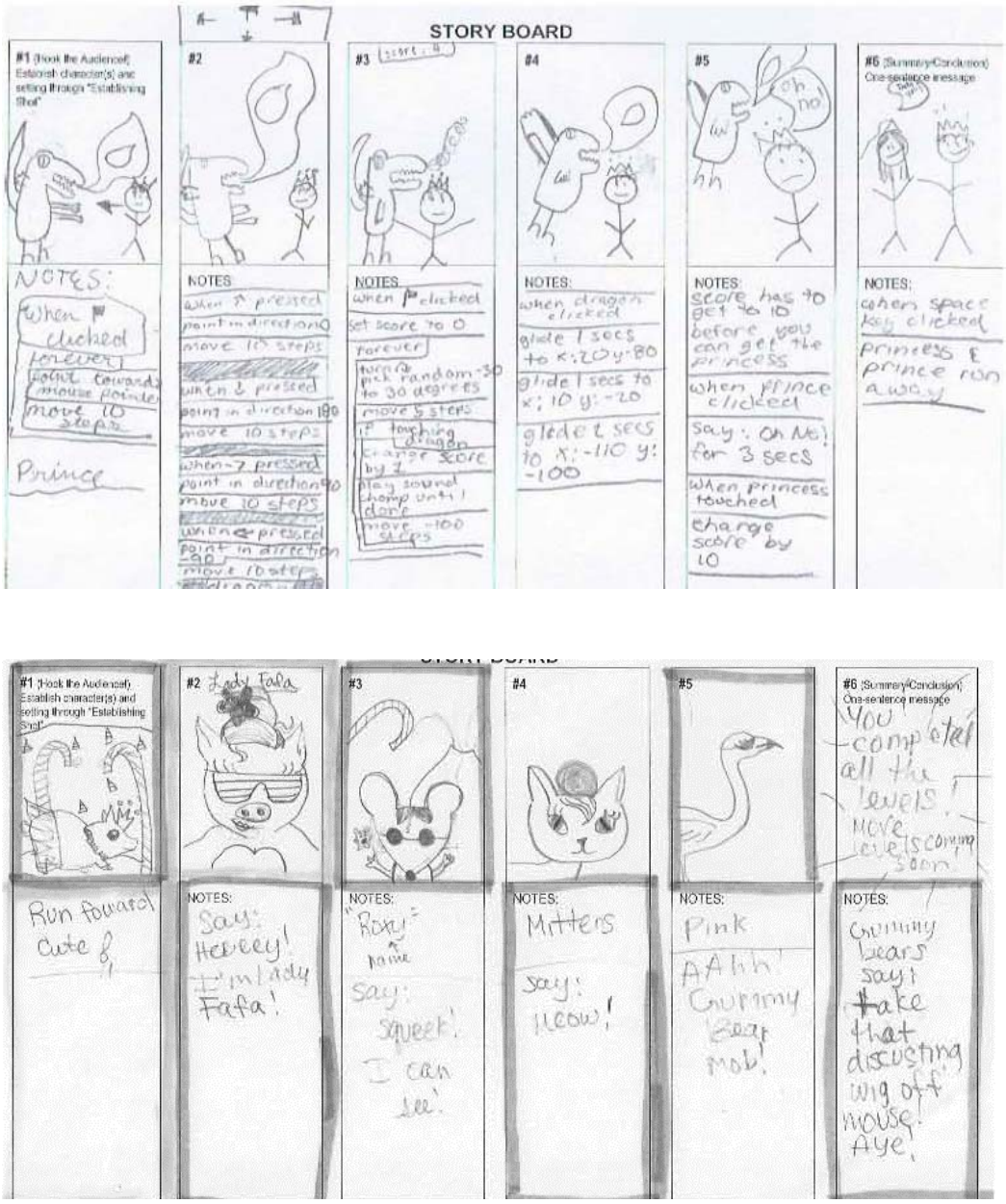

Figure 12. Storyboards Created by Students to Use to Design their Videogames. I showed students how to create storyboards as part of the instruction to the intervention group on designing the storyline and the action in a videogame. Each team designed a visual of a game screen view with notes to direct the construction of their game. Adapted from student Scratch project work by the teams in the intervention group, December 2013. Used with permission.

After I introduced the concept of storyboards, I asked the class what social justice meant. I gave them a definition of social justice and asked them to brainstorm different ideas for what would be considered a social justice game versus what would not be a social justice game. I distributed copies of a social justice chart and definition. We brainstormed together as a group. I spoke with children about the difference between a violent and a nonviolent game.

I then assigned students in pairs to create a social justice or nonviolent game. Students worked on answering questions about how their game reflected the five factors of critical media literacy, created a storyboard with plans for Scratch programming from their Scratch cards, and wrote a paragraph about their game. Children spent the next week in the lab creating their social justice and nonviolent games.

Week Five

I interviewed a representative convenience sample of 15 students using questions (See Appendix F) to measure awareness of violence, marketing, and the five core principles of critical media literacy in games. I then coded responses using the observation and journal protocol to find out the methods they used to construct their nonviolent or socially just videogame using their critical media literacy awareness skills. Finally, I administered the *Videogame Violence and Critical Media Literacy* (Center for Media Literacy, 2007) posttest to students at both schools to determine their awareness of violence, marketing, and the five core principles of critical media literacy.

Data Collection

Using transcripts of the 15 student interviews, I coded responses using the observation and journal protocol to identify the methods they used to construct their nonviolent or socially just

videogame using their critical media literacy awareness skills. Finally, I administered the *Videogame Violence and Critical Media Literacy* posttest (See Appendix I) to students at both schools to determine their awareness of violence, marketing, and the five core principles of critical media literacy. The data collected addressed the research question (See Table 3).

Table 3

Methodology Summary

Research Question	Methods
What are the effects of implementing a critical media literacy curriculum program on awareness of • Violence; • Marketing; • Marketers' messages to gain profit and power; • Users' different experiences with media based on background and viewpoint; • Corporations' branding through including, excluding, and stereotypes; • Media producers´ creative language and artifacts; and • Media authors' purpose and perspective?	Teacher reflection notes taken during critical media literacy lessons on videogame trailers and during Scratch lessons in the computer lab Interviews with students about videogame trailers they create in Scratch Results from pre- and posttest questions about critical media literacy Review of journals in which students answered questions about critical media literacy

Qualitative Data

Glaser and Strauss (1967) noted that although statistical data could give important insights into human behaviors, gathering statistics only could limit the researcher to areas of investigation developed before the actual interaction with subjects began. They noted that qualitative data not only could enable researchers to expand or contradict statistical data, but also could reveal new areas of interest not envisioned in the original research plan. To explore the impact of the intervention program in depth, I designed the study to include scheduled interviews

of students, readings of student journals, examination of their Scratch projects, and writing teacher reflections after each lesson, as well as evaluating the pre- and posttests (See Table 4).

Table 4

Data Collection Timeframe

Data Collection	Classroom Activity	Week
Teacher reflection notes, journals, pretest, Scratch project	Pretest and Scratch Lessons	1
Teacher reflection notes and journals	Critical media lessons and Scratch lessons	2
Teacher reflection notes, journals, Scratch projects	Scratch projects	3
Teacher reflection notes, journals, Scratch projects	Scratch projects	4
Interviews	Scratch project reflections and posttest	5

Student interviews. I interviewed students in the intervention group about the Scratch videogame trailers they created using questions designed to gain insight into their thought processes that I could not gain by merely looking at their products. I used semistructured interviews to obtain information from the participants. Merriam (2009) described semistructured interviews as using a list of interview questions as a guide to gain specific information about a topic with latitude for the researcher to be flexible to the situation at hand to gain insight on new ideas on the topic or to explore ideas. Semistructured interviews allowed students to give information more honestly and freely, and enabled me to explore parts of the projects that closed-ended questions may have missed. Interviews also helped to clarify how the students understood violence, marketing, and the five principles of critical media literacy as they related to their videogame trailer. They also provided insight into the thinking and attitudes of students about critical media literacy concepts.

During the student interviews, I questioned a representative sample of the individuals who created videogame trailer projects. I began with the same basic interview for all fifteen students (See Appendix F) and asked additional questions to explore further as is appropriate for a semistructured interview (See Appendix H). I designed the initial questions to elicit thoughtful and meaningful answers that revealed how each student thought their project embraced critical media literacy awareness. Students' answers to the questions helped determine how they thought the project affected their understanding of critical media literacy awareness.

Teacher reflection notes. Teacher reflection notes were a data collection method appropriate to this study because they were a way to directly determine students' understanding of critical media literacy. Merriam (2009) provided a model for focusing on gaining insight about student learning and opinions through observations and interviews. Kellner and Share (2005) identified five core elements that show critical media literacy awareness. Based on Mirriam's (2009) and Kellner's and Share's (2007) work, I adapted a journal and interview protocol for this study from the *Beyond Blame* (Center for Media Literacy, 2007) and *4H Media* (2010) curricula, which suggested examination of several areas of critical media literacy including identifying violence, marketing, and the five principles of critical media literacy in games (See Appendix J).

Using this tool, I recorded specific teacher reflections of students working in the Scratch program to identify what characters and games they used prior to being instructed in critical media literacy skills. I gathered data on critical media literacy concepts used in Scratch projects by recording my teacher reflection notes of responses both during critical media literacy lessons and during Scratch lessons. I also recorded teacher reflection notes based on my observation of students working on nonviolent and social justice games in Scratch and in class discussions

during critical media literacy lessons to gain an understanding of students' views of violence, marketing, and the five principles of critical media literacy.

Journals. In this study, I reviewed student journals to identify themes related to violence, marketing, and Kellner's and Share's five concepts of critical media literacy and assessed that awareness in games. I listed themes according to a journal and interview protocol (See Appendix J) that explored nonviolent games, violence, marketing, profit and power motives, different experiences, branding through inclusion and exclusion, stereotypes, creative techniques, media authorship, social justice, and stimulus addiction/emotional attachment to games. These were themes, which have been identified in previous videogame studies (Kellner & Share, 2005; Webb et al., 2009) and which I used in previous observations when I conducted lessons using critical media literacy and Scratch in my classroom with fourth-grader students. The journal items I reviewed included a videogame trailer creative storyboard/planning concept worksheet, an interview question worksheet, a jolts in trailer worksheet, and journal response questions. A review of the documents helped me identify the themes of violence, marketing, and the five core factors of critical media literacy in games.

The videogame trailer creative storyboard/planning worksheet was the means by which students designed their trailers for their videogames and decided what messages they wanted to send, to whom they wanted to send them, and why they were sending them. On the interview question worksheet, students answered questions about their Scratch projects based on violence, marketing Kellner's and Share's five critical media literacy awarenesses in games. On the jolts in trailer worksheet, students wrote responses to their reactions to the videogame trailers they watched. The journal questions included student responses to how they felt about videogames

they play. Examination of these documents in journals yielded data related to themes in critical media literacy (See Appendix J).

Quantitative Data

While qualitative data gave me in-depth views of complex variables and allowed me to uncover unexpected phenomena, quantitative data focused on specific predetermined variables. During the fall semester of 2013, I conducted the intervention at one elementary school in Los Angeles while another school continued without the program and acted as the control group. To obtain quantitative data, I administered the pre- and posttest in both schools one week before and one week after implementation of the curriculum to collect data on its impact. Before students began answering questions at either site, the test administrators informed them that they could stop taking the pre- and posttest at any time and that their decision to do so would not adversely affect them, nor would it affect their grades.

I administered a pretest via Qualtrics, a web-based survey application to the students in the intervention group. Students at the intervention school took the survey in the school's computer lab. Students accessed the Qualtrics website and clicked on the link to complete the surveys. Two computer teachers and I observed the students at the intervention school. Children clicked on a link to the survey on the computer lab website and entered a four digit survey number used to keep student identity anonymous. Two computer teachers at the intervention site read questions and answers to the children who selected their answer choice for each question before they read the next question. Teachers told students they could skip a question if they did not feel comfortable answering it.

I sent IRB forms and a link to the Qualtrics surveys to the control group in the first week of the study with an Excel sheet of four digit survey numbers that children entered when they began the survey to protect their anonymity. The vice principal and the fourth-grade teacher assisted the principal at the control school with administering the pretest on a set of iPads. The vice principal and fourth-grade teacher also helped the principal to administer the posttests to the control group in the fifth week of the study.

Pre- and posttest. I adapted the pre- and posttest for the participant fourth-grade students from the *Beyond Blame: Challenging Violence in Media* (Center for Media Literacy, 2007), which is the only media literacy curriculum in the United States focused solely on violence prevention. The adaptations I made were to ensure that the language of the questions was appropriate for fourth-grade students. Items in the test involve slightly modified elements from a pre- and posttest developed and validated in multiple studies from 2007 to 2009 (Webb et al., 2009). That test used a Likert scale, short answers, multiple choice, true/false, and open-ended questions that had been used in a previous study to ensure the validity and reliability of the *Beyond Blame* curriculum's feasibility as an intervention to teach students critical media literacy skills (Webb et al., 2009).

The pre- and posttest method has been used to gather quantitative descriptive data about a population, describing participants' knowledge or attitudes (Creswell, 2009; Krathwohl & Smith, 2005). Gay, Mills, and Airasian (2009) advised that researchers should design study questions to elicit answers to specific, focused research questions of the study. I chose pre- and posttest research to gather data because the use of electronic surveys was common and the online survey software compiled the information gathered and exported it to the Statistical Package in the

Social Sciences (SPSS) computer program. This ensured anonymity for participants and provided the most efficient way to gather and prepare research for data analysis. Responses have been received almost immediately in other studies (Creswell, 2009; Gay et al., 2009; Krathwohl & Smith, 2005). Fricker and Schonlau (2002) gave the example of a successful study strategy in which researchers downloaded online pre- and posttests into software programs like SPSS, which avoided errors in transcribing data.

Measures. The test included demographic data including age, gender, and ethnicity in addition to knowledge, awareness, and attitudes about the five principles of critical media literacy. The 55-question test was based on one used with the *Beyond Blame Curriculum for Media Literacy* (BBCML) (Center for Media Literacy, 2007) and tested in several previous studies (Webb et al., 2009). Students answered in a variety of formats: true/false/don't know; yes/no/don't know; short answers; multiple choice; and a Likert scale of five elements on a range from strongly disagree to strongly agree. Below, I have outlined the aspects of the study factors covered in the pre- and posttest.

Student demographics and behaviors. Demographic and behavioral aspects included the following questions:

- What is your age?
- What is your gender?
- What is your ethnicity?
- How often do you play videogames?

Student violence awareness. Awareness of violence in videogames and how it can affect players of videogames was a critical factor in this study. I used twelve items to assess violence awareness:

- Do videogames use violence to get your attention?
- What is violence?
- What types of violence are portrayed in videogames?
- Which videogames are usually violent?
- Do all stories with conflict also have violence?
- What are some of the real life consequences of violence?
- Watching videogame violence could make someone act aggressively.
- Watching videogame violence could make someone less scared of the real world.
- Watching videogame violence could make someone more willing to help someone in trouble.
- Watching videogame violence makes people want to watch more videogame violence.
- Videogame violence is different than real life violence.
- People can protect themselves from the effects of media violence on themselves by limiting the amount of time they spend engaged with it.

Student marketing awareness. Awareness of marketing techniques and of how advertising is used to sell videogame messages was another important factor in critical media analysis. I used four items to measure marketing awareness:

- The Internet, newspaper, TV, and radio news tell us...
- It is important to ask questions about what advertising tells us because ...
- Which is the best question to ask after seeing a commercial message that advertises a videogame?
- It is important to consider who created the videogame advertising message in order to...

Student awareness of marketers' messages to gain profit and power. Videogame media have been based on and branded for a desire for influence, profit, and power. These test items measured student awareness of how videogames were used to send messages to gain power or make money. I used six questions to assess student awareness of marketers' messages to gain profit and power for their producers.

- The main goal of a videogame trailer advertisement or commercial is to...
- Videogames might seem to be free but who ultimately pays for them?
- Videogame messages affect me.
- Do videogames have an influence on people?

Student awareness of users' different experiences with media based on background and viewpoint. People experience media differently based on their background and viewpoint. I used four questions to measure student awareness of how these differences might impact people's reaction to media:

- Do people react to videogame violence differently?
- Does our point of view influences how we react to videogame messages?

- Does everyone my age like the same music I like?
- How important is it to do whatever my friends do?

Student awareness of corporations' branding through inclusion, exclusion, and stereotypes. Branding strategy includes and excludes certain groups of people, targeting specific groups as potential buyers of certain products and using stereotypical characters who will appeal to them. I used three items to measure branding through inclusion and exclusion and use of stereotypes:

- A target audience is the group of people for which something is created.
- Company advertisers create symbols to represent their products and/or services.
- Consumers benefit from branding.

Student awareness of media producers' creative language and artifacts. I assessed awareness of creative techniques used in media design using five items:

- People who make videogames attract players with exciting jolts.
- The use of different camera angles is a technique videogame makers use to attract my attention.
- The creative techniques of music can make a videogame feel scary.
- Photographs always show people and things just the way they are in real life.
- Cartoons look fun with bright colors and music because...

Student awareness of media authors' purpose and perspective. Awareness of media includes an understanding of what media is and an understanding that media is created by an author to send a message. These messages depend on the authors' purposes and perspectives. I used four items to measure awareness of this aspect of media:

- Which of the following are types of media?
- Identify the jobs associated with the media.
- Does your neighborhood have media?
- Does your school have media?

Data Analysis

I answered the research question by reviewing student journals, interviewing students, reviewing Scratch projects and teacher reflection notes for awareness of violence, marketing, and the five principles of critical media literacy, and by analyzing data from pre- and posttests on these factors. Use of multiple sources of data gave me a broad perspective of students' knowledge of these elements as applied in their analysis of videogame trailers and creation of Scratch projects. I examined what they thought about the relationships among the research factors and compared their real life actions and those of their peers. A review of the journals showed what children thought about violence, marketing, and the five principles of critical media literacy and how those opinions changed during the intervention. Teacher notes included reflections on how aware students are of the messages sent to them in media and analysis of how these media messages affected students' real life actions and beliefs. Interview questions determined what the students felt their messages were, what creative media techniques they used, how they felt others perceived their messages, how they branded their product, and why they believed their messages were profitable and/or powerful. Pre- and posttests provided insight into differences in students' awareness of critical media literacy concepts before and after they experienced the curriculum and created their Scratch projects.

Qualitative Data Analysis

Qualitative analysis was an appropriate method to allow for detailed meaning to come from subject participants' own words and actions. Reflecting the complexity of human beings, responses in grounded theory have shown contradictory concepts, or have enhanced each other or quantitative data (Scharrer & Wortman, 2012). Glaser and Strauss (1967) stated that rather than seeking direct answers, a researcher using grounded theory allows categories to emerge from the data rather than forcing them into preexisting categories. I used Glaser's and Strauss's (1967) constant comparison method to identify emergent themes. Scharr and Wortman (2012) used grounded theory in their study to analyze journals and the homework responses to guided questions from the *Beyond Blame* curriculum (Center for Media Literacy, 2007). They compared similar responses in their study to create categories that they used as evidence of children's learning of critical media literacy concepts from participating in the *Beyond Blame* curriculum (Scharr & Wortman, 2012).

Identifying themes from student and teacher data. In this study, I based qualitative analysis on the answers children themselves gave regarding what they learned from the critical media literacy program lessons and from creating their own socially just nonviolent videogame trailers. I applied grounded theory and the constant comparison method to student journals and interviews, teacher reflection notes, Scratch projects, and interviews, and found relevant answers to the questions posed in this study. I coded transcriptions of the interviews and identified pertinent themes regarding issues of critical media literacy such as violence, marketing, profit and power, branding and stereotypes, different experiences creative media techniques, media authorship, social justice, and addiction stimulation/emotional attachment. I analyzed data from

teacher reflection notes and journals and identified pertinent themes and to corroborate findings from interviews.

To identify themes, I considered each piece of text such as key words or sentences in a student's response and compared it with key words and phrases in other student responses to determine their relationship and the categories into which they fit. Through this inductive process, categories emerged that I continually re-evaluated as new data entered the data stream. Thus, new data shaped and clarified these categories. In applying grounded theory, Scharrer and Wortman (2012) found that as additional data were coded, categories could be verified as they became saturated. I chose a subset of texts as examples to represent each category as it became saturated. I reported and interpreted words and phrases that represented emergent themes in the teacher reflection, interview, and journal protocol. I conducted follow-up interviews in five- to ten-minute sessions to assist in triangulation of journal and teacher reflection data (See Appendix J). Chapter Four includes these themes and the results and findings based on the data.

Quantitative Data Analysis

In a mixed-method research project, data from both qualitative and quantitative methods necessarily have a synergy that informs analysis of the other method. In the quantitative analysis, was necessary to examine the data in terms of new themes that emerged in the qualitative analysis. Although they were a part of the context, gender issues were not part of the initial scope of my research. However, one of the themes that emerged in analyzing the qualitative data was differences in attitudes toward violence related to gender. This theme combined with an overwhelming amount of literature on gender issues in the realm of videogames caused me to believe that I should look at possible differences between males and females in the pre- and

posttest results. If there was a difference, then it might be possible to achieve more reliable results analyzing the test data for two separate populations. This analysis fit into the scope of my research. I began the quantitative analysis by seeing if it was necessary to segment my population into two groups to enhance the reliability of the test results based on a gender theme that emerged in the qualitative research tangentially to the research questions. I reported the results of this inquiry in Chapter Four.

If significant gender issues had appeared in the quantitative results, it would have been a worthwhile effort in future studies to create a totally new project specifically analyzing gender issues and specifically determining if differences between genders were due to differences in how males and females perceived questions on the test or in actual differences in how males and females processed the information and activities of the intervention.

Pre- and posttests measured students' critical media literacy skills of understanding violence, marketing, and the principles of critical media literacy. I used several accepted statistical methods to report and analyze these data including the following

- Basic descriptive statistics on demographics such as age, gender, and ethnic group;
- Basic descriptive statistics such as averages and totals to describe student behaviors, knowledge, attitudes, and beliefs;
- Comparative statistics of responses to individual variables and groups of variables and test items on the pre- and posttests to determine changes over the time of the intervention;

- Comparative statistics to describe differences in changes from pre- to posttest related to demographic factors that could indicate that the intervention impacted different groups differently;
- *T* tests to determine whether these scores from the pre- and posttests are significantly different at a selected probability level (Gay et. al, 2009);
- Pearson's *r* correlation-coefficient analysis to determine the relationships between variables and test items for awareness of violence, marketing, and the five principles of critical media literacy; and
- Cronbach's α values of internal consistency to identify possible composite variables that could be created and determine internal reliability among survey items.

I designed analysis of these data to supply targeted information on specific changes in students' attitudes and behaviors following the intervention. These data supplemented and enhanced the conclusions based on the qualitative data.

Conclusion

The mixed-method qualitative and quantitative research yielded a rich data set which addressed the value of the intervention to change student attitudes across the elements of the research question: awareness of violence, marketing, and the five principles of critical media literacy. Chapter Four, includes the themes and results identified in the qualitative data, as well as the quantitative data from the pre- and posttests. Chapter Five, includes a discussion of the implications and significance of the data, limitations of the study, and suggestions for further research.

CHAPTER FOUR

RESULTS AND PRINCIPAL FINDINGS

Introduction

In this study, I investigated the research question: What are the effects of implementing a critical media literacy (Kellner & Share, 2005) curriculum program on awareness of

- Violence;
- Marketing;
- Marketers' messages to gain profit and power;
- Users' different experiences with media based on background and viewpoint;
- Corporations' branding through inclusion, exclusion, and stereotypes;
- Media producers' creative language and artifacts; and
- Media authors' purpose and perspective?

I coded and organized data that addressed the research question into the following themes: violence awareness, marketing awareness, and awareness of the five elements of critical media literacy. Two additional themes, Scratch coding awareness and symbolic interactionism awareness emerged from analyzing the qualitative data using grounded theory. Qualitative data from teacher reflection notes, student Scratch projects, and student response journals indicated that there was an increased awareness of these factors among those students who participated in the intervention.

Although this study originally was intended to be a mixed-method study, problems arose with the validity and the reliability of the quantitative tests, so results could not be compared from the pretest to the posttest. I could not compare the intervention and control groups due to differences in effective size. Since I could not construct composites for the seven factors of

awareness, I compared individual test items using correlational research and descriptive statistics from the posttest. Although inconclusive in areas, there was some data from the posttest that supported the qualitative data in the conclusion that the combination of lessons in awareness of violence, marketing, and the five factors of critical media literacy in combination with collaborative experiences creating their own nonviolent, socially just videogame trailers significantly increased students' awareness of these factors.

Participant Demographics

Forty-one fourth-grade students at two Catholic elementary schools participated in pre- and posttests on awareness of marketing, violence, and of the five elements of critical media literacy. After receiving a letter explaining the purpose and method of the study, parents of all 33 students from the intervention school allowed their children to participate, but three of the children indicated that they did not want to be in the study leaving a total of 30 children in the study at the intervention school. I sent 22 IRB assent forms and consent forms to parents of students at the control school, but only eleven parents agreed to allow their children to participate in the study at the school site. All 11 of the students who had permission to participate at the control site returned pre- and posttests.

Of the 30 students at the intervention site who agreed to participate in the test, 53% were male and 47% were female. The average age of the students in the sample was nine years old ($M_{age} = 9$). The ethnic background of the participants in the intervention group was three percent African American, seven percent Native American, three percent Caucasian, 14% Asian Pacific Islander, and 72% who identified as other.

The population differed considerably between the control and intervention sites. Of the 11 students at the control site, 64% were male and 36% were female. The average age of the students in the control sample was 10 years old (M_{age}=10). The ethnic background of the participants in the control group was 91% Caucasian and nine percent who identified themselves as other. As previously stated, although some students at the control site agreed to participate and completed both pre- and posttests, the group was too small to allow valid comparisons, and these data ultimately were not used.

Qualitative Data and Analysis

The following qualitative analysis gave me an in-depth look at the effect of the intervention on students' understanding of violence, marketing, and the five core principles of critical media literacy in videogames. My understanding of the impact of the intervention on these factors was based on the students' own words in response to open questions in interviews, journal, and in-class discussions, and on analysis of their Scratch projects. Hearing and reading their language and observing their work allowed me to create additional emergent design categories and themes to explore through additional questions. Only students from the intervention group participated in this part of the research.

Violence Awareness

Violence awareness included recognizing violence in videogames and understanding how it can affect players. The qualitative data from interviews, journals, teacher reflections, and Scratch projects created a picture of student awareness of violence and the relationship between violence and other variables of critical media awareness both before and after the

intervention. These data showed a clear change in student awareness of violence and of how it impacted them and others.

Students answered journal questions on violence in videogames before and after the intervention. They also answered interview questions which were recorded and transcribed. In addition, I wrote reflection notes about their answers to questions in class discussions. In the following discussion of their answers, I assigned pseudonyms instead of using their real names in order to protect their privacy. I included the pseudonym in the sourcing information.

Is there violence in videogames? Twenty-three of the students wrote that there was violence in videogames. Six of the children wrote that they did not know if there was violence in games. One student, Olivia said, "No, because some videogames are fun" (Journal). Olivia's remark about violence being fun was similar to the answers of five other students when they answered the journal question: "Do you think some videogames contain violence? If so, what kind of violence is in games and why do you think the creators would put the violence in the games?" These students saw violence as something that made the game interesting and exciting (Journals). Victoria summarized the feelings of many students when she wrote, "Some people like violence and think it is fun" (Journal).

Violence to attract attention. Students were also aware that violence in videogames was a way to attract their attention. Seven students wrote about how violence is used to attract children's attention in games. For example, Amelia wrote: "Some videogames contain violence ….I think people put violence in games because it attracts some kids" (Journal). Charlotte characterized violence as making "it interesting to play" (Journal). Evan went a little further and

talked about the use of violence for the marketing and selling of videogames in his journal, writing: "Videogames contain gun shooting and name calling to get money" (Journal).

Violence in favorite videogames. Before the intervention, I also asked children what their favorite videogames were. Twelve of the children listed violent games as among their favorites and sixteen listed nonviolent games. Two of the children answered that they did not have favorites (Journals). As is possible in qualitative research, a new theme emerged in my analysis of favorite games. There was a distinct difference in the types of games preferred by males and females. More males than females selected violent games as among their favorites. Table 5 shows the type of games students reported as their favorites (Journals).

Table 5

Students' Favorite Videogames

Gender	Violent	Nonviolent	No Favorites
Female	2	10	2
Male	10	6	0

Note. Summary of Journal responses

The most popular videogame in the violent category was Call of Duty: Black Opps 2, in which soldiers completed missions and killed people (Journals). When I asked the children to discuss why they liked these violent videogames, they answered that the violence was fun, exciting, addicting, competitive, and adventurous. In discussing these games, children used words like "kill", "shoot people", "blood", "fighting", and "stealing" (Teacher Reflection Journal). Charlotte said that the game she liked was "addictive" (Interview), while another student enjoyed the challenge of getting to new levels (Jonathan, Journal).

Eight of the twelve children that listed violent games among their favorites also listed nonviolent games among their favorites (Journals). Children answered that nonviolent games

were among their favorites because of the fantasy aspects, story imagination, adventure, excitement, challenge, building and creating, chasing, sports, and social interaction in games (Journals; Interviews). These games allowed children to create and be problem solvers. Creating their own fantasy worlds, socializing, and stimulation seemed to be major reasons why students played these games (Journals, Interviews). Amelia's response is representative of these reasons. She said, "I like Surface because it is a mystery game. I like Survival Craft because you can build stuff, explore, and ride horses" (Journal). Victoria agreed writing, "I like Just Dance because it takes a lot of energy and it is very fun to dance to the music" (Journal). Jonathan presented another perspective saying, "Pokemon [is my favorite] because it is an adventure" (Journal).

Violent and nonviolent characteristics of videogame trailers. After completing pre-intervention journal questions, students participated in the critical media literacy curriculum. I gave them a list of characteristics of violent and nonviolent videogames and asked them to respond after viewing each trailer in their journal about whether or not the trailer was violent or nonviolent. I created a summary of the class journal responses and reasons that each trailer was considered to be violent or nonviolent (See Table 6).

Table 6

Student Responses to: Are these games violent or nonviolent and why?

Game Title	Violent	Nonviolent
Ben Hex	• Killing • Weapons • Kicking • Hitting • Lasers • Fights • Explosions • Shooting	• No blood • Aliens are not real people • No inappropriate things • Cartoon • No bad Language • No threatening words • Nobody dies. • Characters are regenerated.
Nancy Drew: Tale of the Twister	• Tornado • Gang • People might die.	• No fighting • No killing • No weapons • No guns • Mystery game • Adventure game • No hurting people • No foul language
NBA	• Someone might get hurt.	• Just playing basketball • Sports • No killing • No weapons • No fighting
Monster High	• Monsters	• No weapons • No killing • Nobody gets hurt. • Dress up game • Makeover game • Takes place in school
Hydro	• Crashes • Explosions • Someone could get hurt.	• Racing game • No guns • No fighting • No blood

Note. Summary of Journal responses. Videogame trailers are included in the Sensationalized Superheroes (Wolfe & Fourth R, 2010) and adapted from Ben Hex (Konami, 2010), Nancy Drew: Twister (Her Interactive, Inc. (2010), NBA, (2K Games, 2012), Monster High (THQ (2011), Hydro (Microsoft Game Studios, 2010).

Children said violence in the videogame trailers included weapons, killing, blood, hurting people, using threatening or bad language, fighting, and explosions (Journals). If the violence was in a fantasy such as a cartoon or the characters came back to life, students

made the point of saying that this violence was different than real life violence. The violence was just pretend in the game. Most also classified sports games as nonviolent (Journals).

Cartoon violence. To explore the idea of cartoon violence further, I included a question in the journals asking the children to discuss whether it made a difference if the violence was a cartoon. Children responded to the journal question by choosing a videogame that used cartoon violence and discussing it. Questions included: "Do you think explosions and laser beams scare children? Do you accept that cartoon violence is just art?" Joshua's answer was typical of the clarity the children felt on this issue:

> There is a Star Wars game that involves shooting, crashing, and punching. I think that explosions and laser beams will scare the average preschooler or kindergartener. I don't accept that cartoon violence is just art. (Joshua, Journal)

However, the children did make a distinction between cartoon violence and real life violence. A question about robots versus humans revealed this distinction further. In response to the journal question, "Do you feel that fighting against robots with rockets and lasers is less disturbing than fighting against people?" most of the children said they were more comfortable with fighting robots than people (Journals). Grace elaborated:

> I think that fighting against robots with rockets and lasers is less disturbing because if you fight people sometimes there is blood and if you have the volume on the person getting beat up sometimes moans and groans; however, if you fight robots with lasers and rockets it is less disturbing for me. (Journal)

Charlotte was concerned about consequences in addition to blood and pain when she noted that if you are "murdering people you could go to jail for that" (Journal). Overall in the responses,

children seemed to distinguish between very young children of kindergarten or preschool age seeing violence and older children, like themselves, seeing violence (Teacher Reflection Journal). They also made a distinction when it came to seeing violence against humans. They saw violence against humans as worse than violence against robots or fantasy characters because it was more realistic (Teacher Reflection Journal).

After the intervention, children started to write that they felt violence in games was not good. They became more aware of the characteristics of violence and better identified when something was violent. They started to think more critically about how violence might affect them or other children. Students seemed to think that violence was not good because it might cause another child or a younger child to imitate bad behavior. They had a sense that they had enough personal discernment to recognize the behavior as wrong and to not act out that behavior in real life just because it was in a game (Journals).

Violence and aggression. One journal question was about how likely they thought it was that children who watched violent videogames would act aggressively. Another asked students to give an example of a videogame that rewarded bad behavior, name the videogame, and list some examples of bad behavior that they felt were rewarded. As a follow-up, another question asked if it made it acceptable if bad behavior is silly and cartoon like. Children listed some of the examples of bad behavior that is rewarded in videogames as breaking things, killing (people or animals), shooting, name calling, using bad words, kicking, stabbing, punching, exploding, crashing cars, and being mean. Generally, the children thought it was not acceptable to behave badly in real life (Journals). Charlotte reflected, "No, it is not okay for silly, bad

behavior in cartoons because little kids that watch cartoons copy it and they will start to be like that" (Journal). Joshua remarked, "It does not make it okay for violence if it is animated or not, silly or not" (Journal). Owen stated a reason to avoid violence in games and on TV, "I think some children imitate the violence and the bad behavior they see on television because they think it is cool, and the next thing they know they are in trouble" (Journal).

One child said that violence was not a problem, because he felt that students were smart enough not to copy violence (Michael, Journal). Michael did not see a problem with violence in games because "kids are smart and they know to not do bad things because they can go to jail and be punished" (Journal). However, this was a minority view, as many of the children felt that violence in games was wrong and that this violence could cause children to imitate or act out the behavior (Journals; Interviews; Teacher Reflection Journal).

Children's Perceptions of the Impact of the Intervention on Awareness of Violence

Follow-up interviews with students were the final items I used to assess the impact of the intervention. In the interviews, I asked the students: "Do you think you became more aware about violence in videogames from having gone through the critical media literacy lesson and from creating a nonviolent social justice videogame in Scratch?" Overall the responses showed that the children were thinking more critically about violence. They were not thoroughly convinced that violent videogames were completely bad, but they thought it would be good to be aware of that concept (Interviews). Victoria felt she was more aware. She justified "playing an army game trying to save the country it wouldn't really effect [*sic*] you that much because you're trying to save them so I would say you're trying to get better at it instead of

trying to be violent" (Interview). Leah felt she was more aware of "the things that you are not supposed to do" (Interview). Many children reported positive change in their behavior relative to violent games. Jacob, David, and Hailey's comments were typical of this group:

> [I] thought it would be better not to shoot weapons because some kids might not like that...My friends play violent videogames....I was just playing Halo [be]cause I don't like blood….I played it because I kept killing Dave and William. It was really fun. (Jacob, Interview)
>
> Yes, like now that I know that killing and hitting people is violence I won't play any of those games anymore. I think before I did this I thought the games were fun before I learned what they were all about. (David, Interview)
>
> Violence in games is not good. Before I watched all the videos I knew violence wasn't good, but then once I thought about it I was like violence is so bad. Nonviolent games compared to the violent games are so much better. (Hailey, Interview)

In response to a follow-up question about the likelihood of people acting with violence because of violent games, Jacob said that some games and movies made people act with violence, and that some people just "like violence," while others did not "because it could be sad" (Interview). Jonathan felt that "if they are young kids they would probably copy it since they are like young and they are learning...but if you're older you know that's not what you are supposed to do" (Interview). David agreed that "kids would react to violence if they have it in the game they get addicted to the game and they would probably uh do it" (Interview). Hannah "learned that if you watch too much of the violence you could come out as a bad person" (Interview). She added:

> Since we talked about it a lot I realized that it could actually happen. I never really thought about it while I was playing the game. I thought it's just a game it will never really happen none of this will happen. Since we talked about it I realized it actually could happen. (Interview)

But she also admitted that she liked to play the games.

In response to the question: "Do you think they use violence to market games?" Hannah said that violence was used to attract buyers to games, but that there were other ways to make games fun. She also responded that the barrage of advertisements about games confused her (Interview).

Critical Media Literacy Skills and Creating with Scratch

Children learned to apply their critical media literacy skills by making nonviolent videogames in Scratch. Before the critical media literacy intervention, children created seven violent, four nonviolent, and three media-driven games. In Scratch games made before the specific critical media literacy lessons about violence, five of the seven games contained some kind of violence. Students based their projects on their own experiences or on models of popular commercial violent or nonviolent games. After the intervention, even though children overall said they knew that violence was not acceptable, some of the final Scratch projects still contained violence.

Preintervention Scratch projects. Before the intervention, the nature of the programming code and the videogame genre tended to make children think of fighting scenarios in which winning meant the hurting, deconstruction, or quick elimination of a character (Teacher

Reflection Journal). Below is a sample of each type of preintervention Scratch project with explanations of the game taken from student response journals. When writing about their games, some students worked in pairs on the journal entries.

Figure 13. Student-created Example of a Nonviolent Videogame Trailer, Goober Race. This is a screen view of a student project illustrating a race between animals and the commands the creators designed to be used to play the game. Adapted from Scratch project created by Victoria and Olivia, December 2013. Used with permission.

Victoria and Olivia created the nonviolent game Goober Race (See Figure 13). They explained the nonviolent game they created in their journal:

> Our game is like a race with Goober and Leon Mouse and Quackers the Duck. Leon the Lion are doing a race for different schools. Leon is at zoo school and Goober is at an alien monster universe school. Goober has a car he is racing in and Leon has a rug

he is racing on. They are racing on a playing field. Quackers is the oldest person there. (Journal)

Creation of their game followed a race at school and did not contain violence. Victoria and Olivia made a point of adding an adult figure Quackers, "who is the oldest person there" and is monitoring the race so the game is fair (Journal).

Media brands was another category of game in which children created their own game by mixing popular characters, plots, and songs from mainstream media products. Fox Song is an example of a media branding game created by students before the critical media literacy lessons (See Figure 14).

Figure 14. Student-created Example of a Videogame Trailer Based on Popular Media Fox Song. This is a screen view of a student Scratch project created before the intervention mimicking games available in popular media. Commands indicate how the game works for players. Adapted from a Scratch project created by Ava and Abagail, December 2013. Used with permission.

Ava and Abagail created their videogame trailer based on a Fox Song game that is currently popular in the media with children. They explained the game in the journal:

> It's like a music game that is about a popular music video that everybody loves. At the end, the fox moves 30 steps. He gets scared and wants to leave the stage and you have to grab a mouse to keep him doing it over again. (Ava & Abagail, Journal)

In the preintervention programming, a number of children chose to create violent games in which there were weapons or destruction of another character. Noah chose to include a dragon named Draggy and a knight called Sir Bob (See Figure 15).

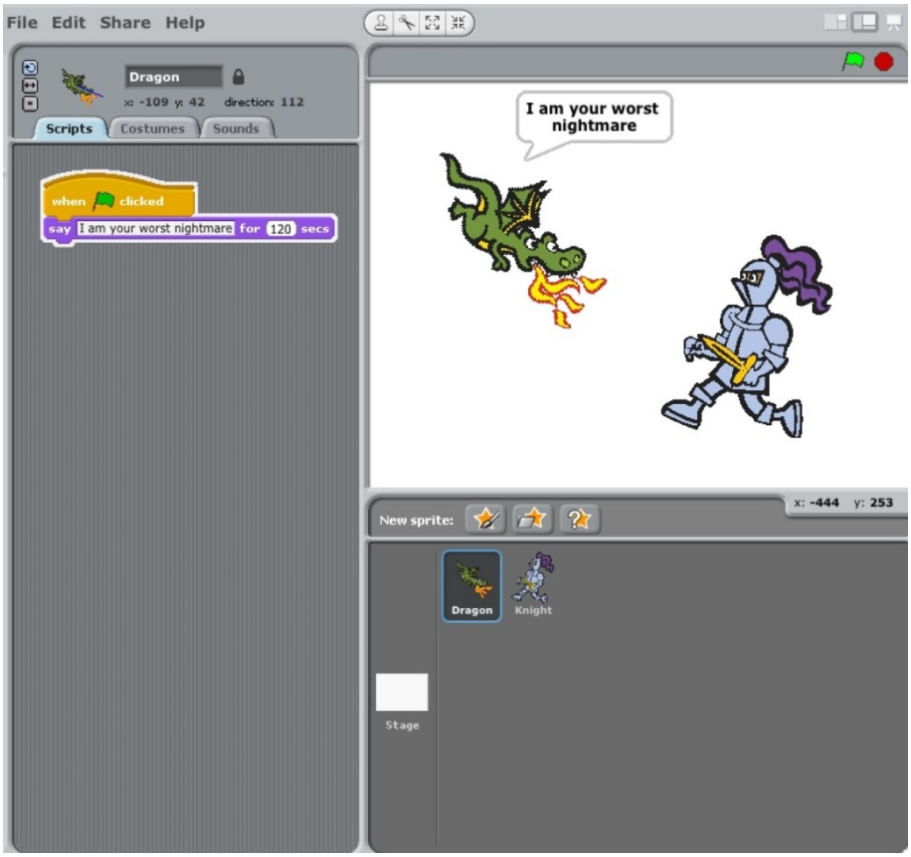

Figure 15. Student-created Example of a Violent Videogame Trailer, Dragon and the Knight. This screen view of a violent videogame created before the intervention is typical of the idea that destroying the enemy is part of the fun and excitement of a videogame. Adapted from a game created by Noah, December 2013. Used with permission.

Noah explained the game as follows: "When a player clicks on the dragon, the dragon says, "I am your worst nightmare" (Journal). When I asked him why he chose a dragon as a character, he responded: "Dragons are usually scary and they give you nightmares sometime."

To add a little humor, he said. “I chose the name of Sir Bob for the knight because ‘Bob’ is funny and a lot of knights always start with ‘sir’” (Interview).

Postintervention Scratch projects. There definitely was a change in the types of games children created after the critical media literacy lessons. After the intervention, children created only three violent games, but 12 nonviolent and social justice games, (See Table 7). Even if they created games that could be classified as violent, they were aware enough of the concepts that they attempted to explain why their games were not violent.

Table 7

Types of Scratch Games Created After the Intervention

Game Type	Number
Eliminate attacker/avoid being destroyed	3
Sports	2
Chase/Racing	5
Fantasy adventure	4
Social Justice	1

Note. Summary of Scratch Projects

The difference between the games students created before and after the critical media literacy lessons showed that the curriculum had an impact. I gave the children explicit direction to create nonviolent games and to create original games that were not media related in part to test their understanding of these concepts. Using Scratch on its own was not enough to ensure that students created nonviolent social justice games. The combination of the critical media literacy lessons and applying skills to a Scratch project was generally effective even though some children still chose to create violent games. Some of the teams of students still chose to create violent games, but they were conscious enough to explain why they felt their game was

actually nonviolent, demonstrating possible lack of understanding of what constitutes a violent game (Journals; Interviews).

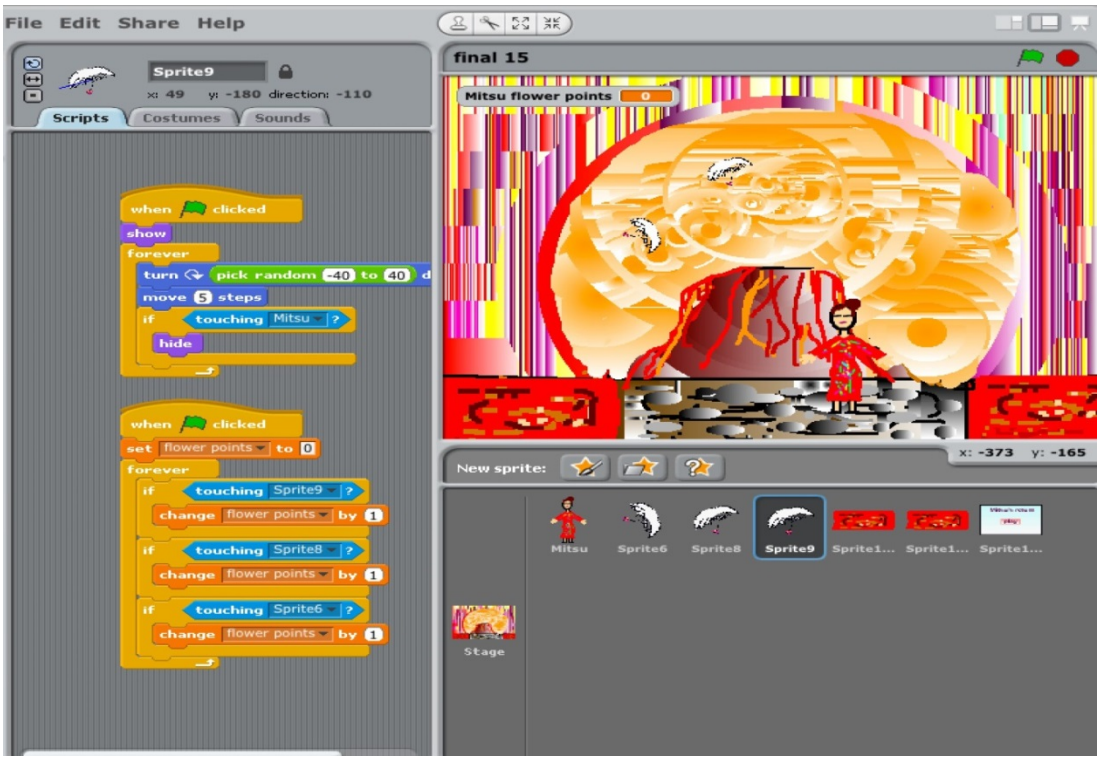

Figure 16. Student-created Example of a Nonviolent Videogame Trailer, Mitzu's Return. This is a screen view of a videogame in which Mitzu, the only character saves the world by picking flowers. Adapted from a postintervention Scratch project by Allison and Nathalie, December 2013. Used with permission.

Mitzu's Return (See Figure 16) was an example of a nonviolent social justice game. The girls who created the game demonstrated a good grasp of the intervention lesson. Allison wrote the following journal entry:

> Our game is called Mitsu's Return. The point of the game is to catch all the spinning flowers without stepping in the lava three times. If you step in the lava even once you lose a point. Our company name is Matsu Mitsu star games because we want to do something Japanese. A creative jolt we have is whenever you step in the lava not only

do you lose a point but lightening flashes. Mitsu is the main and only character in our game. This game mostly appeals to girls because we wanted it to have flowers. You don't die in the game because we didn't want to send a violent message. It is a little too girly for some people such as boys. We do not care if we make a profit or not we just care about kids having fun. (Allison, Journal)

In an interview, Allison explained further:

It is about a girl who is walking around and she is catching some flowers to save the world. As she touches a flower she gets a point but we couldn't get that to work well. You can die by stepping in lava. (Interview)

She also explained why she felt it was a nonviolent, social justice game, "You can't die in it so I guess that works. Well, she is trying to heal the world by catching the flowers because the volcano is erupting everywhere" (Interview). She felt the game counted as a social justice game because the focus was on saving and healing the world through a nonviolent peaceful activity.

On the other hand, Joshua and Daniel created a game called Torpedo Dodge (See Figure 17). They also demonstrated that they understood the concepts I taught in the critical media literacy units, even though their game could be interpreted as violent. They collaborated to write the following journal entry about their game:

Our videogame is about a person dodging torpedoes under water. Our company is called Dodge the Company because you need to dodge stuff in our games. We are going to have flashes movement and music. We are including a torpedo, a person, excitement, action, and explosions. People like action and excitement. We are

excluding people who don't like action, excitement. We excluded them because that's what we wanted the game to be and we knew [some] people won't like it. It sends a nonviolent message because nobody gets hurt or dies. People who like action and that stuff will say wow this game is cool and people who don't like this stuff will say this game is boring. We want to make it profitable because we want to give the money to the poor. (Joshua & Daniel, Journal)

Joshua added: "It's nonviolent like no one gets hurt. It doesn't really look violent; it's like dodge ball sort of and it's fun" (Interview).

Figure 17. Student-created Example of a Videogame Trailer, Torpedo Dodge. This is a screen view of a postintervention Scratch project with torpedoes firing at a person, considered by the students nonviolent because no one is killed. Adapted from project by Joshua and Daniel, December 2013. Used with permission.

It was interesting that the boys classified the game as nonviolent because no one died or got hurt. Yet torpedoes were being blasted at the divers, which could have been interpreted as violent. Although the game could have been classified as violent, the boys made an attempt to not have the game have heavy types of violence such as blood or killing.

Figure 18. Student-created Example of a Violent Videogame Trailer, Paintball War. This is a screen view of a postintervention student Scratch project which students considered nonviolent because there was no killing. Adapted from project by Jacob, December 2013. Used with permission.

Another example of a game that students created that might be categorized as violent is Paintball War (See Figure 18). Jacob expressed some concern about violence in his game, and he asked me if I thought his game was violent (Interview). He explained his game as follows:

> Well, it's just paintball. Our game is about two kids that are great at paintball but a portal appeared and monsters come out and are destroying their city. Help them

> destroy the monsters, retrieve the red thunder bolt and save the city. Equip your weapons and armor and have the experience of your life. The game is free and you can download it on ant and william.com. Good Luck! (Journal)

It is possible that for some students to envision a nonviolent game that still included action and adventure was difficult. Jacob clearly enjoyed the process of creating the technical and exciting aspects of his game. The details of how to create the game were of more concern to him than the theme, although he was aware that the game should be nonviolent. When I asked Jacob how he decided the theme of his game, he explained his thought pattern in attempting to develop a nonviolent game:

> I was drawing like these scary demons and there are just little kids that have to get this thing called a red thunderbolt that saves their city from the monsters that came through a portal. They are terrorizing the city and the king of the thunderbolt is a devil. William and I were going to do something else so then I told him about this because we didn't know what to do so I told him about this idea…I think we did good [*sic*]and it was really cool. On the storyboard, I wrote the pictures of the trailer and I think that's good. I think I did a great job. I think it was really fun drawing our characters because I found this guy that was like a walking boy sprite that I found and I colored him black and put like goggles, paintball gun….I thought it would be better not to shoot weapons because some kids might not like that….there's a monster is like really, really funny like for like a little kid to see so I wouldn't want to like shoot it if there is like a little kid that wanted to play a game. (Interview)

Since he was aware of the nature of the assignment, Jacob was careful to justify why he thought the game was nonviolent:

> Well I have to say it's nonviolent because we do have paintball guns but they don't shoot anything. They just touch the monster and the monster touches us so it's not really that violent….I was thinking about that….we didn't figure out a way to shoot at people….that probably would be too hard for us. I think it's easier without shooting each other with the monster just touching the character. (Interview)

It is interesting that, although guns were included in the game to make it cool, the guns did not actually shoot anything. Players were out when they touched the other character. Jacob felt it was nonviolent because paintball was not as violent as lasers or bullets (Interview).

The majority of the children's games fell in neither the social justice nor the violent categories. The 11 other games children created were nonviolent. Michael and Logan created a nonviolent game about monkeys that like bananas (See Figure 19). Michael wrote in his journal about the game, again indicating knowledge of the concepts taught in the intervention:

> My game company is called Cool Game Company because we make cool games and we're cool. Some jolts in the game are cool songs, a monkey climbing a tree, jumping, moving, and a flash. Who I am including in the game are monkeys, bananas, kings, and trees. The target audience I am looking for are people that like animals. People that wouldn't be interested in my game are people that are athletic because they are into sports and not playing videogames. In the game it can send a nonviolent message and say there's no violence and say social justice can make the

> world better. Some people could not understand a message because they can speak another language and not understand what's going on in the game. I want my game profitable so I can save money for a better life. This is about our monkey game. Game message is in the words and the target audience is people who like animals. Our videogame is about a monkey that was getting bananas for a king and the king thanked him and then he made a house with his gold and he lived happily ever after. (Journal)

He added: "It's a nonviolent game because there's no fighting or killing or hurting each other. They are just helping. He helps the king by the two monkeys getting him bananas" (Michael, Journal).

Figure 19. Student-created Example of a Nonviolent Videogame Trailer, The Monkey King. This is a single screen view of a postintervention Scratch project in which helping is the theme. Adapted from project by Michael, December 2013. Used with permission.

Overall, the creation of games in Scratch showed a change in violence awareness, but violence still existed in some games. Sometimes, students felt violence was fun and made the game better or more exciting. They also felt the violence did not necessarily affect them, although they acknowledged that it could affect younger children. Although they seemed to understand what violence was and clearly indicated that they knew what the "right" answers

should be, some of the children in the study had mixed feelings about whether or not violence in videogames affected people and whether violence should be defined as bad.

Marketing Awareness

Marketing awareness equips people to recognize the advertising messages contained in media that are designed sell something to them. After the intervention, students were aware of the marketing advertisements contained in videogame material they viewed. Qualitative data on marketing came from the answer to the interview question: "Do you feel you became more aware of marketing in games from the lessons and from creating Scratch games?" Student responses indicated that they cared and were aware of advertisements in the games they download and of the need to turn them off. They also saw the advertisements as tempting. Victoria said she did more research before downloading games. She also recognized that she has to deal with annoying advertisements for some games if she wants the free version (Interview). On the other hand, Jacob realized that "free" things might not actually be what he expected (Journal). Jonathan realized that some games required people to purchase things before they could go on with the game (Journal). David took a hard line saying, "Never trust the advertising" (Journal). He said that he did research on the games for such things as age appropriateness and recommendations before getting them. Allison was not as careful with her research and admitted that sometimes when she bought a game it was nothing like the advertisements.

Other children saw this question in a different light, highlighting possible confusion with the concept. They thought of advertising in terms of capitalism or of selling their own games. In

creating their Scratch videogame projects, Noah and Victoria both had marketing of their game for money as a primary part of their game development strategy. Others thought of this question referring to selling their own games. Amelia mused that if she ever made a game she would probably do it for profit or power (Journal), while Liam thought that he could probably sell his game for $15 (Journal).

Many of the children wrestle with the concept of capitalism. Hailey noted that if she created a company and made videogames, she would have to sell them for enough to have materials to make the next (Journal). Other children thought the best path was to share their profits. Noah said that they would sell their game and donate to charity or make more money to build more games (Journal). The extent of stores in children's games and online donations mean that children are very aware of product marketing on the Internet.

Figure 20. Student-created Example of a Videogame Trailer Created for Profit, The Rainbow Group. This is a screen view of a postintervention Scratch project in which animals dance. Students intend to contribute profit made from the game to charity. Adapted from project by Victoria, December 2013. Used with permission.

Referring to the Rainbow Group game (See Figure 20) she created, Victoria wrote: "We want it to be profitable because we can make more with the more money we have" (Journal). However, she noted that their game's entire basis was marketing with dancing animals raising money for charity. She said that the goal was to raise money for the homeless (Victoria, Journal).

Marketers' Messages to Gain Profit and Power Awareness

Marketers' media include messages to gain profit or power through media techniques that attract people into buying or using their products. Before the intervention of the critical media literacy lesson and creating the Scratch projects, most of the children were not aware

that videogame creators were marketing products to obtain profit and power (Journals). The significant preintervention journal question on this issue was: Do you think creators of media messages make media to gain power over people through ideas or gain profit through money? Twenty-three children said they did not know (Journals). Six others gave responses like Noah who said, "I think they do because people buy the games and some of the money goes to them" (Journal).

The critical media literacy intervention began with viewing videogame trailers. I asked students to decide if the trailer messages were designed to gain profit and power for their makers and recorded the responses in the Teacher Reflection Notes (See Table 8).

Table 8

Student Responses to: What do you think the author's purpose was in making the media trailer?

Videogame Trailer	Purpose of trailer
Ben Hex	• They made the game to get money. • They just want to get kids' attention for kids to buy so they can get money. • They made it because they will make more games and people will buy them and get rich.
Nancy Drew: Tale of the Twister	• Made to get lots of money. • Selling to girls
NBA	• Power because they are trying to get you rushed and they are trying to get you to like it. • It's an advertisement for the NBA
Monster High	• Power so people will like it. • Profit because they want to make money • Power they might want people to watch the show • I think it is for power because a lot of girls might like it. • I think it is made for profit because many girls like this stuff and it is made for profit. • Profit and power because they have so many shows
Hydro	• Power because all people will buy this game • Power because people might tell their friends • To entertain and get money

Note. From Teacher Reflection Notes. Videogame trailers are included in the Sensationalized Superheroes (Wolfe & Fourth R, 2010) and adapted from Ben Hex (Konami, 2010), Nancy Drew: Twister (Her Interactive, Inc. (2010), NBA, (2K Games, 2012), Monster High (THQ (2011), Hydro (Microsoft Game Studios, 2010).

The answers from above revealed that students recognized that the trailers' producers were trying to get messages to them to gain profit or power. Children created Scratch games keeping profit and/or power in mind. In one example, students were quick to assure the reader that their profit would go for a good cause (Anna, Journal). Anna explained in her journal what Hamster in Candyland (Figure 21) was about and why it would be profitable:

> We want to hopefully sell our game and get money, but don't worry it's going to be used for very good causes....Thanks for listening hope you have a chance to play it.

Buy Hamsters in Candyland. We want the game to be profitable because we are going to give to a great cause. (Journal)

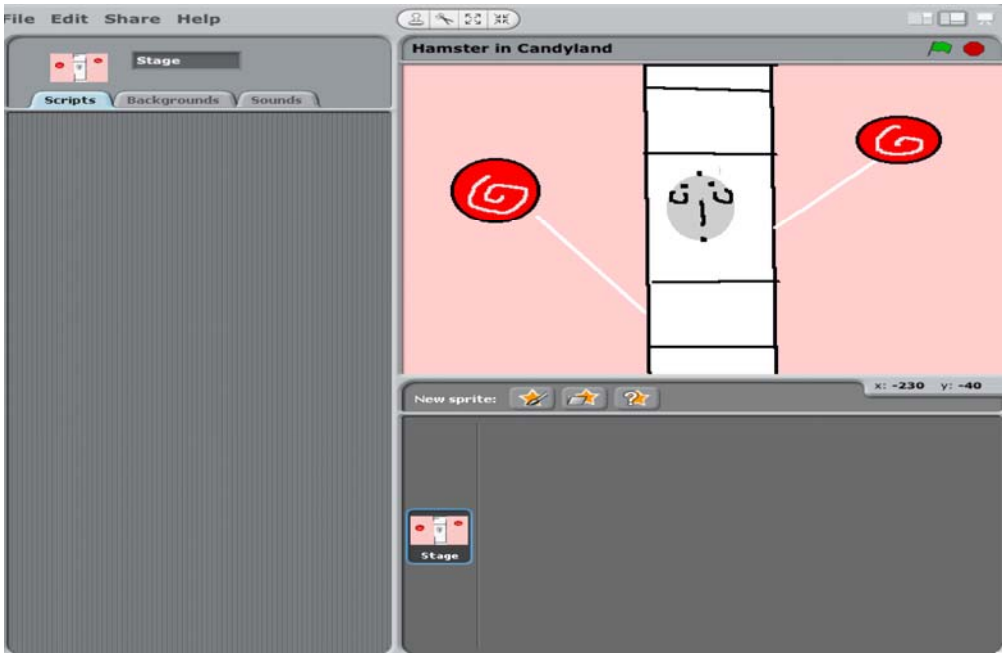

Figure 21. Student-created Videogame Trailer to Generate Profit, Hamster in Candyland. This is a screen view of a postintervention Scratch project from which students hoped to gain profit to donate to charity. Adapted from project by Anna, December 2013. Used with permission.

Another game created to gain profit was Super Gaming (See Figure 22). The students' motives to gain profit again showed an understanding of the concepts taught in the intervention. The author wrote:

It sends a profitable message by raising money for the animals at the animal shelter. They will think that it's mean to just get money. Yes, so I can raise money for the poor. When start clicked you will pick your charity. (Evan, Journal)

He developed a plan to market their game to increase the audience. He designed the game mechanics for having the player pick a charity to which to donate when the game starts.

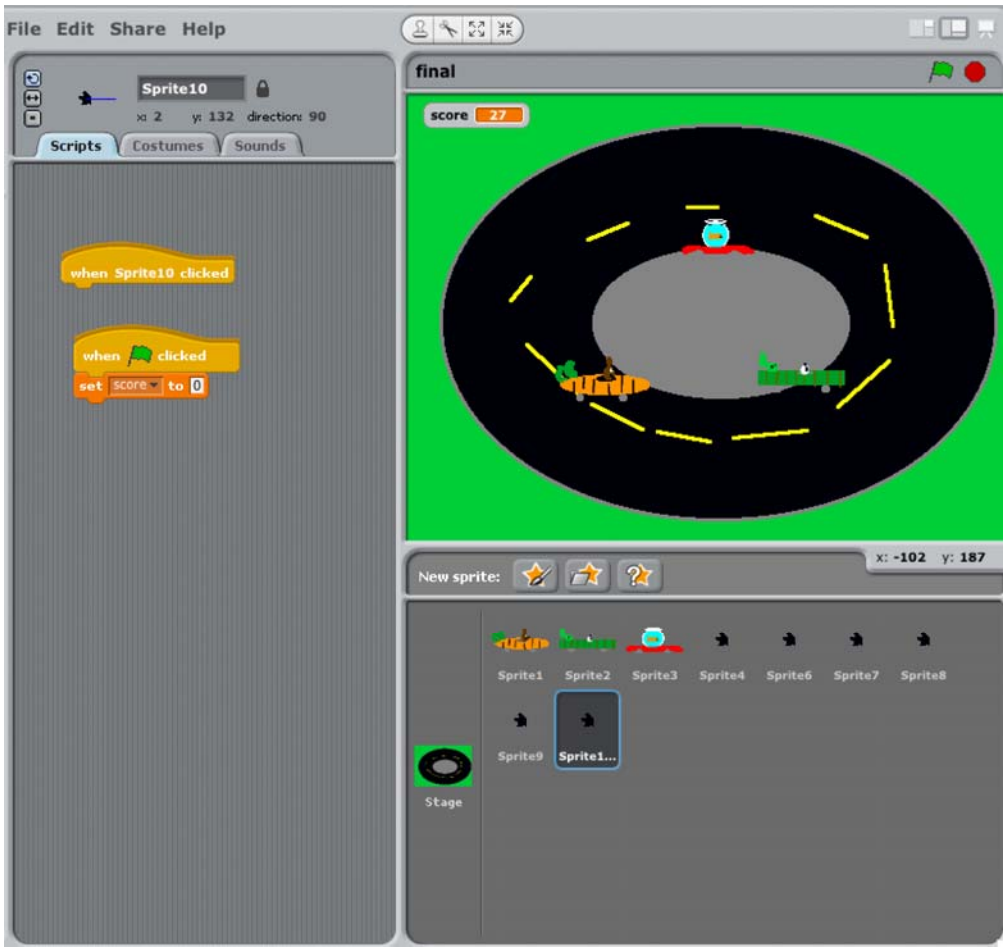

Figure 22. Student-created Example of a Videogame Trailer to Generate Profit, Super Gaming. This is a screen view of a student postintervention Scratch project which would enable the user to donate to a favorite charity as part of the sign on process. Adapted from project by Evan, December 2013. Used with permission.

Interview data from students further confirmed the change in students' marketing awareness from the preintervention journals to after the intervention and creation of Scratch projects. Evan commented: "They make the game to get money and power. Power…they…create a trailer to make you buy the game. So both of them I think are the same as getting money" (Journal). Owen commented that "profit is to just get money and stuff" (Journal). Grace commented: "They use marketing…for profit and money and some

people use it for power" (Journal). She said that she would donate the profit. Aware of the social justice theme, she added, "You could just be nice to each other and try to help each other for social justice" (Grace, Journal).

Students definitely learned how the games were used for profit and power and how they could market their own games for profit. However, they were aware of the lessons of sharing and social justice.

Users' Different Experiences With Media Based on Background and Viewpoint Awareness

People experience media messages in the context of their personal background, experience and viewpoints, which means that different people can experience the same media in very different ways. The qualitative data supported a positive change in student's awareness that people experience media messages differently. In the preintervention journal answers to the question asking if different people understand media messages differently, twenty-one students said they did not know. Another eight said something similar to Allison's response, "Yes, not everyone is the same, and people have different ideas of what media is" (Journal). I was surprised by the number of children who said at preintervention that they did not know whether different people experienced the same message differently. The uncertainty or lack of knowledge found in the preintervention journal matched the lack of knowledge in responses from students' pretests (Teacher Reflection Journal).

After the preintervention journal, I asked students to think about how different people might experience the videogame trailers. I coded class responses and grouped similar responses (See Table 9).

Table 9

Student Responses to: How would different people experience the media trailer differently?

Game	Positive	Negative
Ben Hex	• Good game • Cool game for kids • Lots of exciting jolts • Fun and funny	• Too violent • Adults would think it's boring. • I think I would never want to play a violent game like that ever. • It's not really fun. • People might feel shocked or a little scared. • Some people might think what is the point of this game?
Nancy Drew: Tale of the Twister	• Awesome • The thunder scared me. • Frightened, bored, scared, worried. • Strange	• Interesting • Exciting • Thrilling adventure • Dangerous
NBA	• All real NBA players • Cool shots • Fun music	• Boring • Hate loud music. • No girls
Monster High	• Girls are pretty • Monsters are cool.	• Creepy • Do not like it • Girl videogame
Hydro	• Looks cool because of cars, buildings. • Flying cars	• Some people will not like it because there is violence.

Note. Summarized from Journals and Teacher reflection Notes. Videogame trailers are included in the Sensationalized Superheroes (Wolfe & Fourth R, 2010) and adapted from Ben Hex (Konami, 2010), Nancy Drew: Twister (Her Interactive, Inc. (2010), NBA, (2K Games, 2012), Monster High (THQ (2011), Hydro (Microsoft Game Studios, 2010).

After watching trailers children began to act on the idea that everyone understood the media message differently. Children then wrote in their journal about how people might experience their Scratch project differently.

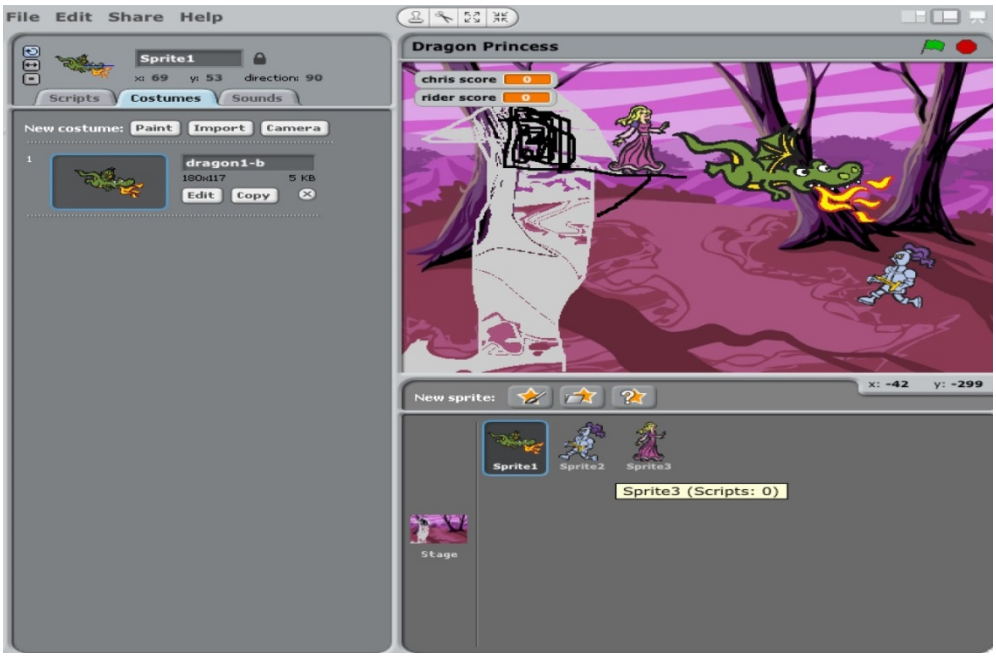

Figure 23. Student-created Videogame Trailer as an Example of Different Reactions to Videogames, Dragon Princess. This is a screen view of a Scratch project created to attract people who enjoy fantasy, indicating student awareness of target marketing. Adapted from project by Grace and Amelia with permission.

In their postintervention collaborative journal, the authors of Dragon Princess (See Figure 23), Grace and Amelia wrote:

> Our videogame trailer is going to be about a prince who has to get past a dragon to save a princess....Our target audience is people who love fantasy....Some people might say it is very fun others might say that it is boring and silly....They might understand that there is a dragon and it's cool. They might understand that there is a prince and a princess and think that it's cute. (Journal)

Grace and Amelia understood that they branded their game for a fantasy audience and that not all people would like it. They discussed their game further in the interview response. Reflecting understanding of the lessons of the intervention, Grace also said it was nonviolent and socially just:

> You have to save the princess and the world because the world is in danger....Well you have to save the princess so it's social justice by saving....I noticed that at first when Amelia and I thought of the idea I thought that could be kind of violent with the dragon but then I realized it was trying to save it and not trying to be violent. (Interview)

Also aware of the lessons of the intervention and the emphasis on nonviolence, Amelia added:

> ...a dragon and the dragon wants to keep the princess...from...the world so now everything is going to go bad. The prince saves the princess and the world and...you get 10 points....We are trying to save the world and someone's life well not their life but I guess. (Interview)

Although some might think it a violent game, they thought it was social justice by saving. They also recognized that people who did not like fantasy probably would not like their game or think of it as boring.

In interviews, other children also responded about how different children could experience videogame violence differently. They had quite different perspectives on this aspect. Jacob was particularly concerned about how some people might think videogames hurt players' eyes and thought about someone creating eye protection (Interview). On the other hand, David was concerned with justice. He felt that criticisms of creators might be unjust saying that creators of the games "might know what happens but then the media got it all wrong" (Teacher Reflection Notes). Leah looked at it from the perspective of her internal feelings saying, "They

don't exactly like it how I like it. They don't have exactly the same feelings or likes that I do or have" (Teacher Reflection Notes). Evan saw the concept from an action perspective declaring,

> For instance, in a game when someone attacks, you might think to kill them. I think some people might think you should actually do that but you don't [have to do that.] You can just run away or something. You don't kill them. (Interview)

Owen took the commercial perspective saying, "Some people might say this is the best game ever you should go get it and the person...will say...it's not the best game don't buy it it's a waste of money" (Teacher Reflection Notes of Class Discussion).

Children made progress in understanding that people experience media differently. At times, however, their limited life experience prevented them from fully understanding and empathizing with the experiences or points of view of people different from themselves.

Corporations' Branding Through Inclusion, Exclusion, and Stereotypes Awareness

Corporations design different products to appeal to different groups. To successfully target market segments, the design and messages of products usually exclude some individuals or groups while including others, and usually include stereotypical views of these different groups. The qualitative data showed that children knew how to include and exclude people to create a target audience to brand the game they created in Scratch. They could also identify when commercial producers were using this tactic and when there were stereotypes in the videogame trailers. They could also think about how different people might experience the branding being done. Children had some experience with stereotypes but need further and deeper work

with the curriculum and more lived life experience to truly grasp completely the use of stereotypes in media branding.

In the preintervention journals, I asked: "Do you think an author or creator of a media message would include certain people in the message on purpose and exclude other people on purpose?" Twenty-five children in the group said they did not know (Journals) and four responded like Jonathan, "Yes, because maybe they want people who are popular" (Journal), or Leah who said, "They would only want to put in certain people" (Journal). Clear in the responses was how unaware children were of this aspect of branding.

The children were also unaware of the definition of *stereotype*. My teacher reflection journal of the class lesson on branding included the following:

> I asked children what a stereotype was and the few children who responded thought a stereotype might have to do with some sort of stereo or radio. After I explained what *stereotype* meant, some were able to give examples of what a stereotype was. I talked about how the media uses stereotypes to sell products. The class then brainstormed answers to the question: "What is a stereotype?" Some children's answers were close to the correct definition, recognizing that it had to do with identifying people in unreal ways, but others definitely did not understand the concept. Their answers included
>
> - A stereotype was that all Latino sell tacos at taco stands.
> - It's like something that is used in movies often that's not really used in real life.
> - A stereo? I got this from the name. A type of stereo.

I explained further that stereotypes can happen in real life. I explained: A stereotype is when someone makes a big, broad generalization about a group of people. A stereotype would be that all boys like sports. Some boys like to play sports, but they also prefer different things like Legos, robotics, or they like art. Victoria observed, "So they're like judging people." I answered that stereotypes can be used to judge people. Sometimes people will use stereotypes on purpose to be mean to somebody. James created a parallel he understood when he asked: "Is it like bullying? Stereotypes can be used to bully. That thing you said about you shoot like a girl could be mean to two people a boy and a girl. You are stereotyping both people."

I told them that advertisers use stereotypes to try and brand or sell things because they figure they are making a game for boys so they plan to sell it to boys who fit a certain stereotype. Maybe as a videogame creator you could say that you do not like the stereotypes telling you what a nine year old boy or girl thinks or acts like. You can say you are going to make a game based on what you like and this is a game that is going to be good for kids because there are other kids like you who would enjoy that game. You can say you are not going to have your games be full of stereotypes and violence. You are going to counter that and put a different message out there. When you do that, you are creating a social justice game. That means you are going to go against stereotypes sending out a message that includes all kinds of people. (Teacher Reflection Journal)

After the discussion, I asked the children to look at each videogame trailer and identify the stereotypes and branding that were used to include and exclude people in order to brand the videogame trailer. I coded similar responses (See Table 10).

Table 10

Corporations' Branding Through Inclusion, Exclusion, and Stereotypes Awareness

Game	People included	People excluded
Ben Hex	• People who like: robots, aliens, Ben 10 tv show, swampfire, crab character, swamp aliens, sci-fi. • Boys that are kids.	• Adults, girly girls, babies, teens, boys who like sports, athletic kids, girls who like pink and Barbies • People who are not interested in videogames
Nancy Drew: Twister	• Girls and boys who like adventure, mystery, loud sounds and storms.	• People who do not like adventure games, spies, tornadoes, Nancy Drew, • Girly girls and some boys • People who like action and sci fi
NBA	• Boys who like basketball, NBA, watching sports • Basketball players, athletes, runners, NBA stars, sporty girls, teams tomboys	• People who do not like sports or the NBA. • Girls, girly girls, adults, small children • Not sporty people
Monster High	• People who like monsters, fantasy, teenage monster girls, dressing up, pretty girls • Girls, girly girls, four-year old girls, girls who like dressing up	• People who do not like monsters, animation, or girls' games • Boys because it is too girly • Babies, boys, adults, people who like sports, tomboys
Hydro	• People who like racing games, action, noise, boats, explosions, water, cars, bombs	• People who do not like crashing, crazy music, noise, thunder, fire • Girls

Note. Summarized from Teacher Reflection Notes. Videogame trailers are included in the Sensationalized Superheroes (Wolfe & Fourth R, 2010) and adapted from Ben Hex (Konami, 2010), Nancy Drew: Twister (Her Interactive, Inc. (2010), NBA, (2K Games, 2012), Monster High (THQ (2011), Hydro (Microsoft Game Studios, 2010).

After looking at branding trailers as examples, students had to make decisions about who would be included and excluded in branding their Scratch project. Ethan completed a Scratch game, student interview, and journal comments on how his team did branding by including and excluding. Ethan said that his game Shoot Out Lobster Basketball (Figure 24) was about basketball "because we like it" (Journal). He added,

We would name our game Shoot Out because it matches our company name. People who like NBA and sports, boys and maybe girls will be included and like our game. It is a social justice game because it might encourage them to play basketball. If some people don't play basketball they might not get it. We are excluding adults because they don't play videogames that much. Like boys will understand how to play and some girls might not. (Journal)

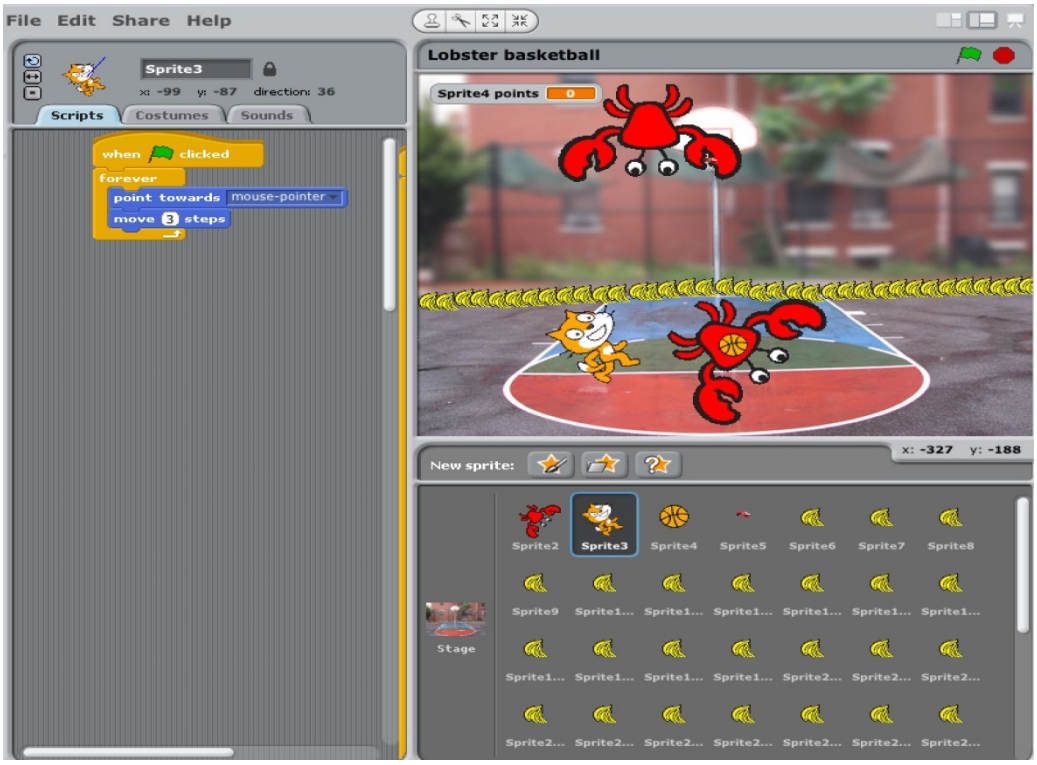

Figure 24. Student-created Videogame Trailer as an Example of Branding, Shoot Out Lobster Basketball. This is a screen view of a student Scratch project illustrating the concept of branding using the NBA model of basketball. Students designed the game with lobsters playing basketball because they thought that would be amusing. Adapted from project by Ethan and Liam, December 2013. Used with permission.

The game was constructed with animals as the players using the traditional basketball scoring method. Liam added:

> I thought it would be fun using animals because it would be funny because you could see fake animals playing....Then when you press the spacebar the guy would shoot and then we had a sprite on the basketball hoop so that whenever the basketball hit it, it would score two points. (Interview)

Liam and Ethan knew they were branding using certain characters and game techniques that would appeal to a sports audience.

Is branding a good or a bad thing? Additional interviews with children in the class showed their awareness of different experiences and stereotypes, and their opinion on whether branding was a good or bad thing. Although the term was not used, they were clearly aware of market segmentation according to what appeals to different groups. Hannah said she thought "[producers] exclude some people because other videogame makers might have some stuff that [those] people would like so they could make stuff that the other people could have liked" (Teacher Reflection Notes). Grace agreed, observing that "differences are acceptable because some people might be thinking they don't want to play because they are thinking it's weird or it's just not for them" (Teacher Reflection Notes).

Some of the children saw the practical side of branding from the consumer viewpoint. Hailey commented, "Branding is important because it brings out what most of your games are going to be about. For example, if somebody's brand is funny game somebody is going to think their games are really weird and funny" (Teacher Reflection Notes). They thought that knowing the brand helped the consumer choose.

However, some showed in their responses that they held the popular stereotypes about gender and thought of them as facts rather than stereotypes. For example, Evan justified differences saying:

> The majority of boys like sports and I don't think they meant to exclude girls 'cause most girls don't really like sports....I don't really think they meant to exclude them I think they just made a game that they thought would be fun [for boys only] . (Interview)

Jonathan added. "Maybe because you are trying to attract boys you include all stars in basketball games, football stars, hockey players. In girl games you could include girls' things that girls like" (Interview).

Not only boys held gender stereotypes as fact. Amelia commented, **"**Branding…well, in makeup games probably boys are excluded and girly girls are included. Tomboys are very discluded [*sic*] and adults definitely are excluded in that stuff" (Interview).

Victoria had a sense that she has to look beyond the obvious stereotype. She seemed to understand that there had to be a way to segment the market, but that the common stereotypes are not always right. She said, "It's good and bad to brand because you don't always know what people like…you do, but you still have to find out what they like so you can have a good game" (Interview). Her idea was to do market research to determine what groups like what, but this would still segment the market and exclude some people from the target group.

What does stereotype mean?" Hailey defined a stereotype and noted that there are many exceptions to accepted stereotypes. She commented,

> [Stereotype is] something people use in videogames, media, and music because that's what they think it is supposed to be like. For example, people think girls are all about pink, but some girls are really into black and dark things. Some girls are feminine and pretty and some are more masculine. Like in movies, everyone thinks girls are so valley and pink and blingly [*sic*] but not all girls are like that. (Teacher Reflection Notes)

Jonathan had a similar definition for which he gave an example. His example included a way of overcoming the stereotype. He said,

> Stereotypes are things like if you make a videogame for girls you might think of dressing stuff like that or stuff that girls usually like, unicorns stuff like that. If it's a nonstereotype and it's like a girl it could be like stuff boys do and if it's like a boy stereotype they might think football, basketball, rock music things like but if you don't like them you don't like the game since you don't like it. (Teacher Reflection Notes)

When discussing stereotypes in interviews, some of the children had a clear understanding, but many confused stereotypes with treating or saying something bad to another child. Leah made a comment typical of their thinking on stereotypes, **"**I think stereotypes are like a girl or boy trying to be mean saying like you play like a girl. The boy wouldn't feel good because the other boy is being really mean to him" (Interview). Evan added, **"**Stereotypes are like using someone's race in a bad way" (Interview). An interesting view of the definition of stereotype was shared with others by Jonathan, who said, **"**I used to not know what a stereotype was and now I know what it is. Saying bad stuff about people when they aren't saying bad stuff about you" (Interview).

Some of the children confused stereotypes with how they acted toward others. Hannah commented:

> There are good stereotypes and bad ones. I learned to only do good stereotypes. You shouldn't do bad stereotypes because they could hurt people. A good stereotype is going up to someone who is sad and going up to them and asking them to play with you, and a bad one would be like making fun of someone because of the way they talk. (Interview)

Victoria took a personal perspective on stereotyping, citing her experience of being stereotyped by her gender. She said:

> People put like stereotypes...without knowing but sometimes it's intentional. People say that girls have to like dolls and like dresses and the color pink but that's not what I like. (Interview)

The children thought they were more aware of use of stereotypes after the intervention. Study data support the idea that children understand through their experience, but also clearly accept many stereotypes as fact. It was clear that there was more work to be done on stereotypes, or possibly as time passed and the children matured, they would begin to understand how stereotyping limited opportunities and access.

Media Producers' Creative Language and Artifacts Awareness

Videogame producers have developed a large variety of techniques to attract and hold the attention of gamers. These include such things as color, movement, sound, storyline, action, and characters. To be critically literate about the games they use, people have to be able to analyze what these artifacts are and why they attract and hold their attention. In preintervention journal

entries responding to a question about what creative techniques videogame creators use to attract attention, about half the class did not know what creative techniques were. Fourteen children said they did not know what creative techniques were (Journals), but another fourteen said things like Michael "Yes, because it makes it look cooler" (Journal) and Victoria, "So people don't get bored of it and don't buy it" (Journal).

Below I recorded children's answers in part of the lesson on jolts in the Teacher Reflection Journal.

I defined *jolt*, gave examples, and then asked children to think of some jolts they had seen in media. They suggested many definitions and examples such as

- Lightning bolts,
- Fast button press,
- Haunted house scary,
- Apollo mission game and the rocket goes off,
- Roller coaster,
- Airplane landings,
- Car crashes,
- Train stops suddenly,
- Falling off a cliff, and
- Volcano going off.

I explained further that when something violent happened to you it emotionally triggered a reaction in you. It triggered a feeling inside you, a scary feeling. People who create videogames want to emotionally trigger something in you. Fast cuts get your attention.

Cuts get you emotionally involved. James cited an example of a cut as where the game player finds himself in a hole and then going into another world. Tyler said that an example of a cut happens in every game when the player is in a tunnel and it gets darker and darker, and then the player comes out and the light flashes.

I asked the children to view videogame trailers and to identify jolts. Table 11 includes the jolts students described in their journals for each trailer.

Table 11

Student Responses to: What creative techniques or jolts were used in the videogame trailer?

Game	Average Number of Jolts	Jolts/Creative Techniques Used
Ben Hex	20-30	• Shocks, explosions, electricity, punch, gun firing, knife slash • Lasers, lightening, flashing, fire • Transforming, fighting, running fast, battle • Parks, moving floor, glowing door, drop down • Aliens, monsters • Talking, voice effects, music, sudden noise • Purple mist, swampfire , disappearing in smoke • Colors
Nancy Drew: Tale of the Twister	5-15	• Thunder, lightening, twister, quick falling rain • A spy, person • A house, dark room, • Lights flashing on and off, color
NBA	20-35	• Slamdunks, shoots, blocks, jump over car, car stunts • Music • Shot angles, lights, slow motion • Characters, NBA players, Blake Griffin, Russel Westbrook, Kevin Durant, Derik Rose • Running, movement with hands
Monster High	8-10	• Talking, music, dancing, • Makeup, hair • Howling, lightening, flashes, fire • Bats, spiders, sparkletts, bats flying
Hydro	26	• Crashes, flying, falling • Scene changing, music

Note. Summary of student journal entries on jolts. Videogame trailers are included in the Sensationalized Superheroes (Wolfe & Fourth R, 2010) and adapted from Ben Hex (Konami, 2010), Nancy Drew: Twister (Her Interactive, Inc. (2010), NBA, (2K Games, 2012), Monster High (THQ (2011), Hydro (Microsoft Game Studios, 2010).

I also talked to them about addiction and jolts and how violence was used to attract people to games. Children wrote journal entries responding to the questions: Do you think children can get addicted to playing a videogame? Why do you think they cannot stop playing the game? Most of the children thought that it was possible to become addicted to videogames because they like playing. Joshua's comment summarized their feelings:

> I think people can get addicted to videogames. I think they can't stop playing the game because it can be fun, it can have really cool music, or you can just really like the game. Addiction is when you like something a lot and you can't stop doing it. (Journal)

Jonathan added another reason he thought people got addicted to games:

You just want to keep playing 'til you beat the game and when you beat the game and there are [more] levels you want to keep playing…to beat that and so on. (Journal)

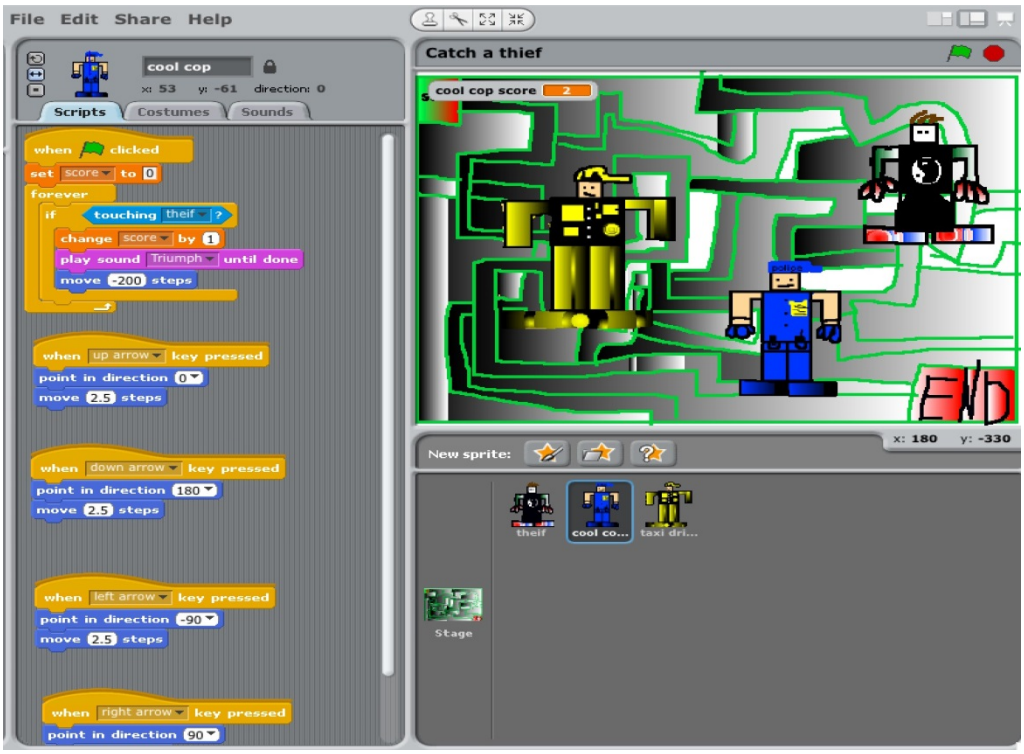

Figure 25. Student-created Videogame Trailer as an Example of Use of Creative Techniques, Catch a Thief. This is a screen view of a student Scratch project which included jolts to create excitement. Adapted from project by Jonathan and David, December 2013. Used with permission.

Children next made decisions about what jolts to use to attract viewers for their own Scratch videogame projects. Catch a Thief (Figure 25) was a sample game created in Scratch where children used jolts to create excitement. Jonathan and David described their game and the jolts they used in their journal entry.

> There is a crime. You are the cops chasing the thieves. The thief gets a taxi. The taxi takes the thief to a maze. You change to the thief. The thief runs through the maze while the cops are chasing you. If you end up getting to the finish, you win. If you don't, you lose. The creative techniques we are using are cool music, cuts, flashes, changing clothes, and characters. (Journal)

Table 12 summarizes creative techniques children used in their Scratch projects.

Table 12

Creative Techniques/Jolts Used in Children's Scratch Projects

Game	Creative Techniques/Jolts Used in Children's Scratch Projects
Candyrush	• Suddenly going fast, boosts • Flashes
Hampsters in Candyland	• Hamster dancing and singing
Monsters and Paintball Shots	• Football player running away from monsters, paintball game • Pops, door closing
Animals Racing	• Racers, carts, boats • Powerups, lights,
Cop and Thief Chase	• Cool music • Cuts, flashes • Changing clothes, characters
Torpedo Dodge	• A torpedo, a person • Excitement, action, explosions
Mitsu's Return	• When you step in the lava, you lose a point. • Lightning flashes
Piggy Ghostbusters	• Ghost, pigs • Rainbows, candy
Hammy the Hamster	• Different super powers • Backgrounds, weather
Monkey King	• Cool songs • Monkey climbing a tree, jumping, moving • A flash
Dragon Princess	• Vivid colors • Fast motion
Soccer	• Cool shots
Shootout	• Cool music • Cool dunks
Fox Run	• Music • Color • Running

Note. Teacher summary of creative techniques children used in their Scratch projects

The children's creative technique awareness was definitely raised by the lessons and the application in creating the Scratch project. Noah commented on his project: "When somebody scored the ref would blow a whistle and then the song would play. We put kind of loud music and a song would play" (Interview). Joshua recognized that "some games have music, and the commercials make it seem cooler and stuff" (Interview).

Media Authors' Purpose and Perspective Awareness

Before the intervention, children often simply participated in videogames without thinking about who created it for what purpose. To be critically media literate, children should learn to consider the perspective and purpose of the author and how that affects the design of the game. This literacy should extend to all media, since all media has authors who send their messages from their own specific viewpoints. In response to the preintervention journal question about the definition of "media", 21 children wrote that they did not know what media was. Eight other children thought they did know and gave responses similar to a response written by Noah: "I think media is TV, videogames, and the radio. I think this because you can see or hear it on electronics" (Journals, Teacher Reflection Journal).

What is media? Twenty-four children did not know the answer to a journal question asking if videogames were media. Only three children thought they were, giving answers similar to Grace's answer: "I think videogames are media because it's a type of technology" (Journal). The other two children said videogames were not media. Victoria said, "No, because they are games not commercials" (Journal), and David said, "If they do not have ads in the game they are not media" (Journal). It seemed from this response that children did not know if videogames were media or felt they were not media if they did not have commercials.

Twenty-three children did not know in preintervention journals if there was an author or creator who constructed or put together a media message such as a videogame or commercial. Six children responded like Evan when he said, "Yes, there is because someone needs to create it because a commercial does not make itself" (Journal). Below is a summary of the notes I took as I taught the lesson.

> After giving the surveys out to the children, I asked the class what media was. No one knew. I put the definition of media on the board and talked about how things like Scratch and cameras are tools authors of media use to create media. The class then brainstormed answers about media. The children said media was any type of technology such as movies, television, videogames, news, radio, newspapers, music, Instagram, Facebook, Twitter, film, video, or pictures that were the product of a media author or creator. (Teacher Reflection Journal)

Children had definite opinions about the definition of media when I interviewed them about media authorship. There was some confusion about media being technology only and who the authors of media were. Noah's comment was typical of their understanding of the definition of media, "Media has to be something like TV, radio, videogames, and like electronics maybe" (Interview). Jacob, however, had a slightly different understanding when he said, "Media is like things that you can save and share" (Interview).

Media creators. The class brainstormed the types of media author or creator jobs including photographer, computer programmer making videogames or websites, computer engineer editing videos, director, producer, disc jockey, camera person, and actor. Additional comments focused on media creators as people who worked with technology. Comments in my

observation journal included Evan's response, which was typical of the class: "In order for it to be a media job it has to have some type of technology." Students subsequently added musician, reporter, sports announcer, and author as media jobs. David had a special insight when he reminded the class that they were creating media products (Teacher Reflection Journal). Jacob made a significant comment when he said, "I can be an author of videogames because I am very skilled with videogames" (Teacher Reflection Journal).

David thought that the purpose of some media authors was "they try to make the news or other stuff really out into the world. Like for the news if something happened they might exaggerate to make it better" (Teacher Reflection Journal).

The children then watched videogame trailers and answered questions about the authors and the messages they were trying to send in a class discussion. In Table 13, I summarized their responses as I had recorded them in my Teacher Reflection Journal.

Table 13

Student Responses to: Who is the author and why is this message being sent?

Game	Author	What is the purpose of the message?
Ben Hex	Xbox live	• They made the game to get money, to attract people, to make it popular so that the kids that like Ben 10 can buy it and play it. • So people buy it so Xbox Live could become rich. • So they can earn some profit to attract kids. • Kids to enjoy it. • They just want to get kids their kids' attention for kids to busy so they can get money. • They made it because they will make more games and people will buy them and get rich. • Xbox Live made this to addict kids. • Excited to make people pay. • Children to have fun.
Nancy Drew: Tale of the Twister	Her Interactive	• Made to get lots of money. • Selling to girls
NBA	Machina Sports	• Power and profit • Power because they are trying to get you rushed and they are trying to get you to like it. • It's an advertisement for the NBA
Monster High	THQ	• Power so people will like it • Profit to become rich • Entertain people • Profit because they might want people to watch the show • I think it is for power because a lot of girls might like it. • I think this is made for profit because many girls like this stuff and it is made for profit. • Profit and power because they have so many shows, videos, movies, and games that are monster high so profit and power
Hydro	Xbox 360	• Power because all people will buy this game • Power because people might tell their friends • To entertain • To get money

Note. Summary of answers children gave in class discussion. Videogame trailers are included in the Sensationalized Superheroes (Wolfe & Fourth R, 2010) and adapted from Ben Hex (Konami, 2010), Nancy Drew: Twister (Her Interactive, Inc. (2010), NBA, (2K Games, 2012), Monster High (THQ (2011), Hydro (Microsoft Game Studios, 2010).
At the time of the intervention, the publisher of NBA was Machina Sports, as the children answered. For reference purposed in this document, I have included above the current owner of the publishing rights throughout .

Students then began to create their Scratch projects. I asked them to give a name to their production company and state their purpose as media creators for making their game. I have included a sample Scratch game below (See Figure 26).

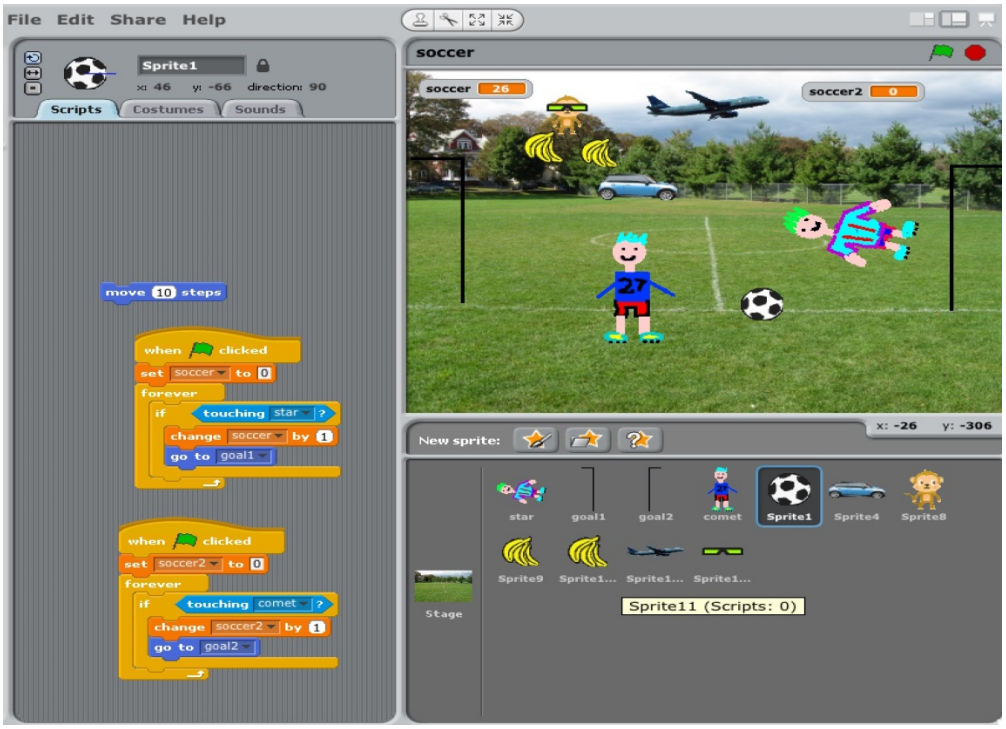

Figure 26. Student-created Videogame Trailer Screen View as an Example of Student Media Awareness, Soccer. This is a screen view of the postintervention videogame trailer Soccer showing original characters and actions not reflecting commercial videogames currently popular with children. Adapted from videogame trailer created by Tyler and Noah, December 2013. Used with permission.

In their journal, Noah and Tyler explained their *Soccer* game:

> Our videogame is about two soccer teams fighting for the championship. We named our company sf soccer. We would put cool shots. We would put soccer players, coaches, fans, and Refs....They help each other....We would want to use the money [profit] for another videogame.

Other Awareness That Emerged From the Data

While the basic research question included investigation of whether the intervention affected children's awareness of violence, marketing and the five core concepts of critical media literacy in videogames, qualitative research also allowed other themes to emerge in the process of analyzing the data. Project participants expressed excitement about both their collaboration and the power and enjoyment of their new Scratch coding skills. They became aware that they could participate virtually in an international community of programmers. They also thought about the possibilities of future employment in game-making enterprises (Teacher Reflection Notes; Interviews; Journals).

Coding and Scratch projects. Children discussed how they learned programming code while creating videogames in Scratch. They commented that they used trial and error and the code book. They explained their collaborations and what they created. Jonathan's comment summarized the excitement evident in the students' comments about their experience: "If you create videogames you can do things like you never did before like coding people and stuff" (Teacher Reflection Notes of Class Discussion). Hannah looked at a more practical reason for the work: "If you wanted to work for the Apple company, you would know sort of how to do it because of what we're learning" (Interview).

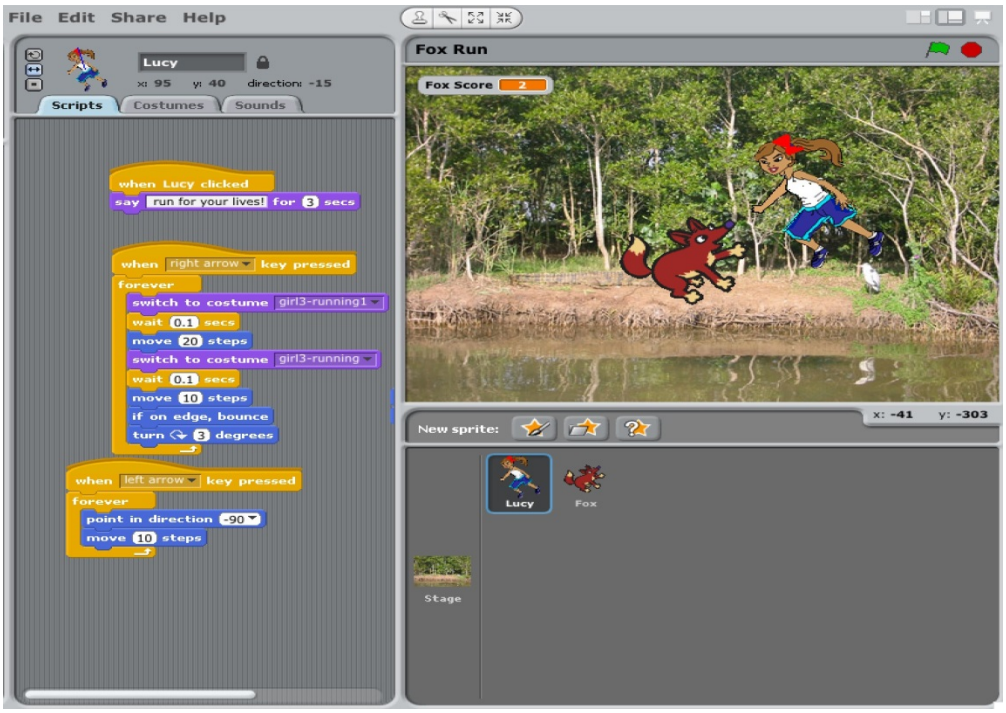

Figure 27. Student-created Videogame Trailer as an Example of Student Scratch Coding, Fox Run. This is a screen view of a student project, showing characters and action commmands designed in Scratch coding, and options for actions to be performed. Adapted from Olivia's and Leah's project, December 2013. Used with permission.

In their interview, Olivia and Leah talked about their Fox Run game (See Figure 27) and the programming coding they used to create it:

> We are using music, color, running, and more. We are including a person, an animal, and a forest. [The] videogame is about a fox trying to get the girl. When the fox gets the girl, the fox gets a point. So the girl tries to run away and moves her arms and legs. We got her to do that. Use the mouse pointer tracker thing to have the fox move around and try to get the girl.

Hour of code learning. After using the Scratch cards for guidance, the students participated in the hour of code. The knowledge they gained in the project helped them be successful in the hour of code. Below are my teacher notes from that day:

> On the last day of the project, the hour of code was part of computer science week. The class made a Christmas card in Scratch as one of the lessons. The computer teacher explained the code behind the blocks that the students drop. We watched an introductory video on coding that explained that 90% of schools are not teaching code. The video showed children talking about lines of code that teach problem solving and logic. Coding can be intimidating at first, but like an instrument or a sport you get better at it. It teaches you how to think, how to be determined, how to use multiplication, fractions, addition, and subtraction. Will-I-Am talked about an after school club called the Whiz Kids from which many talented engineers came. There was a message that flashed across the screen that asked, "What would you do if you weren't afraid. You could build a company. We are magic wizards of the future that have superpowers. One in ten schools teach students how to code." The computer teacher said, "You are amazing. You are capable of great works. One of our alumni works at a Google company because he started learning code at our school. He got advanced curriculum learning technology in a book. Children created their own interactive holiday card asking three of their friends for help before asking the computer teacher. The children learned the program rapidly and few clicked on tutorials. Since the children had already learned Scratch, they were far ahead of the tutorials provided in the hour of code. (Teacher Reflection Notes)

Symbolic Interactionism

Learning Scratch computer programming in pairs, students interacted with symbols and with each other and created shared meaning. Individually, students decided what they would like the videogame to be and thought about what coding blocks and scripts they would need to move characters and create the game. In interacting with the blocks and with partners, students created a shared meaning. Students also realized through the theoretical framework of critical media literacy that the messages created in their games were symbols whose meaning would be interpreted differently depending on the player of the game.

Students working on Scratch engaged in interactive problem solving to figure out which blocks worked to create the game mechanics desired for a final effect. Much like gaming programmers today meet for 24 hour coding gameathons to finish games, the students partnered with each other to create meaning for their games. Students recognized that working with a game and coding was especially beneficial when done with a partner. Victoria noted that "you need two people to think on it and get better ideas…and you don't really get stressed" (Interview). Jacob also saw that more people meant more talent and said he thought "you should include as many people that are talented as you can so that they can help you make it better" (Interview). Leah and Hannah were typical in feeling that they learned from their partners and could not have done the game alone (Journal).

Some children worked out ways to collaborate harmoniously. Jacob explained how he and his partner compromised, "Ben's favorite color is yellow and my favorite color is blue, so I made my guy blue and his is yellow" (Interview). Jonathan explained that he did the background

and his partner did the characters and they always took turns (Interview), while Noah explained that he and his partner had to agree on the code (Interview).

Others did not find working together so easy. Anna explained, "It was kind of hard because it wasn't working out and my partner wasn't letting me do that much stuff and it was kind of difficult" (Interview). However, she added that they worked it out so that they shared ideas and made it fair for both of them.

In working with one another, students created meaning from symbols and interacted with one another to interpret this meaning and so changed the socially constructed reality of their games.

Quantitative Data and Analysis

Although it offered some support for the qualitative conclusion that the intervention had a significant impact on students' awareness of violence, marketing, and the five core concepts of critical media literacy, quantitative data could not pass the reliability or validity tests necessary to support these conclusions strongly. I could not compare data from the pre- and posttest because the Cronbach's α measures of internal consistency were too low to create reliable composites to measure the seven areas of awareness. I could not compare control and intervention groups because of a large difference in effect size between the two groups. I ran descriptive statistics, analyzed changes in individual items from pre- to posttests, and correlations on individual items on the posttest for the intervention group to determine if any relationships could be found among the variables or test items. I found some statistical correlations. However, the relationships were for the most part either weak or moderate. Results included in the quantitative data on correlations should be viewed with caution since there are

limitations to using single items to represent a construct and the values of shared variance demonstrated weak correlations between most of the individual items.

Internal Reliability

In an attempt to test for internal reliability, I found the following Cronbach's α values for the factors: violence awareness (α = .21), marketing awareness (α = .38), and for awareness of each of the five principles of critical media literacy: marketers' messages to gain profit and power (α = .45), users' different experiences with media based on background and viewpoint, (α = .14), corporations' branding through inclusion, exclusion, and stereotypes (α = .41), media authorship (α = .65), media producers creative language and artifacts (α = .20), and media authors' purpose and perspective (α = .65). Since Cronbach's α statistics for all variables were below the desired level of .76, composite variables could not be created for these factors. As an alternative, I completed comparative analysis of responses to the individual test items.

Correlations Between Test Factors

I examined correlations between the test items with significant correlations to further investigate their relationships using the squared Pearson's *r* value to calculate the coefficient of determination. The values of shared variance demonstrate the weak correlation between most of the test items. The weak correlations demonstrate that there is at best a weak relationship between individual test items. I could draw few conclusions from analyzing the correlations between the individual items. Where there are contradictions or confusing areas in the correlational data, I used qualitative data to clarify the change in students' awareness of violence, marketing, and the five factors for critical media literacy. I included tables showing the

statistically significant relationships are included in the discussion of the specific variable groups below.

Control and Intervention Group Pretest Comparisons

I attempted to compare results from the pre- and posttests for the intervention group with those of a control group to determine the impact of the intervention as well as validity of the study approach. However, at the conclusion of the research, I discovered that control and intervention schools could not be compared because an effect size calculation showed the groups to be too different in size. I conducted an independent samples *t* test to compare the students' scores on the pretest from the intervention and control groups on the *Beyond Blame Critical Media Literacy Test* (BBCML) (Center for Media Literacy, 2007). (The BBCML is detailed in Chapter Three.) Pretest scores from the intervention school site were statistically different from pretest scores at the control site: intervention site (M = 18.91, SD = 5.89) and control site (M = 24.45, SD = 5.61), t (10) = -2.23, p = .05 (two tailed). The mean difference in scores was 5.55 with a 95% confidence interval ranging from -11.088 to -.003. The eta-squared statistic $\eta^2 = .33$ indicated that there was a large effect, with a substantial difference in the scores of the pretests in the control and intervention groups. Since there was a substantial difference in the effect size of the pretest scores for the intervention and control group, pre- and posttests could not be compared between the two groups.

Results of Comparing Groups

Results from the pre- and posttest scores could not be compared because of the test's low reliability. Although I gave the posttest to the control group, I did not analyze data for the pre-and posttests until after I had gathered all the data from both the control and intervention sites. After

conducting the effect size calculation on the pretest data from both groups, I realized that no further comparisons could be made between the groups. Therefore, I only analyzed the data from the intervention groups pre- and posttests to see if changes had occurred in descriptive statistics and on individual items. Tests showed no difference in test scores by gender or by amount of time spent playing videogames for the intervention group.

Gender posttest comparisons. Although it was not directly in the scope of my project or part of my research questions, the theme of gender differences in how children interact with videogames began to emerge in the quantitative analysis. With this theme emerging and the overwhelming amount of literature on the subject, it seemed prudent to test for difference in test results between males and females. The average score of males on the posttest was 26.38 while the average score for females was 23.36. I conducted an independent samples *t* test to compare the BBCML posttest scores for males (M_{Males} = 26.38, *SD* = 6.26) and females ($M_{Females}$ = 23.36, *SD* =7.66; *t* (28) = -1.19, *p* = .25, two-tailed). The magnitude of the differences in the means (mean difference = .048, 95% CI: -8.23 to 2.19) was small (η^2 = .048) so there was no significant difference between male and female posttest scores.

I also ran independent *t* tests to examine if there were any significant differences in questions for each critical media literacy area for males and females and found no significant differences. I ran an independent *t* test with pre- and posttest groups to determine if there was a significant difference in the playing times of males and females. There was no significant difference in pretest scores for males (M_{Males} = 2.25, *SD* = 1.18) and females ($M_{Females}$ = 1.86, *SD* = .86; *t* (28) = 1.03, *p* = .34, two tailed). There was also no significant difference in posttest

scores for males (M_{Males} = 2.25, SD = 1.07) and females ($M_{Females}$ = 1.93, SD = .73; t (28) = .350, p =.35, two tailed.

If there had been a significant difference, it may have been practical to segment the population by gender to complete the most effective analysis of the data. However, since there was no significant difference, I completed the balance of the analysis for the total population.

Behavioral aspects comparisons. Behavioral aspects described the difference in the videogame playing habits of children in the study. The qualitative data indicated that there may have been some difference in the impact of the program on the difference in time children spent with games before and after the intervention. Although not part of my research question, because of the qualitative data emerging, I examined two different groupings of participants to see if there was significant difference between the groups in time played or in critical media literacy as a result of the intervention: high and low time playing and gender. In none of the comparisons were there statistically significant differences. There was, however, a trend to less videogame playing after the intervention. This may have been due to an increase in critical media literacy awareness. Children may have been spending more time creating games and playing less violent videogames than before. It may also have been due to seasonal behavioral differences, or, as the result of the small sample size, due to different behavior by a very small number of students for different reasons.

In the test of response by high and low time game players, children reported how often they played videogames and I compared their pre- and posttest results. Results from the study classroom are displayed in Table 14.

Table 14

Time Spent on Videogames by Students in the Intervention Group

Reported time played per week	Pretest	Posttest
Less than one hour	37%	27%
One to three hours	30%	47%
Three to six hours	27%	17%
Six to 10 hours	3%	10%
10 or more hours	3%	0%

From these data, I created two categories: low videogame players (less than three hours a week) and high videogame players (more than three hours a week). I compared the media literacy awareness of the high and low playing groups before and after the intervention. Before the pretest, 67% were low videogame players. At the posttest, 74% were low videogame players. Before the pretest, 33% were high videogame players, and at posttest, 27% were high videogame players. I also ran independent *t* tests to determine if there were any significant differences between high videogame players and low videogame players on awareness of violence, marketing, and all critical media literacy factors. I found no significant differences on any of the variables between high and low videogame players.

Intervention School Pre-and Posttest Scores

I could not conduct a paired samples *t* test to evaluate the overall impact of the intervention on students' scores on the BBCML on awareness of the five principles of critical media literacy, violence, and marketing in videogames, because of the low Cronbach's α statistics that showed the measures for the awareness in the seven areas had low reliability. As a consequence, I proceeded to analyze the data instead by running correlations on the individual posttest items for each of the seven areas of awareness to see if any relationships

among the items could be found. I also analyzed individual items to see if there was a change in awareness from pre to posttests. I arranged individual items by category to assess differences in student responses from pre- to posttest. A discussion of questions within each category follows.

Student awareness of violence. Violence awareness includes understanding of what violence is, what constitutes violence in videogames, and how violence can affect players. The four test items for violence awareness were

- Watching videogame violence could make someone act aggressively.
- Do all stories with conflict also have violence?
- People can protect themselves from the effects of media violence by limiting the amount of time spent watching violence.
- Do videogames use violence to get your attention?

Violence awareness correlation with other factors. I analyzed each of the test items for awareness to determine if any relationships existed between the awareness of violence and awareness of marketing, marketers' messages to gain profit and power, users' different experiences with media based on background and viewpoint, corporations' branding through inclusion, exclusion, and stereotypes, media producers' creative language and artifacts, and media authors' purpose and perspective questions. I found weak relationships between the awareness of violence variables and most of the other awareness variables. Moderate relationships existed between the awareness of violence and the awareness of marketers' messages to gain profit and power, and the items for users' different experiences with media based on background and viewpoint test items. Seven pair of test items showed statistically

significant correlation ($p < .05$ or $p < .01$). Table 15 shows the items for which these moderate correlations existed.

Table 15

Correlations Between Violence Awareness Items and Other Measured Test Items

	Test items	V1	V2	V3	V4	P1	P2	U1
V1	Watching videogame violence could make someone act aggressively	-						
V2	Do all stories with conflict also have violence?	.17	-					
V3	People can protect themselves from the effects of media violence by limiting the amount….	.14	.43*	-				
V4	Do videogames use violence to get your attention?	.03	.31	.24	-			
P1	Videogame violence can be branded for profit and/or power	.07	.18	.13	.43*	-		
P2	Videogame messages affect me.	.43*	.47**	.40*	.40*	.32	-	
U1	People react to videogame violence differently.	.13	.29	.27	.41*	.51**	.29	-
	M	2.13	2.77	1.87	1.70	1.57	2.47	2.00
	SD	0.94	0.43	0.94	0.75	0.90	0.73	0.73

Note. * $p < .05$; ** $p < .01$

I squared the Pearson's *r* value to determine the coefficient of correlation to better analyze the relationships between the seven pairs of test items with statistically significant correlations. This test showed that all items showed moderately weak relationships (See Table 16).

Table 16

Coefficient of Determination for Significant Correlations Between Violence and Other Measured Test Items

Violence test items	Other measured test items	r^2
Watching videogame violence could make someone act aggressively	Videogame media messages affect me.	21%
Do all stories with conflict also have violence?	Videogame media messages affect me.	22%
Do all stories with conflict also have violence?	People can protect themselves from the effects of media violence by limiting the amount...	18%
People can protect themselves from the effects of media violence by limiting the amount...	Videogame media messages affect me.	16%
Do videogames use violence to get your attention?	Videogame violence can be branded for profit and/or power.	18%
Do videogames use violence to get your attention?	Videogame media messages affect me.	15%
Do videogames use violence to get your attention?	People react to videogame violence differently.	16%

The moderately weak relationship between the items relating to awareness that watching videogame violence could make someone act aggressively and awareness that videogame media messages affect the respondent may show that children understood that they or other people might be affected by violence. This also may demonstrate that children in the study were not convinced that videogame violence actually had an effect on people. Children's skepticism about whether violent content affected them also may have played into the moderately weak relationship between the test item related to limiting the amount of time watching violence and the test item measuring awareness that videogame messages affect the user. Children were aware that limiting violent media watching might be a good idea, but they were not completely convinced that it had an effect. The moderately weak relationship between awareness that producers use videogame violence to attract attention and awareness that marketers use

videogame violence to brand for profit and power showed that children had some awareness that violent images and scenes could be used in videogames to make money and to get students' attention. Children also understood that people react to videogame violence differently but thought that these messages may or may not affect them personally as shown by the weak correlation with the item concerning whether videogame messages affect the user.

I examined the data further, dividing the questions into groups for the analysis. The following discussion includes violence awareness questions in three categories:

- What is violence?
- What are the characteristics of a violent game?
- What are some of the real life consequences of violence?

What is violence? Data indicated some differences in awareness of what violence is between the pre- and posttests. All of the students correctly identified violence as beating someone up, and 87% identified threatening words as violence in both the pre- and posttests. However, there was an increase from pre- to posttest from 73% to 87% in identifying physical force as violence (See Figure 28). There were some incorrect answers from students on two questions on the posttest, with 10% of students incorrectly identifying talking loud as violence and three percent of students identifying running fast as violence (See Table 17).

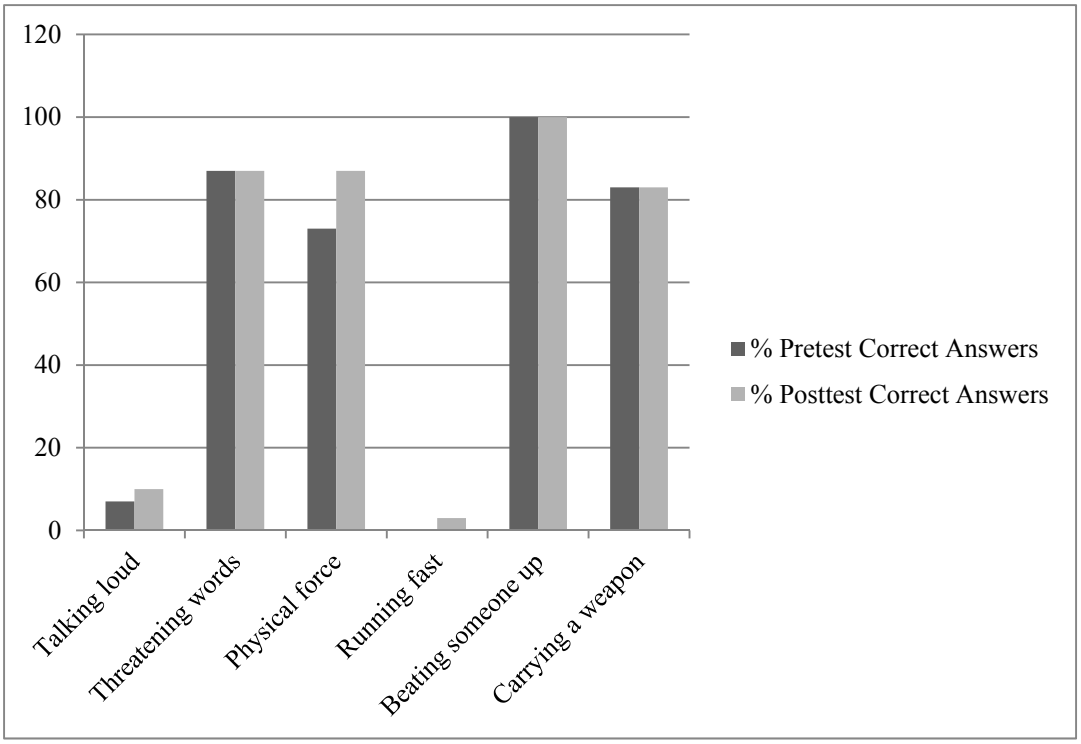

Figure 28. Percentage of Students in the Intervention Group Correctly Identifying Factors of Violence. Data from the posttest questions on the characteristics of violence show that nearly all of the students correctly identified the most important characteristics, December 2013.

Table 17

Student Correct Identification of Characteristics of Violence

Characteristics of violence correctly identified by students	Percentage on pretest	Percentage on posttest
Talking loud	7	10
Threatening words	87	87
Physical force	73	87
Running fast	0	3
Beating someone up	100	100
Carrying a weapon	83	83

What are the characteristics of a violent game? Students correctly identified games with fighting (97%) and first person shooters (93%) as videogames that are usually violent (See Figure 29). They demonstrated understanding of the characteristics of violent games on the posttest.

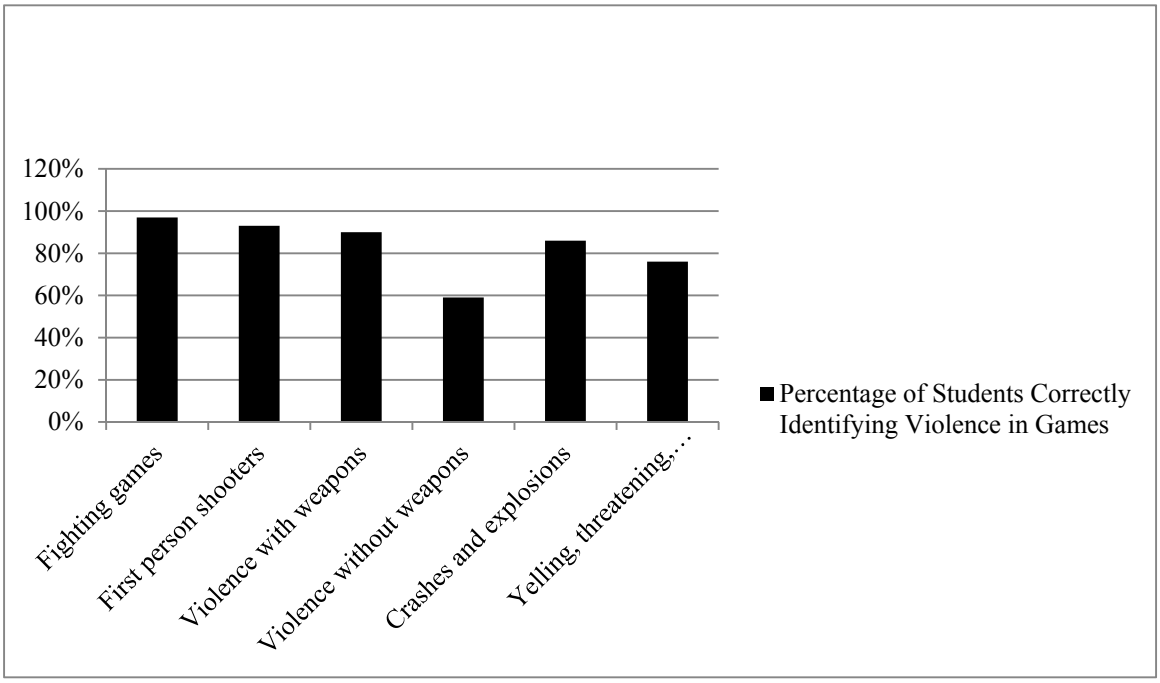

Figure 29. Percentage of Students in the Intervention Group Correctly Identifying Violence in Games. Data from the posttest questions on identifying violence in videogames show that nearly all of the students correctly identified elements of videogame violence, December 2013.

What are the real life consequences of violence? The majority of students (96%) correctly identified getting arrested to be a real life consequence of violence. Sixty-eight percent identified going to the hospital, and 61% identified being scared as a consequence of real life violence. Only two percent of the students chose "feeling good" as a consequence of violence (See Figure 30).

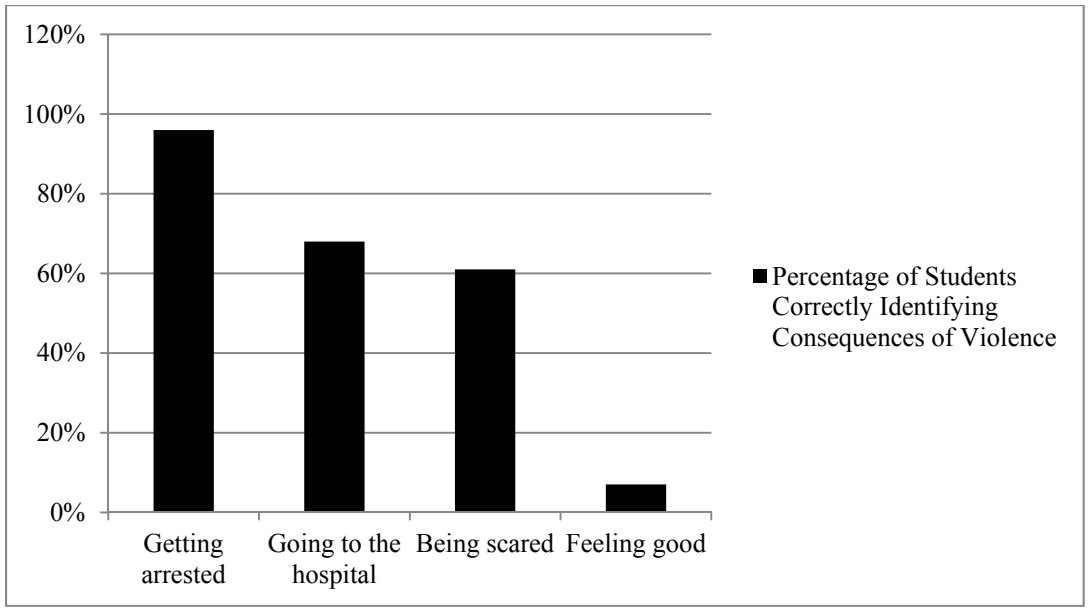

Figure 30. Percentage of Students in the Intervention Group Correctly Identifying Consequences of Violence. Data from the posttest questions on the consequences of violence show that most of the students correctly identified the most important consequences of violence, December 2013.

What are the impacts of playing violent videogames? There was an increase from 60% to 73% of students answering that watching videogame violence could make someone act more aggressively, and from 46% to 60% for students answering that watching videogame violence makes students want to watch more videogame violence. There also was an increase in students saying that videogame violence is different that real life violence 44% to 55% (See Table 18).

Table 18

Student Awareness of Violence

Violence awareness test items	Percent of correct answers on pretest	Number of correct responses on pretest	Percent of correct answers on posttest	Number of correct responses on posttest
Do all stories with conflict also have violence?	24	7	23	7
Watching videogame violence could make someone act aggressively.	60	18	73	22
Watching videogame violence could make someone less scared of the real world.	60	18	45	13
Watching videogame violence could make someone more willing to help someone in trouble.	44	13	37	11
Watching videogame violence makes people want to watch more videogame violence.	46	14	60	18
Videogame violence is different than real life violence.	44	13	55	16
People can protect themselves from the effects of media violence by limiting the amount of time they spend engaged with it.	53	16	50	15

As shown in Table 18, the quantitative data overall showed that there were some changes in violence awareness particularly in looking at how violence in videogames might cause someone to act aggressively and in being more aware of identifying when violence was present in a videogame product. The results showed that children were not convinced that playing violent videogames affected them or other people. Children were not completely convinced that videogame violence affected everyone because they indicated in responses that people react to videogame violence differently.

Student awareness of marketing. Marketing awareness involves children being able to identify advertising, how it is being sent to them, and the reasons it is being directed toward them. The four test items I used to determine marketing awareness were:

- The Internet, newspaper, TV, and radio tell us...
- It is important to ask questions about what advertising tells us because...
- Which is the best question to ask after seeing a commercial message that advertises a videogame?
- It is important to consider who created the videogame advertising message in order to...

I looked at each of the items for awareness to determine if relationships existed between the awareness of marketing items and awareness of violence, marketers' messages to gain profit and power, users' different experiences with media based on background and viewpoint, corporations' branding through inclusion, exclusion, and stereotypes, media producers' creative language and artifacts, and media authors' purpose and perspective items. Weak relationships existed between the awareness of marketing and most of the other awareness items. The only moderate relationship found was between an awareness of violence item and the item related to awareness that marketers include in media messages to gain profit and power.

Marketing awareness correlation with other factors. Table 19 shows the significant correlations of marketing awareness to other factors. Only one item showed a statistically significant correlation.

Table 19

Correlations Between Marketing Awareness and Measured Test Items

	Test items	M1	M2	M3	M4	P1	P2	P4
M1	The Internet, newspaper, TV, and radio tell us...	-						
M2	It is important to ask questions about what advertising tells us because...	.21	-					
M3	Which is the best question to ask after seeing a commercial message that advertises a videogame?	.33	.09	-				
M4	It is important to consider who created the videogame advertising message in order to...	.00	.25	.08	-			
P1	Videogame violence can be branded for profit and/or power	.14	.15	.15	.15	-		
P2	Videogame media messages affect me	.27	.16	.27	.10	.32	-	
P4	The main goal of a videogame trailer advertisement or commercial is to...	.40*	.16	.13	.02	.20	.21	-
	M	2.93	2.43	2.41	1.68	1.57	2.47	1.80
	SD	0.90	0.96	0.78	0.69	0.90	0.73	0.45

Note: * $p < .05$

I squared the Pearson's *r* value to determine the coefficient of determination to better analyze the relationships between the pairs of items with statistically significant correlations (Table 20).

Table 20

Coefficient of Determination for Significant Correlations Between Marketing Awareness and Measured Test Items

Marketing Test Items	Measured Test Items	r^2
The Internet, newspaper, TV, and radio tell us...	The main goal of a videogame trailer advertisement or commercial is to...	16%

The weak relationship may have meant that children were uncertain about when advertising was present and what the goal of advertising was or it may have reflected confusion about the answer choices and wording of the question.

I examined the data further, dividing the questions into groups for the analysis (See Table 21). The following discussion includes marketing awareness questions in three categories:

- What is the best question to ask after seeing a commercial message?
- It is important to consider who created the videogame advertising message in order to…?
- What questions should you ask about advertising?

Table 21

Student Awareness of Marketing

Marketing awareness test items	Percent of correct answers pretest	Number of correct responses pretest	Percent of correct answers posttest	Number of correct responses posttest
The Internet, newspaper, TV, and radio news tell us….	59	17	54	15
It is important to ask questions about what advertising tells us because….	59	16	54	15
Which is the best question to ask after seeing a commercial message that advertises videogame?	34	10	59	17
It is important to consider who created the videogame advertising message in order to….	38	10	44	11

What is the best question to ask after seeing a commercial message? Analyzed on its own, "The best question to ask after seeing a commercial message that advertises a videogame is…" showed correct responses with a statistically significant increase in the question from pretest (M = .57, SD = .50) to posttest (M = .33, SD = .48), t (29) = 2.97,

$p < .01$ (two tailed). The mean change in scores was .233 with a 95% confidence interval ranging from .073 to .394. The statistic $\eta^2 = .23$ indicated a large effect size. The percentage of students correctly answering the question "Which is the best question to ask after seeing a commercial message that advertises a videogame?" increased from 34% to 59%. This may show that students became more aware of what questions to ask after seeing a marketing message in order to determine what advertiser's purpose is.

It is important to consider who created the videogame advertising message in order to…. Correct answers for, "It is important to consider who created the videogame advertising message to…" increased from 38% to 44%. However, the increase was not statistically significant. This showed that children had some increased understanding that whoever creates the advertisement has a motive to sell a product. However, I cannot claim that this understanding resulted from the intervention.

Asking questions about advertising. Student scores decreased to only 54% for both questions about what the Internet, newspaper, television, and radio news tell us and for why it is important to ask about what advertisements tell us. This may mean that students were overwhelmed by the format of questions, confused by the number of choices in the survey, or not sure of what advertising is and why they should be worried about how it affects them.

Overall quantitative results for marketing were mixed, which may reflect that children are still confused and not aware of advertising and how corporations market to them; or it may reflect poor wording of the question and answer choices. This has implications considering the extent to which children are targeted by marketing efforts and advertising.

Students' awareness of marketers' messages to gain profit and power. Awareness of marketers' messages to gain profit and power includes students' understanding that videogames are made to make money or to gain influence by appealing to a person's emotions or way of thinking. The six test items for profit and power awareness were

- Videogame violence can be branded for profit and/or power;
- Videogame messages affect me;
- Videogame media are based on a desire for influence, profit, and power;
- The main goal of a videogame trailer advertisement is to...;
- Videogames might seem to be free but who ultimately pays for them; and
- Do videogames have an influence on people?

I analyzed each of the items for awareness to determine if any relationships existed between the awareness of marketers' messages to gain profit and power and the awareness of violence, marketing, users' different experiences with media based on background and viewpoint, corporations' branding through inclusion, exclusion, and stereotypes, media producers' creative language and artifacts, and media authors' purpose and perspective items. I found either no relationship or weak relationships between the awareness of marketers' messages to gain profit and power test items and most of the other awareness items. I identified moderate relationships between the awareness of marketers' messages to gain profit and power items and those for awareness of violence and of media authors' purpose and perspective.

Awareness of marketers' messages to gain profit and power items' correlation with other factors. Table 22 shows the significant correlations of awareness of marketers' messages

to gain profit and power to other test items. Six pair of test items showed statistically significant correlations. Four pair are represented in the following discussion while the other two are included in the violence correlation table above and discussed under the violence heading in the quantitative section.

Table 22

Correlations Between Marketers' Messages to Gain Profit and Power Awareness and Violence Test Items

	Test item	P1	P3	P4	P5	P6	V1	V2	V3	V4	A1
P1	Videogame violence can be branded for profit and/or power.	-									
P3	Videogame media are based on a desire for influence, profit, and power.	.40*	-								
P4	The main goal of a videogame trailer advertisement is to….	.20	.03	-							
P5	Videogames might seem to be free but who ultimately pays for them?	.04	.16	.18	-						
P6	Do videogames have an influence on people?	.15	.16	.32	.43*	-					
V1	Watching videogame violence could make someone act aggressively.	.28	.12	.24	.01	.18	-				
V2	Do all stories with conflict have violence?	.18	.62**	.19	.34	.04	.17	-			
V3	People can protect themselves from the effects of media violence by limiting the time they spend engaged with it.	.13	.13	.13	.06	.01	.14	.43*	-		
V4	Do videogames use violence to get your attention?	.05	.05	.02	.58**	.03	.31	.31	.24	-	
A1	Does your school have media?	.04	.43*	.05	.34	.25	.13	.06	.10	.00	-
	M	1.57	2.47	1.86	1.96	2.07	2.13	2.77	1.87	1.70	
	SD	.68	.68	.45	.62	.98	.94	.43	.94	.75	

Note: * $p < .05$, ** $p < .01$

I squared the Pearson's *r* value to determine the coefficient of correlation to better analyze the relationships between the five pair of test items with statistically significant correlations (See Table 23).

Table 23

Coefficient of Determination for Significant Correlations Between Marketers' Messages to Gain Power and Profit Awareness and Violence Test Items

Marketers' Messages to Gain Profit and Power Test Items	Measured Test Items	r^2
Videogame violence can be branded for profit and/or power.	Videogame media are based on a desire for influence, profit and power.	16%
Videogame media are based on a desire for influence, profit, and power.	Do all stories with conflict also have violence?	38%
Videogames might seem to be free but who ultimately pays for them?	Do videogames have an influence on people?	18%
Videogames might seem to be free but who ultimately pays for them?	Do videogames use violence to get your attention?	34%

This test showed that none of the pairs of test items had strong moderate relationships. The weak moderate relationships between items may show the uncertainty students still had about whether violence was being used to influence consumers for the purpose of profit or power. Some contradictions existed in the data since there was a positive moderate correlation between awareness that videogames might seem to be free but someone ultimately pays for them and awareness that videogames have an influence on people. This may show some recognition by students that there is a connection between companies wanting to influence consumers and to make profits. There was also a moderate correlation between awareness that videogames might seem to be free but someone ultimately pays for them and awareness that videogames use violence to get your attention. This may be interpreted to mean that at least some of the children understood that violence could be used to make money from consumers. I examined the data

further, dividing the questions into groups for the analysis. The following discussion includes marketers' messages to gain profit and power awareness questions in two categories:

- All factors for profit and power, and
- Awareness that videogame violence can be branded for profit and power.

All factors for profit and power. All test items for profit and power awareness showed higher awareness. This shows that the children who experienced the intervention did learn that there were commercial motives behind the creation of the videogames they buy and use.

Videogame violence can be branded for profit and power. Only the awareness that violence can be branded for profit and power item showed a statistically significant increase. (See Table 24). Correct answers increased from 27% to 70% in terms of understanding how violence in videogames is used for profit and power. Analyzed on its own, responses to this question showed a statistically significant increase from pretest (M = .23, SD = .50) to posttest (M = .67, SD = .55), $t(29) = -4.71$, $p <$ .0005 (two tailed). The mean change in scores was .433 with a 95% confidence interval ranging from .622 to .245. The statistic $\eta^2 = .43$ indicated a large effect size. This change could be interpreted to show that children acquired this awareness from the intervention instruction. The only question that showed a lower awareness after the intervention was the one asking who pays for videogames.

Overall results in the quantitative for this group of questions did not conclusively show that students understood that marketers were sending messages to gain profit and power. Students did seem to understand that there was some influence on them by these messages, but results were inconclusive.

Table 24

Student Awareness of Corporations' Motives for Profit and Power

Profit and power awareness items	Percent of correct answers pretest	Number of responses pretest	Percent of correct answers posttest	Number of responses posttest
Videogame media are based on a desire for influence, profit, and power.	23	7	43	13
Videogame violence can be branded for profit and power.	27	8	70	21
The main goal of a videogame trailer advertisement or commercial is to…..	73	22	79	22
Videogames might seem to be free but who ultimately pays for them?	35	9	21	5
Videogame messages affect me.	3	1	13	4
Do videogames have an influence on people?	37	11	43	13

Students awareness that users' have different experiences with media based on background and viewpoint. Being aware that users' have different experiences with media based on background and viewpoint means understanding that not everyone will experience a media message in the same way. Individuals have different points of view and experience media differently depending on culture, gender, and opinions. For example, while some may find elements of a game exciting, others may find it frightening or boring for example. The four questions I used to measure users' different experiences with media based on background and viewpoint were

- Do people react to videogame violence differently?
- Does our point of view influence how we react to videogame messages?

- Does everyone my age like the same music I like?
- How important is it to do whatever my friends do?

Awareness of people's different experiences with media depending on background and experience correlation with other factors. Table 25 shows the significant correlations of awareness of users' different experiences with media based on background and viewpoint to other test items. Seven items showed statistically significant correlations with other items tested.

Table 25

Correlations Between Users' Different Experiences With Media Based on Background and Viewpoint Awareness and Other Measured Test Items

	Test item	U1	U2	U3	U4	V3	P1	P3	I1	I3	C2
U1	Do people react to videogame violence differently?	-									
U2	Does our point of view influence how we react to videogame messages?	.41*	-								
U3	Does everyone my age like the same music I like?	.24	.31	-							
U4	How important is it to do whatever my friends do?	.12	.10	.11	-						
V3	People can protect themselves from the effects of media violence by limiting time they spend engaged in it .	.27	.61**	.16	.13	-					
P1	Videogame violence can be branded for profit and/or power.	.51**	.28	.32	.15	.13	-				
P3	Videogame media are based on a desire for influence, profit, and power.	.37	.59**	.22	.20	.37	.40*	-			
I1	A target audience is the group of people for which something is created.	.36	.40*	.28	.13	.26	.21	.28	-		
I3	Consumers benefit from branding.	.20	.43*	.27	.08	.21	.02	.51**	.22	-	
C2	The use of different camera angles is a technique videogame makers use to attract my attention.	.38	.52*	.34	.08	.39	.46*	.52	.32	.22	-
	M	2.00	2.37	1.83	1.63	1.87	1.57	2.47	2.24	2.63	2.13
	SD	.85	.93	.38	.72	.94	.90	.68	.91	.62	.90

Note: * $p < .05$, ** $p < .01$

I squared the Pearson's *r* value to determine the coefficient of correlation to better analyze the relationships between the seven test items with statistically significant correlations with other items. This test showed that none had strong moderate relationships (See Table 26).

Table 26

Coefficient of Determination for Significant Correlations Between Users' Different Experiences with Media Based on Background and Viewpoint and Other and Measured Test Items

Users' different experiences with media based on background and viewpoint test items	Measured test items	r^2
Do people react to videogame violence differently?	Does our point of view influence how we react to videogame messages?	17%
Do people react to videogame violence differently?	Videogame violence can be branded for profit and/or power.	26%
Does our point of view influence how we react to videogame messages?	People can protect themselves from the effects of media violence by limiting the amount of time they spend engaged with it.	37%
Does our point of view influence how we react to videogame messages?	Videogame media are based on a desire for influence, profit, and power.	35%
Does our point of view influence how we react to videogame messages?	A target audience is the group of people for which something is created.	16%
Does our point of view influence how we react to videogame messages?	Consumers benefit from branding.	18%
Does our point of view influence how we react to videogame messages?	The use of different camera angles is a technique videogame makers use to attract my attention.	14%

A weak moderate relationship was present between the items measuring awareness that people react to videogame violence differently and awareness that the individuals' points of view influence how they react to videogame messages, which may support the qualitative data that showed some children understood that people have different reactions to violence. Some might copy violence, while others may just think it is fun, or others might be scared of violence in games. There was also a weak moderate relationship between awareness that people react to

videogame violence differently and awareness that videogame violence can be branded for profit and/or power which means that some children realized that branding of violence could be done to appeal to users who experienced an attraction to violent games. There were moderate relationships between awareness that an individual's point of view influences how they react to videogame messages and awareness that people can protect themselves from the effects of media violence by limiting the amount of time they spend engaged with it, and with awareness that videogame media are based on a desire for influence, profit, and power. The moderate relationships mean that students understood that media could have an influence on different users and that different users had the option of limiting the amount of time they spent with media to moderate the effect of a videogame. The moderately weak relationships between awareness that an individual's point of view influences how that individual reacts to videogame messages with items measuring awareness of the definition of target audience, understanding that consumers benefit from branding, and understanding that the use of different camera angles shows that students know that media creative techniques and brands are used to attract different types of users. Students had some awareness that users experience media differently and that is why corporations target audiences with creative techniques and brands.

I examined the data further, dividing the questions into groups for the analysis (See Table 27). The following discussion includes users' different experiences with media based on background and viewpoint awareness questions in three categories:

- Our point of view influences how we react to videogames,
- People react to videogame violence differently, and
- Peer-related questions.

Our point of view influences how we react to videogames. I reviewed individual questions and there was a statistically significant increase from 10% to 30% in students understanding that and individual's point of view influences how they react to videogames. All but one of the responses for different experiences awareness items showed higher awareness.

People react to videogame violence differently. The only question that showed a lower awareness after the intervention was the one asking if different people react to videogame violence differently which decreased from 67% to 65%. Answers to the questions concerning how point of view and previous experience might impact how people view different videogames show that the students in the sample felt that their point of view could protect them from the effects of violence and give them power to choose how they want to react to media messages.

Peer-related questions. The questions comparing media use of music and thinking and behaving like other children could have been questions that did not actually measure the factors, and may explain why I found no significant correlations. Overall, it seemed that in spite of some confusing questions, there was a trend toward increased awareness among students that different users experience media differently.

Table 27

Students' Awareness of Users' Different Experiences with Media

Different experiences awareness questions	Percent of correct answers on pretest	Number of correct responses on pretest	Percent of correct answers on pretest	Number of correct responses on pretest
People react to videogame violence differently	67	20	65	19
Our point of view influences how we react to videogame messages	10	3	30	9
Everyone my age likes the same music I like	80	24	83	25

Student awareness that corporations do branding through inclusion, exclusion, and stereotypes. Awareness that corporations do branding through inclusion, exclusion, and stereotypes involves an understanding that certain people are included in or left out of the target group for advertisements to create a brand for a product. Stereotypes such as gender are used to brand products for certain categories of people such as males and females. The two test items for corporations' branding through inclusion, exclusion, and stereotypes were

- A target audience is the group of people for which something is created; and
- Consumers benefit from branding.

Awareness of corporations' branding through inclusion, exclusion, and stereotypes awareness with other test items. Table 28 shows four of the significant correlations of awareness of corporations' branding through inclusion, exclusion, and stereotypes to other test items. Four pair of test items showed statistically significant correlations.

Table 28

Correlations of Awareness of Corporations' Branding Through Inclusion, Exclusion, and Stereotypes Awareness with Other Test Items.

	Test Item	I1	I3	V2	P3	P6	A4
I1	A target audience is the group of people for which something is created.	-					
I3	Consumers benefit from branding.	.28	-				
V2	Do all stories with conflict also have violence?	.24	.45*	-			
P3	Videogame media are based on a desire for influence, profit, and power.	.28	.51**	.62**	-		
P6	Do videogames have an influence on people?	.43*	.02	.04	.16	-	
A4	Does your neighborhood have media?	.45*	.31	.28	.34	.16	-
	M	2.24	2.63	2.77	2.47	2.07	2.00
	SD	.91	.62	.43	.68	.98	.93

*Note: * p < .05, ** p < .01*

I squared the Pearson's *r* value to determine the coefficient of correlation to better analyze the relationships between the four pair of test items with statistically significant correlations. This test showed that one of the pair had a strong relationship (See Table 29).

Table 29

Coefficient of Determination for Significant Correlations Between Corporations' Branding Through Inclusion, Exclusion, and Stereotypes Awareness and Other Measured Test Items

Corporations' Branding Through Inclusion, Exclusion, and Stereotypes Test Items	Measured Test Items	r^2
A target audience is the group of people for which something is created.	Do videogames have an influence on people?	18%
A target audience is the group of people for which something is created.	Does your neighborhood have media?	20%
Consumers benefit from branding.	Do all stories with conflict also have violence?	20%
Consumers benefit from branding.	Videogame media are based on a desire for influence, profit, and power.	26%

The coefficients of determination show that there is a deeper connection in children's mind in the posttest in the idea that branding is used to attract consumers and can be used for influence, profit, and power. The fact that students were very aware of the brand they created in Scratch games and that they were interested in branding for profit by including and excluding certain people in their games also supports this idea. The moderate relationship between consumers benefit from branding and so all stories with conflict also have violence did not seem to be meaningful. The correlations between a target audience is the group of people for which something is created with do videogames have an influence on people and with does your neighborhood have media could be interpreted to mean that at least some students were aware of the targeting of brands in their own neighborhoods.

What is a brand? I examined the data further by analyzing answers to the question asking what a brand is. In both the pre- and posttest, over 96% of students correctly identified the Nike brand and 93% correctly identified Apple as a brand. Only seven percent of students chose symbols that were not brands. This means that students are aware of, exposed to, and affected by the advertising they see around them daily. All test items measuring

awareness of branding through inclusion, exclusion, and stereotypes showed higher awareness, although the change was not statistically significant. Overall, student awareness of branding seemed to increase but students limited life experience caused them to not identify stereotypes or caused to mimic stereotypes with realizing it (See Table 30).

Table 30

Student Awareness of Corporations' Branding Through Inclusion, Exclusion, and Stereotypes

Test Items	Percent of correct answers on pretest	Number of correct responses on pretest	Percent of correct answers on posttest	Number of correct responses on posttest
A target audience is the group of people for which something is created.	7	2	31	9
Consumers benefit from branding	17	5	30	9

Student awareness of media producers' creative language and artifacts. Awareness of media producers' creative language and artifacts includes student awareness that creative media techniques such as jolts, music, different camera angles, and colors can be used to communicate different perspectives and moods. In this study, with the Scratch project, students experienced using some of these techniques. I used five test items to measure creative language and artifacts awareness:

- People who make videogames attract players with exciting jolts;
- The use of different camera angles is a technique videogame makers use to attract my attention;
- The creative techniques of music can make a videogame feel scary;

- Photographs always show people and things just the way they are in real life; and
- Cartoons look fun with bright colors and music because...

Awareness of media producers' use of creative artifacts and language correlation with other test items. Table 31 shows the significant correlations of awareness of creative artifacts and language correlation to other factors. Six pair of test items showed statistically significant correlations.

Table 31

Correlations Between Media Producers' Creative Language and Artifacts and Measured Items

	Test item	C1	C2	C3	C4	C5	V1	V3	P1	P2	P3	U4
C1	People who make videogames attract players with exciting jolts.	-										
C2	Different camera angles is a technique game makers use to get my attention.	.20	.									
C3	The creative techniques of music can make a videogame feel scary.	.18	.35	-								
C4	Photographs always show people and things just the way they are in real life.	.11	.13	.11	-							
C5	Cartoons look fun with bright colors and music because …	.13	.19	.03	.12	-						
V1	Watching videogame violence could make someone act aggressively.	.68**	.22	.15	.11	.01	-					
V3	People can protect themselves from the effects of media violence by limiting the time they spend with it.	.17	.39	.49**	.00	.05	.14	-				
P1	Videogame violence can be branded for profit and/or power.	.16	.46*	.03	.11	.09	.28	.13	-			
P2	Videogame messages affect me	.09	.43*	.11	.15	.23	.46*	.40*	.32	-		
P3	Videogame media are based on a desire for influence, profit, and power.	.10	.51*	.19	.09	.06	.12	.13	.40*	.38	-	
U4	How important is it to do whatever my friends do?	.17	.08	41*	.37	.12	.08	.20	.15	.19	.20	-
	M	1.20	2.13	1.55	1.79	2.10	2.13	1.87	1.57	2.47	2.47	1.63
	SD	.61	.90	.83	.41	1.16	.94	.94	.90	.73	.68	.72

Note: * $p < .05$, ** $p < .01$

I squared the Pearson's *r* value to determine the coefficient of correlation to better analyze the relationships between the six pair of items with statistically significant correlations. This test showed that all but one had weak moderate relationships (See Table 32).

Table 32

Coefficient of Determination For Significant Correlations Between Media Producers' Creative Language and Artifacts Awareness and Profit and Power and Violence Awareness Test Items

Media producers' creative language and artifacts test items	Violence and profit and power test items	r^2
People who make videogames attract players with exciting jolts. .	Watching videogame violence could make someone act aggressively.	46%
The use of different camera angles is a technique videogame makers use to attract my attention.	People can protect themselves from the effects of media violence on themselves by limiting the amount of time they spend engaged with it.	15%
The use of different camera angles is a technique videogame makers use to attract my attention.	Videogame violence can be branded for profit and/or power.	21%
The use of different camera angles is a technique videogame makers use to attract my attention.	Videogame messages affect me.	18%
The use of different camera angles is a technique videogame makers use to attract my attention.	Videogame media are based on a desire for influence, profit, and power.	26%
The creative techniques of music can make a videogame feel scary.	People can protect themselves from the effects of media violence on themselves by limiting the amount of time they spend engaged with it.	24%

The only pair of items that had a strong moderate relationship was awareness that people who make videogames attract players with exciting jolts and awareness that watching videogame violence could make someone act aggressively. This means that the explicit instruction in the intervention curriculum on about how jolts could cause strong emotions and aggression increased combined with the Scratch project increased student awareness of how the creative artifacts of jolts could be used in a videogame to attract the attention of players. The moderate relationship probably was because of the explicit lesson on how jolts in videogames could cause aggressive behavior. The weak moderate relationship of awareness of the use of different

camera angles to awareness that people can protect themselves from the effects of media violence by limiting the amount of time they spend engaged with it to awareness that videogame violence can be branded for profit and/or power, and to awareness that videogame messages affect people may have showed that students were aware how the creative use of camera angles can be used to influence users. Thus, being aware of these creative techniques and limiting the amount of time engaged with videogames can be a way to self-monitor or control how a student feels media is affecting him. A similar argument could be made about the weak moderate correlation between the creative techniques highlighted in the questions about if music can make a videogame feel scary and if people can protect themselves from the effects of media violence by limiting the amount of time they spend engaged with it. Some children showed slightly higher awareness that a scary song is a creative technique causing them or others to experience fear.

I examined the data further, dividing the questions into groups for the analysis (See Table 33). The following discussion includes creative language and artifacts awareness questions in two categories:

- People who make videogames attract players with exciting jolts, and
- Photographs and cartoons.

Table 33

Students' Awareness of Creative Language and Artifacts

Creative techniques awareness questions	Percent of correct answers on pretest	Number of correct responses on pretest	Percent of correct answers on posttest	Number of correct responses on posttest
People who make videogames attract players with exciting jolts.	33	10	90	27
The use of different camera angles is a technique videogame makers use to attract m attention.	17	5	33	10
The creative techniques of music can make a videogame feel scary.	53	16	66	19
Photographs always show people and things just the way they are in real life.	83	24	79	23
Cartoons look fun.	53	16	40	12

People who make videogames attract players with exciting jolts. Three test items for creative techniques awareness showed higher awareness, and two showed less awareness. However, the change was not statistically significant. The biggest increase was from 33% to 90% in terms of understanding that jolts were used to attract player's attention. Analyzed on its own, this question showed a statistically significant increase in identifying jolts as a creative technique from pretest (M = .33, SD = .48) to posttest (M = .90, SD = .06), t (29) = -6.16, p <. 0005 (two tailed). The mean change in BBCML scores was .567 with a 95% confidence interval ranging from -.755 to -.378. The statistic η^2 = .90 indicated a large effect size.

Photographs and cartoons. The difference between the pre- and postintervention measure of children's understanding that jolts are used to attract players was statistically

significant. Understanding of three factors increased. Understanding of two actually decreased. Real life photographs and cartoons with bright color changes were less often perceived as techniques after the intervention. This may be because of confusion in the answer choices.

Overall, students were more aware of jolts than of the other creative techniques, but there was also awareness of how music and camera angles could be used to influence people. There were, however, some contradictory results about photographs and cartoons, which may be attributed to the wording of the question.

Students' awareness of media authors' purpose and perspective. Awareness that the media authors' purpose and perspective affects the media's message includes student knowledge of what media is, that it exists in their personal environments such as their neighborhood and school, and that there is always an author that creates this media. Two questions were used to measure media authors' purpose and perspective awareness:

- Does your school have media?
- Does your neighborhood have media?

Awareness of media authors' purpose and perspective correlation with other test items. Table 34 shows the significant correlations of awareness of media authors' purpose and perspective to other factors. Six pair of test items showed statistically significant correlations.

Table 34

Correlations between Media Authors' Purpose and Perspective Awareness and Measured Test Items

	Test item	A1	A4	P1	U2	I1	C2
A1	Does your school have media?	-					
A4	Does your neighborhood have media?	.48**	-				
P1	Videogame violence can be branded for profit and/or power.	.43*	.04	-			
U2	Does our point of view influence how we react to videogame messages?	.18	.43*	.28	-		
I1	A target audience is the group of people for which something is created.	.29	.45*	.21	.40*	-	
C2	The use of different camera angles is a technique videogame makers use to attract my attention.	.37*	.52**	.46*	.52**	.32	-
	M	1.67	2.00	1.57	2.37	2.24	2.13
	SD	.96	.93	.90	.93	.91	.90

Note: * $p < .05$, ** $p < .01$

I squared the Pearson's *r* value to determine the coefficient of correlation to better analyze the relationships between the five pair of test items with statistically significant correlations. This showed that none of the pairs had more than weak moderate relationships (See Table 35).

Table 35

Coefficient of Determination for Correlations Between Media Authors' Purpose and Perspective Awareness and Measured Test Items

Media authors' purpose and perspective awareness items	Measured items	r^2
Does your school have media?	Does your neighborhood have media?	23%
Does your school have media?	Videogame violence can be branded for profit and/or power.	18%
Does your school have media?	The use of different camera angles is a technique videogame makers use to attract my attention.	14%
Does your neighborhood have media?	Does our point of view influence how we react to videogame messages?	18%
Does your neighborhood have media?	A target audience is the group of people for which something is created.	20%
Does your neighborhood have media?	The use of different camera angles is a technique videogame makers use to attract my attention.	27%

Weak correlations between pairs of test items means that conclusive results cannot be drawn as to whether there was an increase in awareness of media authors' purpose and perspective. Children seemed to have about the same knowledge about media in their school and neighborhood as they did before the intervention. The relationship between awareness of media in the school and awareness of violence being branded for profit and/or power may be because children were creating their own Scratch projects at school. The relationships between awareness of media in the neighborhood and awareness that our point of view influences how we react to videogame messages, and to knowledge about target audiences, and to knowledge of camera angles as a creative technique to attract attention means that at least some children have some awareness that there is media in their neighborhood, that they are being targeted by different media techniques such as camera angles, and that they can use their point of view to choose how to respond to this media.

I examined the data further, dividing the questions into groups for the analysis. The following discussion includes media authors' purpose and perspective awareness questions in three categories:

- What is media?
- What jobs are associated with the media?
- Does your school have media?

What is media? Over 90% of the class correctly identified television, movies, and videogames as media. A little less than half of the class (45%) identified newspapers as media. The percentages of correct answers given about what constitutes media demonstrate a mixed understanding of the term "media" (See Figure 31).

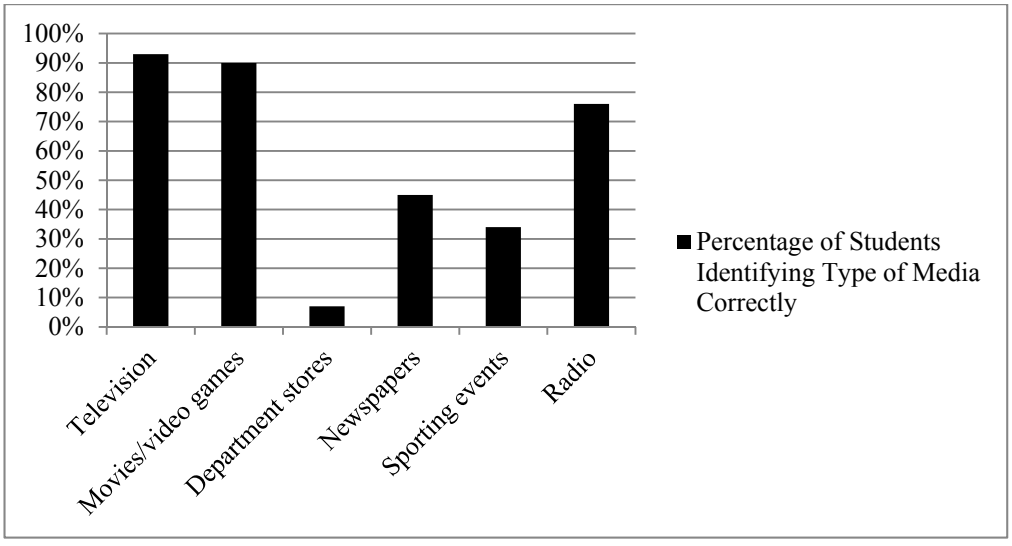

Figure 31. Percentage of Students in the Intervention Group Identifying Types of Media Correctly. Data from the posttest questions on children's understanding of the types of media they encounter show that there was still some confusion over the difference between "media" and "technology" after the intervention, December 2013.

Jobs associated with the media. Over 80% of students identified reporters and photographers as jobs associated with media. Sixty seven percent of students recognized that a journalist was a media job. Fewer students were able to identify disk jockey as a media job, and a number of students incorrectly identified teacher, restaurant owner, and car sales person as media jobs (See Figure 32).

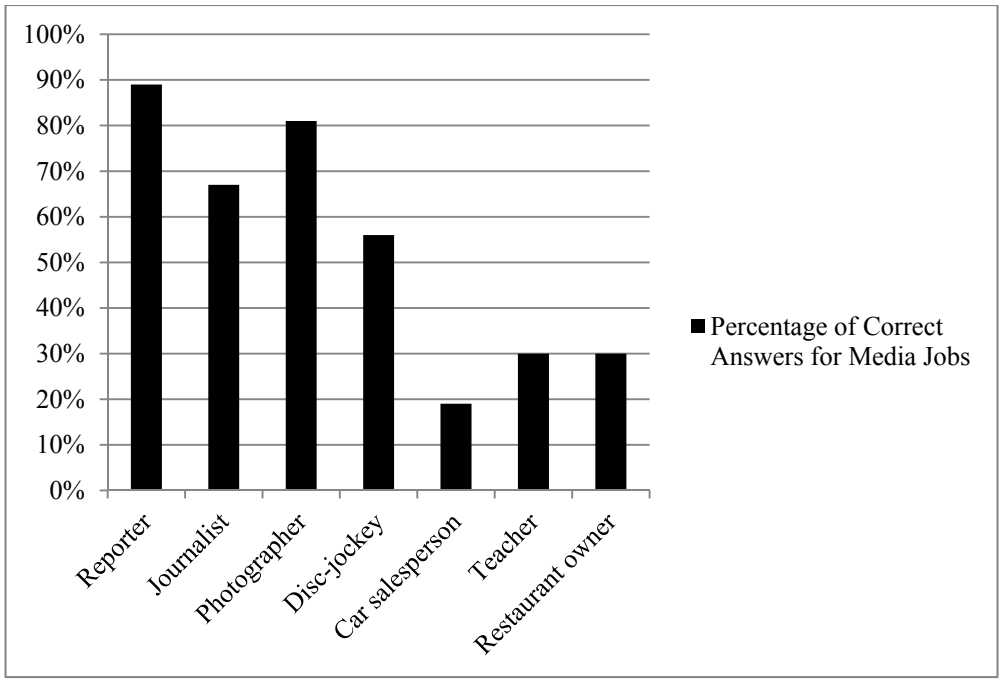

Figure 32. Percentage of Students in the Intervention Group Identifying Authors of Media Products. Data from the posttest questions on what jobs are media related show that most of the students know what jobs are media jobs. December 2013.

Does your school have media? The two test items for media awareness showed higher awareness after the intervention. However, the change was not statistically significant. The biggest increase was from 23% to 67% in terms of understanding the school has media (See Table 36). Analyzed on its own, this question showed a statistically significant increase in identifying that the school has media from pretest (M = .20, SD =.48)

to posttest (M = .67, SD = .48), t (29) = -4.47, p < .0005 (two tailed). The mean change in the school has media score was .467 with a 95% confidence interval ranging from -.680 to -.253. The statistic η^2 = .41 indicated a large effect size.

Table 36

Students' Awareness of Media

Media awareness questions	Percent of correct answers on pretest	Number of correct responses on pretest	Percent of correct answers on posttest	Number of correct answers on posttest
Does your neighborhood have media?	37	11	41	12
Does your school have media?	23	7	67	20

To summarize, the quantitative data showed a change in student awareness that media existed in their neighborhood and school but the subtleties of that media still remained a mystery to the children.

Summary for Research Question

Qualitative data from observations, journals, and interviews show that the intervention affected students' awareness of violence and marketing and the five elements of critical media literacy. In addition, some themes emerged from the qualitative analysis which gave context to the quantitative, and which suggest possible areas for future research. Some of the quantitative data support this conclusion showing a number of significant correlations between individual test items and differences between scores on individual questions on pre- and posttests relative to these elements. The implications of these findings and suggestions for further study are included in Chapter Five.

CHAPTER FIVE

DISCUSSION AND IMPLICATIONS

In this mixed-method study, I examined how a critical media literacy curriculum in which students created nonviolent social justice videogames affected seven areas of students' awareness: violence; marketing; marketers' messages to gain profit and power; users' different experiences with media based on background and viewpoint; corporations' branding through inclusion, exclusion, and stereotypes; media producers' creative language and artifacts; media authors' purpose and perspective. I collected qualitative data at the intervention site using interviews, teacher reflection notes, student journals, and analysis of the nonviolent or social justice videogame trailer students created in Scratch. I collected quantitative data using a pre- and posttest at the control and intervention schools and analyzed the data. I organized the qualitative data from these four research methodologies into seven research themes reflecting areas of awareness. In this chapter, I summarize and discuss the findings of the study. In addition, I discuss the usefulness of a critical media literacy curriculum that incorporates creating nonviolent and social justice videogames in teaching students digital citizenship skills which they can use interpreting and creating media products. I also discuss the value of symbolic interactionism and the use of Scratch programming to teach common core critical thinking, science, math, technology, engineering, and computer programming skills. Finally, I discuss the implications of this study as well as recommendations for future research.

Discussion

In this study, I taught students a critical media literacy curriculum that included lessons on critical media literacy awareness and an action component applying critical media literacy

skills to program videogame trailers in Scratch. The combination of learning to both analyze and create media products was essential to affecting student awareness.

I designed the study to answer the research question: What are the effects of implementing a critical media literacy curriculum program on awareness of

- Violence;
- Marketing;
- Marketers' messages to gain profit and power;
- Users' different experiences with media based on background and viewpoint;
- Corporations branding through inclusion, exclusion, and stereotypes;
- Media producers' creative language and artifacts; and
- Media authors' purpose and perspective.

The study's emergent design anticipated that themes of awareness not originally incorporated in the research question might surface from qualitative analysis of student journals, interviews, teacher reflection notes, and Scratch projects. In addition to the seven areas of awareness in the research question, two additional themes—the positive impacts of Scratch coding awareness and symbolic interactionism—emerged during analysis of the qualitative data.

To answer the research question after students participated in the intervention curriculum, I measured students' awareness in all seven areas from the data collected from interviews, student journals, teacher reflection notes, Scratch projects, and pre- and posttests. I discuss the results here of the study on the sample of fourth-grade students, 33 from the intervention site and 11 from the control site, and the implications of the study. Only the 33 students at the intervention site completed the qualitative portion of the study. Both the intervention and control

groups completed the pre- and posttest. I did not compare the control group to the intervention group due to a substantial difference in effect size found during a baseline comparison of the pretests of both groups. Analyzing a control group not exposed to the intervention with similar participants would have helped to improve the study.

Cronbach's α statistics on the pre- and posttest showed that the reliability of the items used to measure each variable was low, so I could not create composites for each of the seven areas of awareness. Instead, I analyzed individual items. Therefore, generalizations about correlations and contradictory findings on some questions should be considered with caution. Where I found contradictions in the quantitative results, qualitative data clarified and explained the study results.

Caution should be applied interpreting both qualitative and quantitative results because passage of time, outside factors, and exposure to the test could have caused changes in awareness instead of the intervention curriculum. In the discussion section below, I examine the seven areas of awareness as well as the two additional themes that emerged from the data: Scratch coding and symbolic interactionism.

Violence Awareness

With the violence awareness variable, I examined students' awareness of violent content in videogames and its effect on them. In the preintervention data, children's answers showed that they were not sure if there were negative effects from violence in games. In preintervention journals, several children described violence as fun to watch, addicting, and something that videogame companies put in games to get their attention. Michael's, Charlotte's, and Audrey's responses are examples:

> Yes, some kinds of violence that are in games are gun shooting, bombing, fighting, and killing. I think creators put violence in games to make it fun. (Michael, Journal)
>
> Castle Crashers I like it because there is blood and fighting and it is addicting to play. It is about fighting. (Charlotte, Journal)
>
> Yes, swords, guns, knives, because they want to get your attention. (Audrey, Journal)

The children's answers showed that there is reason to be concerned about how children are interpreting the violent imagery they have been exposed to in games such as Call of Duty (Grossman & Degaetano, 1999).

After the intervention, the majority of qualitative responses showed that children were highly aware that watching violent content could have harmful effects. Hannah's response was typical. She said,

> I learned that if you watch too much of the violence you could come out as a bad person because if you play videogame violence it might teach you that it's the right thing to do when it's the wrong thing to do. (Hannah, Journal)

Interviews revealed that children felt that some people, especially young children might react to or imitate violence. Allison's response is an example of a commonly repeated theme in the journal. She wrote,

> Violent games should not be around children that young. I don't accept that cartoon violence is just art, because it can still scare young children and it could cause bad behavior. (Allison, Journal)

Children did make a distinction in their answers about cartoon violence being different than real life violence. They classified real violence and scenes imitating real violence as much

more disturbing. At the beginning of the study, children were aware of violence in games but were not sure whether that violence would actually have an effect on people. The children did not feel violence necessarily affected them. After the intervention, they felt they had a choice both in how they interpreted the violence and in whether they wanted to imitate the violence in real life.

Children in the study raised concerns in journals and interviews that playing violent games could cause fear, a desire to watch more violent games, and increased aggressiveness. The concerns raised by children in the study about games were consistent with findings in the literature that suggested the effects of viewing violence could include aggressiveness, antisocial behavior, increased fear of being a victim, increased desensitization to violence and the victims of violence, and an increased appetite for more violence in entertainment and real life (Lee & Peng, 2006). Although the children felt safe in their school, the journal responses reflected their concern that watching violence in media possibly could cause children to be afraid that they could be a victim of violence in real life when the actual chance of experiencing violence was low. This cultivation effect of media has been documented in many studies that show that people who are exposed to violence in media experienced increased fear and they saw the world as more violent than it actually was (Gerbner et al., 1993).

In the literature, a need for children to receive explicit critical thinking and media literacy education has been a consistent theme. Studies have shown that with media literacy education, children have been able to see and critique the social values and assumptions embedded within videogames (Gee, 2007; Sanford & Madill, 2007). In this study, I found that children needed explicit lessons on how media can influence their own social interaction and how it can change

their perspective. This finding supports research findings reported in the literature (Giles & Maltby, 2004; Liu et al., 2011).

As reported in their journals, nonviolent games that children played tended to be fantasy games. They listed elements such as problem solving, learning, and going to other worlds as things that attracted them to games. Allison and Victoria's responses were typical of reasons students gave for playing nonviolent games. Victoria felt that in Dragonvale she could take care of dragons in their own world and in Animal Jam she could play with a friend and have animal avatars go to different worlds (Journal). Survivalcraft was Allison's favorite game. She liked that it was about building things and surviving. She could choose from a variety of ways to play with many different animals and ways to survive (Journal). Children talked about how games could be useful in their learning. The positive aspects of games such as creating exciting fantasy worlds and adventures that they listed corresponded with studies, which have revealed that gamers "greatly prefer imaginary settings, mythical creatures, and illogical rules of conduct over more realistic games and simulations featuring familiar events and environments" (Alexander, 2010, p. 1843).

In the quantitative data, I found only weak or moderate relationships between a limited number of test items. I found weak relationships between the awareness of violence items and most of the other awareness items. I found moderate relationships between the awareness of violence, marketers' messages to gain profit and power, and users' different experiences with media based on background and viewpoint items. The moderately weak relationship between the items relating to awareness that watching videogame violence could make someone act aggressively and awareness that videogame media messages affect the respondent may show that

children understood that they or other people might be affected by violence, but also exemplified the fact that children in the study were not convinced that videogame violence actually had an effect on people. Children's skepticism about whether violent content affected them also may have played into the moderately weak relationship between the item related to limiting the amount of time watching violence and the item measuring awareness that videogame messages affect the user. Children were aware that limiting violent media might be a good idea, but they were not completely convinced that it had an effect.

Weak correlations in violence awareness could also have been due to students' confusion about the wording of several of the violence awareness questions. An example of a question with confusing content is question eighteen: Watching videogame violence could make someone more willing to help someone in trouble. Most of the children either said they were not sure, agreed, or strongly agreed with this statement. Taken at face value, this would mean that over half the class was not aware that viewing violence could potentially cause children to become desensitized to violence. However, some children may have interpreted this question to mean that if a person saw violence they might be more emotionally compelled by watching violence to help someone in real life than if they did not watch violence. This is one of many examples where the wording of the test questions may have been misleading.

Although children recognized the effects of violence, their responses did not always agree with the literature that indicates videogame playing causes violence. Quantitative data showed that heavy game playing decreased, and students indicated that they changed the types of games they played to more nonviolent games after they became more aware that violence could

possibly affect them. However, some students still saw these as games to be played simply for fun.

Violence Awareness and Videogame Creation

Some Scratch games created before the intervention contained violence. Studies have shown that, in creating content and being able to interpret media messages, students needed guidance in how marketing is impacting them (Buckingham, 2006; Gainer et al., 2009; Silverstone, 2004). Kerr (2005) found that without knowledge of how to analyze media structures, students did not have the skill sets they need to understand and create content. It is important, therefore, to explicitly show students how to interpret videogame images so they can create new images that contain messages of social justice rather than violent ones (Alexander, 2010). Although a few children created violent games after the intervention, the number of violent games created decreased. Even children who created violent games made a point of explaining how their games could be considered nonviolent because they did not contain extreme violence such as blood or killing. Some of the violent games created after the intervention could have been created because of the coding and nature of videogames. Baetman (2006) explains that just using a mouse to point and aim and then click to shoot is a simple coding process. Designers need to be more creative in thinking about ways to move plotlines forward without violence.

Johnson et al. (2011) wrote that as the popularity of nonviolent games increased, children may have been more inclined to prefer nonviolent games to violent games. The number of independent games being made has increased. Martens (2012) found that these games did not have the same profit and power motivations as larger videogames. The fact that videogame

creation has become much easier with programs like Scratch and application software has become so accessible may also lead to the development of more nonviolent and social justice games. Empowering also for today's students has been not just being able to interpret messages, but also to create messages (Pavlova, 2005). No other generation has had the same kind of access to media creation tools. Ghose (2012) found that by creating their own games, students could send positive messages rather than rely on consumer messages that reinforce negative feelings of social isolation and hurt.

In this study, children added to game content by making their own games (Devlin, 2011). In thinking of creating nonviolent videogame stories in Scratch, students problematized and thought critically about the videogame genre and redesigned the types of games that are sold to the industry. A videogame market has been growing that creates games, which tell a story rather than simply upping the violence quota to draw in gamers (Kafai et al., 2009; Martens, 2012). With the increase in application software, game companies have been moving away from large-scale media projects to creating games which tell a compelling story without violence (Anthropy, 2012; Martens, 2013).

As students used Scratch to tell their stories and expressed their own concerns, space was opened up in the curriculum for them to create their own media, which increased the transformational potential of critical media literacy (Gainer et al., 2009). In deconstructing social justice issues in videogames and reconstructing positive images in their own games, students became the programmers not the programmed (Hoeschsmann & Poyntz, 2012; Masterman, 1985; Resnick et al., 2009). Although children responded in journals that they understood nonviolence,

it was in the construction of the game in Scratch that they were challenged to actually show in a physical product their understanding of a nonviolent game.

Children in the study lived the principles that have been preached in the literature. Children using Scratch showed problem solving skills, and rapid discovery of rules and principles that they applied to new programming situations. They also deduced meaning for their symbols to bring their game to a conclusion (Alexander, 2010). I observed that students working on Scratch games approached problem solving collaboratively and used advanced programming and math skills.

Critical media literacy enables young people to become active contributors to the public environments that are shared in cyberspace. O'Neill (2009) found that young people could affect the common good through participation in media creation. Game creation helped study participants to better appreciate games and to think more critically about the craft and design of the game. They learned that it is not a mysterious process to which only a few highly skilled programmers have access (Anthropy, 2012). Opening game creation to a wider audience allowed a larger number of voices to be heard.

In this study, results were mixed concerning children's perceptions about a relationship between violent videogames and aggression and desensitization to violence. One study found such a link (Bushman & Anderson, 2009), while another did not (Ferguson & Olson, 2014).

This study contradicted the literature showing that children were aware of violence, but that they had mixed feelings about whether violent videogames were actually harmful to them. The qualitative results also showed a preference by boys for violent videogames. However, boys and girls had few gender differences with respect to videogames in the study overall. This finding

differs from the literature and could be due to a rapid expansion of games now available to girls and the increased amount of time that girls are playing games.

Marketing Awareness

Marketing awareness includes recognizing that advertising exists in media products and understanding that this advertising is used in videogames to sell products. Qualitative data showed that children were more aware of marketing in videogames and trailers as a result of the intervention. The findings showed that children were aware of the constant barrage of advertisement and marketing shown to them in games. An example was Victoria who recognized that she had to deal with annoying advertisements for games if she wanted the free version. Children in this study admitted to being bombarded with advertisements, but they also knew to close them out or to ask a teacher or parent if they were unsure about an advertisement's content. David explained this by his diligence in researching games for age appropriateness and recommendations before purchasing them and his strong comment, "Never trust the advertising." (Journal). Other children thought that marketing was about selling their game to make money. Liam commented that he could probably sell his game for $15 (Journal).

Certainly, children showed awareness that marketing was aimed at them in advertisements, and that they knew they could use marketing to sell their own videogame products (Mou & Peng, 2009). Researchers have found that if children were creators as well as consumers, it was important that they be socially conscious of the product they are marketing (Gee, 2007; Pavlova, 2005). The rush to integrate technologies into education has raised concerns about corporate interests developing and selling videogames that addictively stimulate children

through violence and media marketed blitz campaigns (Grossman & Degaetano, 1999; Kim & Leventhal, 2008).

The quantitative data results were mixed concerning marketing awareness. Weak relationships existed between the awareness of marketing items and most of the other awareness items. This may mean that children were uncertain about the presence or goal of advertising; or it may reflect confusion about the answer choices and wording of the question.

The action component of critical media literacy becomes even more important as children create their own online marketing and become part of the symbolic interactionism process of responding to and creating the world of advertising. Children in this study were aware of the strong feelings and desire to buy a product, yet they responded that they could consider specific products and then not buy them because commercial items are not always what they seem. The literature has reported that children have been marketed to and that they have not been aware of advertisements, but in this study, children were not only aware of the advertising, they wanted to sell and market their own games. When creating videogame trailers, children even used marketing techniques such as having characters buy items from their store to get to higher levels. This means that children need to be aware of creating and marketing content that is socially just. Symbolic interactionism marketing is acting on them, but they are also acting on marketing to change or perpetuate the reality in which we all live.

Marketers' Messages to Gain Profit and Power Awareness

Profit and power awareness is a corollary to marketing. This awareness includes understanding that games can be used to make money and to send powerful messages to influence consumers' thinking. Whereas marketing concentrates on the distribution of

advertisements, profit and power awareness looks at interpreting how such advertisements or messages in games are used by individuals and corporations to gain profit from consumers and to gain power over consumers' thoughts and feelings.

Before the intervention, 23 children said in their journals that they did not know if marketing was being used for profit and power. After the intervention, children showed an increase in awareness. A typical summary of children's answers after viewing the videogame trailers was the group of responses given after viewing the Nancy Drew: Tale of the Twister trailer (Her Interactive, Inc., 2010). Children responded that the trailer was made "to get lots of money" and "for selling to girls" (Teacher Reflection Journal). The children's responses indicated that they could identify profit and power messages behind the games after participating in the intervention curriculum.

When creating their own games, children also had a sense of how they could include advertisements to make or raise money. Children were aware of techniques they could put into their own games to market them, but wrestled with the concept of how to share or be socially just with the profits from their marketing. An example was Isaac's and Samuel's decision to get their audience to click on an advertisement link to raise money before their Super Gaming race began. They commented that consumers of their game might think "it's mean to just get money" so they decided to include a feature in their game that "when start (is) clicked you will pick your charity," and "raise money for the poor" (Journal). Children seemed familiar with an online social justice that involves giving money instead of participating or acting to actually help someone. This may be an area where children can learn more about action social justice in real life versus a capitalistic social justice online model.

Qualitative data supported the conclusion that students began to understand how jolts and violence could be used in videogames to attract viewers for profit and power. Quantitative data were not as clear, presumably because of the reliability issues. Reliability of several of the questions was low, so I could not create composites. This could have been a contributing factor in some of the lack of significant changes in awareness in student answers. I found either no relationship or weak relationships between the awareness of marketers' messages to gain profit and power test items and most of the other awareness items. Some contradictions existed in the data since there was a positive moderate correlation between awareness that videogames might seem to be free but someone ultimately pays for them, and the item showing awareness that videogames have an influence on people. This may show some recognition by students that there is a connection between companies paying to influence consumers and also seeking to maximize profits. Analysis of some of the quantitative data showed student confusion between the concept of consumers buying videogames and the concept of someone behind the scenes creating and paying for the actual game that sends a message to gain profit and power. Some of the data could be interpreted to mean that at least some of the children understood that violence could be used to make money from consumers.

In this study, children recognized advertisements, but initially they did not understand that they were designed to gain profit or power over people's thinking. In the beginning, the qualitative data showed that the children were not aware that media could be used to gain profit or power. This study showed that children are not always aware of these aspects of the media they encounter. In the intervention as in the literature, they needed direct instruction on how to

critically think and respond to the barrage of marketing material embedded in the technological content they consume (Macedo & Steinberg, 2007; Pavlova, 2005).

Users' Different Experiences With Media Based on Background and Viewpoint Awareness

Users' different experiences with media based on background and viewpoint awareness includes understanding that people experience media messages differently based on their personal opinions, gender, ethnicity, and life experiences. Not everyone who sees a media message will perceive or interpret it in the same way. The qualitative data showed initially that children believed that a media message was viewed the same by all people. Before the intervention, 21 children answered in their journals that they did not know if different people understood media messages differently. This uncertainty or lack of knowledge matched the lack of knowledge in responses on the pretests. Both quantitative and qualitative data in the beginning of the study showed that children were unsure that people experienced media differently. This meant that prior to the intervention, children were looking at media as static products, which was a dangerous thing to do (Mou & Peng, 2009). As a result of the intervention, children's awareness that users' have different experiences with media began to change. After viewing the videogame trailer Ben Hex (Konami, 2010), students said that some people might think the trailer showed a cool game for kids with lots of exciting jolts, while other people might perceive it as too violent or adults might think it is boring. Through the viewing of the videogame trailers, children began to understand that everyone understood the media message differently. In the design phase of their Scratch projects, they wrote about how different people might experience their trailer. After the intervention, children showed an increase in awareness in their qualitative responses. As an example, Leah's response to the

interview question about different children's experience with videogames was, "They don't exactly like it how I like it. They don't have exactly the same feelings or likes that I do have" (Interview).

Children's responses tended to focus on surface level experiences of difference. They did not seem to have the knowledge or life experience to delve deeper into concepts. For instance, in the dragon Scratch game created by Grace and Amelia, a prince saved a princess from a dragon. The children discussed how people might interpret their game as violent because killing the dragon was violent, but how they saw the game with the prince having saved the life of a princess as social justice (Grance and Amelia, Journal). However, they did not see the social justice issue of placing a female in a gender stereotypical role of being saved by the masculine stereotypical role of the prince. Although children grew in their understanding that people experience media differently, their limited life experience prevented them from fully understanding and empathizing with the experiences or points of view of people different from themselves, or from seeing all the interpretations possible. As children age and develop mentally and emotionally, they may also grow in their ability to understand and interpret this area of awareness.

The quantitative analysis of individual questions that fell under the category of awareness of users' different experiences showed weak to weak moderate relationships. However, correlations that did exist may mean that at least some children believed that people have different reactions to violence. Some might copy violence; some may think it is fun; and others might be scared by violence in games. There was also an indication that some children realized that branding of violence could be done to appeal to users who experienced an attraction to

violent games. The data also indicated that students were aware that media could have an influence on different users and that people had the option of limiting the amount of time they spent with media to moderate the effect of a videogame.

In the quantitative data, the point of view question shows that the students in the sample felt that their point of view could limit them from the effects of violence and gave them power to choose how they wanted to react to these messages. Students believed that people interpret media differently and because of this they had the agency not to react to violence and to choose to limit the time engaged in gaming.

Children were also living the recommendations of the literature by learning to think about how others feel. By working with critical media literacy and Scratch, children were able to create products that began to take into consideration the different experiences of others (Ghose, 2012). Although students made progress in understanding that people experience media messages differently, there was still more work to be done in continuing to learn about how others experience the world, which comes with age and time (Tisdell & Thompson, 2007).

Videogame creation has allowed more people's viewpoints to be heard, which is part of the experience of critical media literacy (Blau et al., 2009). Students could create games in Scratch that model real life situations thus increasing critical media literacy of social justice in the real world. Digital games "have a great potential for storytelling" and for allowing the game creator to communicate their personal experiences (Alexander, 2010). Students began the process of telling stories of people with different experiences. As they mature, it would be interesting to see how their understanding of others develops and changes. Authors have said that many people

in media studies feel the media affects everyone but them and that is how the children felt in the study.

Corporations' Branding Through Inclusion, Exclusion, and Stereotypes Awareness

Corporations' branding through inclusion, exclusion, and stereotypes awareness means that corporations design products to include a certain audience and exclude others. Stereotypes such as traditional gender roles are used to develop the product to appeal to the included targeted audience. Initially, the qualitative data showed that children were unsure if an author or creator of a media message would include certain people on purpose and exclude other people on purpose. Before the intervention, twenty-five children answered that they did not know to the question: "Would an author or creator of a media message include certain people on purpose and exclude other people on purpose?"

After the intervention, the qualitative data showed that children recognized when people were included or excluded and they were aware how to include or exclude people when designing their Scratch projects so their videogame trailers would appeal to a specific audience. They were also able to consider how consumers of their product might experience its branding differently. An example was Ethan's explanation in his journal of his NBA shoot out game when he wrote that people "who like NBA and sports, boys and maybe girls will be included and like our game, but we are excluding adults because they don't play videogames that much" (Journal). He also wrote that "boys will understand how to play and some girls might not" (Ethan, Journal).

Quantitative data showed that almost all of the children were aware of branding on the posttest. This means that students are aware of, exposed to, and affected by the advertising they see around them daily. Students were aware that branding could be used in media to gain

influence, profit, and power. The data also indicated that students who were aware of the influence of media also were aware of how media could be used to market to a target group for profit. Students began to understand how they could brand to target audiences, influence the target audience, and in this process create their own powerful and profitable messages. Correlations between responses on some of the test items could be interpreted to mean that at least some students were aware of the targeting of brands in their own neighborhoods.

Branding and racial and gender stereotypes in videogames. The majority of the students in the study did not initially understand the meaning of the word stereotype. As they created messages, children began to understand how branding and stereotypes worked, but they still had a tenuous understanding of stereotypes. This is a significant finding when thinking of how technology tools have a tremendous potential to teach, but also a tremendous potential to overwhelm children with marketing content that contains violence and gender and racial stereotypes that can filter into their social interactions (Williams et al., 2009).

Children continued to include some stereotypes in their own games, which may reflect that children have already been influenced or do not have enough life experience to identify stereotypes. In class discussion on branding, children said that boys liked videogames more than girls. Yet in this study, girls played games as much as boys. The findings on stereotypes in this study mean that educators should be aware of stereotypes in games, and they need to educate children earlier regarding what stereotypes are and how they are used to brand products. This is critical as Mou & Peng (2009) discussed in their findings that commercial games such as Wii Fit and iPad videogame programs had been entering classrooms along with stereotypes that could affect children's development and adolescents' identities.

Media Producers' Creative Language and Artifacts Awareness

Awareness of media producers' creative language and artifacts includes understanding how creative media techniques such as jolts, music, color, and camera angles can be used as a language to influence people's feelings and emotions. In preintervention journals, only half of the class was able to identify what creative media techniques were. After the intervention, children identified creative techniques in the trailer for Hydro as "crashes, scene changing, music, flying, and falling" (Teacher Reflection Journal). Children recognized the strong emotional effect creative techniques can have on players. Joshua spoke about how people can get addicted to videogames, commenting, "They can't stop playing the game because it can be fun, it can have really cool music, or you can just really like the game" (Interview). Children showed a change in awareness by using creative techniques in their own games. The group that created Monkey King used "cool songs, a monkey climbing a tree, jumping, moving, and a flash" (Michael & Logan, Journal). Interviews, teacher reflection notes, and Scratch games showed that children had an understanding of creative techniques. Qualitative data also demonstrated that students began to understand how jolts and violence could be used in videogames both in what they watch and in what they create to attract viewers for profit and power.

Quantitative data indicated an increase in the understanding of some creative techniques, and that these techniques could influence people or cause them to act aggressively. Explicit instruction in the intervention curriculum on how jolts could cause strong emotions and aggression increased student awareness of how the creative artifacts jolts could be used in a videogame to attract the attention of players. If the students scored high on the question about

camera angles as a creative technique, they generally knew that media was used to influence people.

Masterman (1985) argued that, in order to understand how meaning operates in media, students needed to engage in its actual production using its language and representations to create a media product (Hoechsmann & Poyntz, 2012). Kellner and Share (2005) wrote that critical media literate students should be able to identify the creative techniques used in videogame trailers to attract viewers' attention. Regardless of tests scores, after the lessons qualitative data showed that students understood that they could use creative techniques to brand their own media products. The children's understanding that some creative techniques in videogames could cause some people to act aggressively was consistent with the writing of Kutner and Olson (2008) who found that playing violent videogames correlated with aggressive behavior in children. Contrary to the opinions of adult researchers, the children were convinced that these creative techniques were good and they wanted to use them to build their own games and to influence people.

It is important to teach children critical media literacy and have them act so they can critically respond to media using creative techniques. A great deal of literature on video games and children has contained a victim mentality. This mentality should be examined further because children are creating media. We should start to educate them as they create instead of blaming commercial media for problems with aggressive behavior.

Media Authors' Purpose and Perspective Awareness

Understanding that behind every media product is a media author that creates it is an important part of critical media literacy. In pre-intervention journals, most children wrote that

they did not know what the term media meant and did not know if videogames were media. Most did not know that an author or creator constructs a media message such as a videogame or commercial. Even in the class discussion, none of the children were able to define media.

After the intervention, children's media awareness increased but they still confused media with technology. Awareness of the definition of media is related to an awareness of creative techniques, branding, and experiencing media differently. Future interventions should have more explicit instruction in the curriculum, defining and comparing the terms media and technology. In class discussion after instruction about media authors, children were able to identify media authors as part of a group of media creator jobs such as photographer, computer programmer making videogames or websites, and camera operators. After viewing the trailers, students were able to identify both the author for the trailer and the purpose the author had in creating the trailer. An example was children watching the NBA trailer and identifying the author as Machina sports and the purpose as "to make an advertisement for the NBA" and to gain "power because they are trying to get you rushed and they are trying to get you to like it" (Ethan, Journal).

Low scores of media awareness on the posttest may have occurred because there was still some confusion among students in thinking that media was technology only. The wording of some of the answer choices may also have confused them. When asked what media was, students in qualitative interviews often said that it was a technology product and so paper newspapers may not have met the definition of media for these young students. Some respondents might have chosen sporting events because the events are often shown on the computer and television, which students identify with technology. A deeper explanation of the difference between technology and media should be explored with future groups to explain the

difference between technology-based products that are media and those that are not as children increasingly get most of their meaning from technology. The literature said children were bombarded by and savvy about media, but this study showed that before the intervention children were not even sure what the word media meant.

Although test scores indicated confusion about media authorship, through the action part of the curriculum, the children also began to see themselves as media authors as was exemplified by Jacob who when interviewed after creating his Scratch game said, "I can be an author for videogames because I am very skilled with videogames" (Interview). Increased understanding that the school had media could have come from students authoring and creating their own media in Scratch at the school site. Interpreting and authoring media products helped to change students' critical media literacy awareness.

At the beginning of the study, children did not know what media was. This was frightening when considering the impact of media effects and how much media saturates children. A stronger component in this area of the curriculum is needed because children were still confused about media being a technology product after the intervention. Students who did understand what media was also showed higher scores on awareness for the creative techniques used in media to attract viewers' attention and in awareness of how violence could be used to brand games for profit and power, a key to critical media awareness.

Peppler and Kafai (2007) spoke of the advantage of having students write about media messages and respond to media in the texts they created because it empowered them to deconstruct product messages and critically analyze them so that they could become critical consumers who were not swallowed by media culture. Freire (1998) expressed that

> …it is extremely urgent that the power and effects of the media should be subjected to serious debate. As educators with open minds, we cannot ignore it. In fact, we must use it, but above all, we must discuss what is going on, what is being said and shown. (p. 14)

Coding and Scratch Projects

Although coding and Scratch projects were not among the awareness variables, students commented on how they learned programming through this process. Examples from student interviews included Jonathan who said, "If you create videogames you can do things like you never did before like coding people and stuff" (Interview). In addition, Hannah explained, "If you wanted to work for the Apple company, you would know sort of how to do it because of what we're learning" (Interview). The variety of coding blocks in student projects also showed an increase in awareness of code. The additional participation in the hour of code during computer science week also demonstrated how advanced students were at Scratch programming skills compared to what was taught in the lessons.

Students learned videogame programming which is considered a pathway into computer science and information technology careers and which is the second most influential technology to impact teaching, learning, and creative expression (Johnson et al., 2011; Margolis & Fisher, 2002). As part of designing games in Scratch, students applied a number of mathematical concepts including using a Cartesian coordinate system, negative and positive numbers, ordered pairs, angle rotations and measurement, logic, and comparing inequalities (Penta, 2006). Children can learn mathematics skills in videogame creation that could be incorporated into a rubric showing mastery of the Common Core Standards.

This study is important because it contributes research that past studies have cited as needed. It shows how to integrate Scratch into the full day class curriculum which researchers have described as critical (Burke, 2012; Penta, 2006). Burke (2012) looked at storytelling in Scratch as an effective tool for coding but suggested that further research was needed looking at Scratch as a form of composition and examining how it could fit into the traditional curriculum. In this study, students experienced videogame storytelling concepts as part of the curriculum. This study has added to the research of how game construction can be applied to mainstream classroom learning and educational standards (Dalal et al., 2009; Kafai, 2006; Papert, 1980) It also showed how computer-based learning is an integrated, interactive technology (IIT) model that lends itself to the theory of symbolic interactionism (MacKinnon, 2005). Students working on Scratch engaged in interactive problem solving to figure out which blocks work to create the game mechanics desired for a final effect.

Students in this study had the very experiences the literature has said are important for critical media literacy. They actually lived the experience the experts have recommended. Students wanted to do more than just watch media; they wanted to create and interact with media (Hutchison, 2007). Students were able to design game rules, script the game, draw characters, add music, and write dialogue (Fullerton et al., 2004). In this critical media literacy project-based game-design curriculum, students learned the skills of coding, graphic art, concept design, and communication required to create games which fit into the problem solving and critical thinking skills that they need to be successful in the 21st century (Quillen, 2012). Students constructed meaning and knowledge through the process of using instructional tools (Jonassen, 2011) and collaboration with classmates. Through constructing and reorganizing personal

conceptual models, students learned to program together (Jonassen, 2005). They created story models in Scratch that helped them make sense of their understanding of critical media literacy and programming concepts

Symbolic Interactionism and Critical Media Literacy

It has become common for gaming programmers to meet for 24 hour coding gameathons to finish games, collaborating and creating the code with colleagues, because working efficiently with games and coding is enhanced when done with a partner. Students worked in pairs to create stories and program videogames in Scratch, which has been described as an appropriate space for applying symbolic interactionism theory (Chung, 1997).

> [Individuals] engaged in joint action cannot help but attend to the ways co-participants, especially more knowledgeable co-participants, talk about and interact with objects in the environment. This jointly produced language and action becomes the basis for the taken-for-granted knowledge and practice. (Prawat, 1996)

In this study, students recognized that working with a game and coding was especially beneficial when done with a partner. Victoria noted that "you need two people to think on it and get better ideas...and you don't really get stressed" (Journal). Jacob saw that more people meant more talent and said he thought "you should include as many people that are talented as you can so that they can help you make it better" (Interview). Symbolic interactionism goes hand-in-hand with critical media literacy because students create symbols while developing their Scratch nonviolent videogame models. Through the programming process, students in this study interpreted the meaning of their games and communicated with one another to create the socially constructed reality of what a nonviolent or socially just videogame means (Jonassen et al., 2005).

In addition, through engaging in the production of videogames and sharing media content, children became a part of the response to public pedagogy and they were able to engage in the democratic process of interpreting and responding with media that voices their concerns (Tisdell & Thompson, 2007). Students using Scratch were able to create meaning of the world around them through the self-constructed narratives they designed for their games. In future studies, students can upload these games to the Scratch website and share them with other users. Liu et al. (2011) wrote that this sharing increased the influential power of the digital stories students constructed to shape the reality of the world in earlier studies.

Johnson and Johnson (1996) found that in constructivist, cooperative learning classrooms where students socially construct reality, there was a symbolic interactionism component of students looking at symbols and constructing meaning, sharing the meaning with peers through language, and then thinking of the meaning their peer has constructed to give rise to the social reality of the videogames they create. Symbolic interactionism applies to Scratch technology because "computers and technology are image-laden and students in this project were working in closely knit social groups" (MacKinnon, 2005). The children in the study experienced these interactions causing them to look at their world, and videogames in particular, more critically.

The process of personal meaning "takes a backseat to socially agreed-upon ways of carving up reality….Symbolic interactionism sees meaning as a social product that arises in the process of interaction between people" (MacKinnon, 2005, p. 90). Symbolic interactionism "is also a valuable theory for advertisers and marketers in their quest to understand (and ultimately increase) the spending habits of adolescent consumers" (Domine, 2002, p. 54; McGee, 1997). Branding is an example of how humans respond to symbols to create a culture of meaning. The

learners "created shared meanings through social interactions, and these meanings became their reality of nonviolent or socially just videogames" (Domine, 2002, p. 54).

One of the themes that emerged from analysis of the qualitative data was how videogame programming influenced student social relationships. The children were constructors of their own actions and meaning as they created critical media literacy stories and videogames. Children understood that their Scratch videogame project was an object in the world that had a social meaning that did not always carry the same meaning for everyone, nor did all people interpret their videogame situation of nonviolence or social justice in the same way (Woods, 1983). As students worked with branding, they had to think about how different people would respond to their game message.

Implications of the Study

The results of this study confirm that the implementation of a critical media literacy intervention program that incorporates an action component, creating nonviolent or social justice videogames in Scratch enhances students' awareness of critical media literacy. The process of interpreting media requires explicit instruction on how to interpret and use critical media techniques to create nonviolent social justice videogames. Without explicit instruction, children will be more affected by messages and they will replicate the messages they see in media. Without training in critically conscious construction of media, students will continue to replicate the violence they currently see in commercial media.

A New Curriculum

This study contributes to the field of critical media literacy a description of how to implement an action-oriented critical media literacy curriculum that incorporates videogame

programming. It also contributes information that can assist educators in helping students to design nonviolent videogame curricula for the classroom. This study provides examples of how to measure critical media literacy skills quantitatively as well as qualitatively, although there are not many critical media literacy studies that use quantitative or mixed-method data. Additional studies are also needed on Scratch and its potential for use in education and as a tool for teaching critical media literacy.

Knowledge of how to use creative techniques helped children to better incorporate these techniques in their own Scratch projects to communicate their ideas. Knowledge of media messaging and authorship was low in the beginning of the study, which is why this research was important. The critically conscious creation of Scratch projects helped students to understand the role of media authorship and commercialism. This new process design helped children build creative futures through consciously creating critical challenging computer programs.

In terms of curriculum, the implication for educators is that as technology becomes more integrated into schools and classrooms, they must consider how to use it in ways that are constructive for learning. With the requirement in the Common Core curriculum that students apply knowledge to show learning of educational tasks, Scratch programming has provided a hands-on constructivist way to apply mathematics, problem solving and logic skills (Li, Lemieux, Vandermeidan, & Nathoo, 2013). Once learned, these skills have led to students acquiring higher skills needed for much sought-after mathematics, science, and programming careers (Rogers, 2011; Trilling & Fadel, 2009). Moreover, researchers have shown that Scratch fits STEM curriculum and Common Core assessments of videogames with rubrics that show mastery of content through a gamed based badge assessment system (Fontichiaro & Elkordy,

2014). Carr-Chellman (2012) wrote that experiencing programming in classrooms, women and minorities could become more involved in gaming, and boys could experience a literacy curriculum that is more engaging than sitting in a classroom reading. Schott and Horrell (2000) wrote that more nonviolent social justice education games were needed as the videogame field and educational gaming content grows.

This study also showed that Common Core standards and STEM can be taught with videogame creation. Siko and Barbour (2013) found that children learned ethical values and critical thinking skills in science, mathematics, engineering, and technology and they could create a more just, peaceful society through participating in computer programing that incorporates critical media literacy awareness. Rather than consuming marketed curriculum, Mak (2014) found that students could use critical thinking skills to create Common Core curriculum and assessment. A new term for this approach of critical media literacy would be Critically Conscious Creation (CCC). CCC would center on children building a creative, socially just future for our world through creating media products using critical media literacy skills and computer programming. Creative concepts designed by children through the process of critically conscious creation could place them in an active role in changing the cyber world to a more just, peaceful world; and it could teach Common Core and STEM skills that integrate holistically with the arts (Gee & Hayes, 2010).

Cooper (2006) saw games as the gateway into computer literacy and technology careers. Reluctance to choose computer and technology classes to influence career choices could be attributed to the lack of women and minorities in games (Clark & Gorski, 2002). This study was important because girls were given the opportunity to experience some of the positive aspects of

gaming on social science and cognitive development to which females and minorities would not have access if they did not partake of or feel represented in gaming (Durkin, 2006; Gee, 2007; Lee & Peng, 2006; Lieberman, 2006).

Combatting Violence

Since students are constantly connected to digital environments and they also communicate with people in the real world, they need guidance in how humans can be affected by virtual contact. Ties to violent videogames in school shootings and the isolation that technology can cause are additional reasons that the link to critical media literacy in the interpretation and creation of media product is vital.

The study confirmed presumptions of violence and marketing in videogames. As students "learn to live as digital citizens" (Bennett, Wells, & Rank, 2009), "educators, policy makers, and parents must recognize and acknowledge that no clear division between online and offline realities exists for students" (Brewer, 2011). Young children can imitate the violence and media stereotypes they see in games, which can lead to physical and psychological hurt on the playground. With the nature of violence in the world today, it has become important that students be critical viewers of videogame violence. This study showed the importance of further critical media education for children. Lachlan et al. (2005) found that critical media literacy intervention programs gave educators a way to implicitly teach the values that were embedded in media and videogames so that children could be aware and make choices about what they believed was morally right or wrong in a game.

Media can have a broad effect on others as in cases of cyber bullying and isolation that can lead to depression and violence towards self or others. Students have to be taught digital

citizenship skills along with programming skills to create socially just media. It has become critical to teach children how they are being marketed to so they can create a positive future in which they are active participants in changing the social consciousness through symbolic interactionism and critically conscious creation of media products.

Furthermore, problems of cyber bullying have come with increased use of media and media marketing. The intervention I used in this study gave children skills to cope with interpreting the barrage of materials that are sent by media organizations to children on a daily basis (Barbaro et al., 2008). The curriculum also gave students the opportunity to create counter materials that were nonviolent or socially just so more voices could be heard.

Understanding Marketing and Stereotypes

A major finding in this study was that students knew advertisements existed, but in the beginning of the study, they were not aware that these advertisements were being used to gain profit and power for their producers. It has become important to begin critical media literacy awareness at a young age, so that children become aware of the effects of advertising.

Children affect their peers even more than mainstream marketers in many ways. Children in the study were aware of the marketing going on and they themselves were marketing in their own games. They were capitalists wanting to market their own work. Why not create and market ideas based on the seven areas of critical media literacy awareness? The implications are that it is important to teach social justice marketing so children are marketing for social good and not just replicating stereotypes.

Educators must start much earlier with children helping them understand the different experiences of gender and social justice as indicated by the lack of knowledge of stereotypes in

this study. If children are not aware of stereotypes in media, they cannot create and program media products that counter stereotypes. The findings on stereotypes, particularly gender and racial stereotypes indicated that critical media literacy in this area is essential and it is particularly needed in teaching game programming. Although girls and boys played the same amount of time and were equally adept at programming, there were some differences in types of games created and in stereotypes held about girls and boys in the creation and branding of games. Although this study did not have gender awareness as a variable, this area is definitely something that could be expanded and investigated in a further study using the intervention curriculum of critical media literacy lesson and building Scratch videogame trailers with the focus on gender awareness as a variable.

Children began to understand that people experience media differently but had a hard time expanding this idea beyond their own limited life experience. Part of this may be developmental and it may be that older children can better apply awareness of users' different experiences with media based on background and viewpoint simply because of a broader base of experience and higher level of thinking. Student lack of knowledge concerning branding and stereotypes indicated that children needed early education about stereotypes and more materials that counter stereotypes.

Sardone and Devlin-Scherere (2010) found that children could create their own games on any subject they were learning in the Common Core and could evaluate knowledge that was being sent to them. With the proper skills, people have been able to pursue careers in computer science and create a more socially just future (Siko & Barbour, 2013). Children can do this, but educators must take the lead in preparing them for these roles.

Recommendations for Future Studies

This study addressed only one component of the need for critical media literacy awareness. Worldwide efforts are being conducted on giving students critical media literacy skills, but the United States is behind in this area compared to Canada and other countries. Mitigating this problem must become a global effort by all school districts to compete against the effects of violence and isolation and to reach out to make games which are drivers of change for the common good.

Analysis of the data from the study has highlighted several recommendations for further research. For a similar intervention and quantitative data, an instrument that uses Likert scale items exclusively would enhance the research methodology in this study. This would help to create composites with higher reliability. In the future, researchers should change the questions in the pre- and posttest to a five-item Likert scale model to enhance reliability. Without the changes to the pre- and posttest, the most reliable research requires rigorous qualitative analysis.

Several of the questions on the pre- and posttest should be eliminated or modified to make them clearer and more valid measures of the seven awareness factors. Because children in the study were confused and combined marketing and profit and power awareness, researchers in the future can create a better study by combining those items into a single variable for awareness.

Questions that more closely aligned to the explicit teaching of concepts in the curriculum would have increased reliability and validity of the quantitative measures. For instance, the explicit teaching of jolts in the lessons resulted in substantial changes in awareness in the quantitative data. There is a strong need for mixed-method data in critical media literacy so I highly recommend making these changes to the pre- and posttest and repeating the study.

Future researchers may want to interview students at a control group site as well as the intervention site to clarify understanding of the results of the intervention. Investigation of more school sites and broadening the scope of the study to include public schools would expand the findings to address more diverse populations with differing access to videogaming and programming technology. Differences in critical media awareness and in programming skills in creating games could then be examined.

The question of appropriate timing of educational intervention is important. It would be interesting to see if there would be any difference in the outcomes of the study if the intervention were done with older or younger students. The curriculum was designed originally for sixth grade students who might have had more exposure to media and higher level empathy and critical thinking skills when it comes to critically analyzing media. An older population of students may show differences in the interpretation of trailers and in the level of awareness in Scratch projects, particularly in the area of users' different experiences with background and viewpoint. Since the curriculum was originally designed for sixth graders and was changed for fourth graders, repeating the curriculum with older children including high school students might show greater changes in awareness.

Another area for future research would be in nonviolent social justice videogame creation as part of other aspects of Common Core curriculum. How could Scratch be used in other areas such as social studies, science, and mathematics? How could videogame programming be used to teach and create games for learning? Several of the students in the study suggested making curriculum games for younger children. Perhaps older children could make games that could be played by younger children for academic learning. Children could also create larger adventure

games entirely based on a year of social studies curriculum as a class. Common Core digital curriculum is needed. Children could make their own games rather than waiting for publishers to create the latest Common Core product. Children could create games and assessments for games that match the standards. The games children create could match a standard and a high score on the game could indicate a mastery or practice of that standard that could be used with digital badges for Common Core standards assessment. Cocreation by students of Common Core curriculum is a dynamic and growing future area of research as companies and individuals rush to create curriculum and assessments that meet the integration of technologies into classrooms.

Although this study did not find significant differences in gender other than a tendency of boys to play more violent games, there were some differences in the types of games children created. A future study to investigate gender issues as they relate to videogame programming in Scratch and critical media literacy awareness would be a rich area of research to explore.

A similar methodology could also be applied to the design of a longitudinal study to be able to evaluate the effects of a critical media literacy program over time. It could be valuable to compare results if students in one school learned Scratch programming, while another school used only the classroom curriculum, and a third school taught Scratch programming plus the classroom curriculum to see which method provided the greatest change in awareness over time. A longer study in which children can create full games with more complex programming skills would also be valuable.

Ultimately, more research needs to be done both on using technology in the classroom and on using critical media literacy programs to assist students in media awareness. The move away from mindless consumption of media technology to thoughtful production of media

technology is vital. Larger *Beyond Blame* (Center for Media Literacy, 2007) and Scratch studies are needed. There are not many fully implemented critical media literacy programs. A few have been tried including the *Beyond Blame* (Center for Media Literacy, 2007) curriculum that is used in this study. Pilot studies conducted on *Beyond Blame* have addressed the need for this curriculum to be implemented and studied on a much wider scale (Webb et al., 2009). As technology use increases in schools the need to teach students critical media literacy awareness through critical media literacy programs is increasing exponentially (Bhat et al., 2009). This study has the potential to affect broad numbers of the educational population and serves as a model not only for how to teach critical media literacy awareness but also how to teach students technology skills in demand in the fields of science and mathematics.

One of the findings in this study was that children thought media was technology only. Further media studies with more emphasis on distinguishing types of technology and types of messages are needed with larger and more diverse groups of children. The study was limited in that respondents self-reported answers. Another limitation was that only 11 of the 22 students at the control site agreed to participate in the study. The number of students that could be sampled limited the study. In the future, more diverse groups can be recruited by increasing parental confidence in the value of the study.

Conclusion

With the rise in digital technologies has come the need to be critically media literate both of reading the messages in the constant media barrage and when creating media that are socially just. From the time they are born, children are sent media messages. These messages shape

children's identities, and through the process of symbolic interactionism children create reality both in person and through their interaction in responding to and creating media.

Computer programming has become essential to children's futures. The Common Core requires skills in critical thinking, problem solving, digital citizenship, mathematics, science, and engineering. Critically conscious programming that applies critical media literacy awareness meets all the common core requirements and can be assessed through the action products that children create.

Today's students are coconstructers of reality. They piece together their personalities from their lived experience and from the media with which they interact. They also create media from movies, blogs, and videogames. Educators should explore these technologies with students so that they can benefit from the guidance and experience of their teachers in helping students develop as digital citizens. As virtual reality and three-dimensional games develop and flood the marketplace with even more realistic scenarios and characters, it becomes more critical that children learn to create and interact in games with an understanding of the consequences of their actions both to themselves and to others.

Children can learn by creating curriculum rather than being marketed to with predetermined curriculum. For instance, a child could create a three dimensional mathematics, science, and social studies videogame that other virtual players could play. Children could create alternative realities through three-dimensional digital curriculum worlds that center on learning about the world as a global digital citizen. The characters could challenge traditional branding through inclusion, exclusion, and stereotypes. More games are needed that are nonviolent with more gender and cultural diversity in lead characters. More minorities and girls should be

represented in games. Giles and Maltby (2004) found that children and adolescents looked to role models in media as they developed their gender role identity, which made the need for female role models in games even more important.

Digital citizenship is a daily struggle for children as they deal with peers on the Internet. Children can respond through critically conscious creation (CCC) by programming media in which they encourage their peers to speak up through action to help people so that they are not alone and isolated. When people ignore others, fail to speak up, give up hope, and stop thinking of solutions or new ideas, marketing wins. If people can market what makes a difference, the idea will become increasingly popular. People can make money to make things better instead of just donating to a website. They can change how people think and approach one another. Developing socially just creative futures for children through critically conscious creation of curriculum using computer programming that meets common core and STEM standards is essential.

Children can become socially just programmers not just programmed consumers. Children need experience with academic content that will lead to science, technology, and mathematics careers. Even more important, children need guidance in becoming socially just leaders in making the cyber world and the real world a better place for the future.

APPENDIX A

Critical Media Literacy Lesson

Fighting Evil in Videogames

Lesson 5

SENSATIONALIZED SUPERHEROES

Junior Division (Grade 4-6) Unit

INTRODUCTION

This Junior Division Media Unit is designed to assist teachers in delivering a program that will help students develop their critical thinking skills. The seven lessons highlight the media literacy expectations, and reading, writing and oral language opportunities are deeply embedded. It is suggested that teachers use the response journal as a way to track and provide feedback to student thinking. Many reflective questions are posed throughout the lesson, and time should be taken for students to think, make connections, and respond at a deep level.

These seven lessons take students through a continuum of media texts, from the fantasy world of superheroes to real-life stunt junkies. Students at this age level live in both worlds and are challenged to understand and respond to the messages of violence and dangerous behavior. Is it more exciting to watch bombs explode and cars crashing, rather than fighting evil through compassion? Are we more likely to imitate more realistic representations of risky behaviors rather than two robots fighting? The media texts will challenge students to examine multiple perspectives and production choices in the creation of media texts related to superheroes. From the fantasy world of superheroes to more realistic portrayals, students will read, view, analyze, and critically respond to the representations of dangerous behavior.

Lesson 5: Fighting Evil in Video Games

Is fighting evil with compassion and integrity less exciting than using bombs, blades, and guns? This lesson will focus on the representation of conflict in video games. Students will view a selection of video game trailers to understand the codes and conventions of this medium. A deeper analysis will involve a comparison of the jolts per minute between some favorite video games to understand how this relates to attracting and appealing to a target audience.

LESSON 5: FIGHTING EVIL IN VIDEO GAMES

40 Minutes

CURRICULUM EXPECTATIONS

- MEDIA LITERACY – EVALUATING TEXTS
    - 1.3 – Express opinions about ideas, issues, and/or experiences from the texts to support their opinions.

- MEDIA LITERACY – UNDERSTANDING MEDIA FORMS
    - 2.1 – Identify elements and characteristics of some media forms.

KEY CONCEPTS AND QUESTIONS TO CONSIDER

- Each medium develops its own "language" in order to position readers/viewers in certain ways.
- Demographic factors such as age, culture, gender and socio-economic status as well as prior experience and knowledge play a role in how we interpret a message.
- How are power, conflict and violence represented in video game trailers?

INTRODUCTION/OVERVIEW

Is fighting evil with compassion and integrity less exciting than using bombs, blades, and guns? This lesson will focus on the representation of conflict in video games. Students will view a selection of video game trailers to understand the codes and conventions of this medium. A deeper analysis will involve a comparison of the jolts per minute found in some favorite video games, and an understanding of how this relates to attracting and appealing to a target audience.

TEACHING/LEARNING STRATEGIES

INFORMATION SOURCES – Ask students from where they receive their information about new video games. Create a list of the sources on the blackboard or chart paper. Ask students to think about their video game experiences and to fill out the survey on Video Game Trailers Survey (5.1 H).

When everyone is finished filling in the survey, collect the papers. Have a small group of students tabulate and present the results to the rest of the class. Follow with a discussion of some of their favorite video games. Create a list on chart paper for activity number 3.

TRAILERS – Explain to students that they will be viewing a number of video game trailers. Ask them:

- What is the purpose of the video game trailer?
- What are some of the features that we would expect to see in a video game trailer (i.e., music, action, montage of images, voice over narration)?

View as many of the following trailers as possible:

- Ben 10 Alien Force Rise of Hex Gameplay Trailer (Konami, 2010) http://www.youtube.com/watch?v=mA6wNibbxAc
- Monster High Videogame Trailer (THQ, 2011) http://www.youtube.com/watch?v=CIBOQnAcGw4
- NBA 2K13 All Star Preorder Trailer (Machina Sports, 2010) http://www.youtube.com/watch?v=JbwrMbz2jME&ytsession
- Nancy Drew Trail of the Twister Trailer (Her Interactive, Inc., 2010) www.youtube.com/watch?v=lrWz-lh35AM
- Hydro Thunder Hurricane Trailer (Microsoft Game Studios, 2010) www.youtube.com/watch?v=FANeQRvkABc&feature=fvst

JOLTS – Have students focus their initial viewing on the structure of the video game trailers. Tell students that video game trailers tell the story of a video game in a highly condensed form, with maximum appeal. Write on the board: *A jolt in media refers to the surprising or fast-paced moment that will generate excitement in the audience*. Brainstorm with the class a list of examples of what a jolt might be. The list should include:

- a violent act
- motivating language
- quick film cuts
- flashes of color
- exciting music

Have students keep score of the number of jolts per minute they count as they view the trailers, using Jolts in Trailers (5.2 H) as a viewing and recording guide for this activity. You should act as the time- keeper for this activity.

Tell students that they now will view a few of the trailers a second time, and they will focus their viewing on three features:

- voice over narration
- use of music
- use of cast

Divide the class into three large groups, and assign one of the features to each group. Encourage students to jot down their ideas as they view the trailers, and to support how that feature is used to create an effective video game trailer. When the viewing is finished, allow the group members time to compare their ideas and answers. When they are ready, ask one student from each group to summarize their group's observations.

CHOICE BOARD – Hand out **Choice Board (5.3 H)**, and read over the options with the class. Instruct students to choose the questions to which they would like to respond. There are

many entry points available for students on this choice board, based on experience and interest level.

JOURNAL – Instruct students to write a response journal that explains their ideas and their answers the questions they have chosen. Hand out Response Journal Rubric for Choice Board (5.4 H), to show how this journal will be evaluated.

ACTIVISM

Have students share their learning at the school's parent meeting or other appropriate venue. Parents would benefit greatly from learning about the critical thinking skills that their children have used to understand the representation of power, conflict and violence in their favorite video games. Have students generate small group questions to promote discussion about this topic with their parents and other family members.

ASSESSMENT OPPORTUNITIES

- Oral discussions as a class and in small group contexts.
- Jolts in trailers (5.2H) worksheet
- Response rubric journal for jolts

IMPLICATIONS FOR FUTURE LESSONS/HOMEWORK / EXTENSION ACTIVITIES

Currently, a definition of videogame trailer is not represented in Wikipedia. Challenge students to create a definition for this term. Allow students the opportunity to view similar terms on Wikipedia to determine the form and structure of an appropriate entry.

CROSS CURRICULAR CONNECTIONS

- Information
- Technology/Music

MATERIALS AND RESOURCES

- Data projector or SMART board
- Internet connectivity will be necessary for this lesson.
- Videogame Trailers Survey (5.1 H)
- Jolts in Trailers (5.2H)
- Choice Board (5.3 H)
- Response Journal Rubric for Choice Board (5.4 H)
- Information listed in Links / Resources

TERMINOLOGY/BACKGROUND FOR TEACHERS

- ***Videogame***: A type of game existing as and controlled by software, usually run by a video game console or a computer, and played on a video terminal or television screen. Controlled by a paddle, joystick, joypad, mouse, keyboard, or a combination of any of these input devices

- ***Videogame Trailer***: A mini-movie or sampler created from excerpts from a video game, designed to promote and sell the game.
- ***Jolt***: a surprising or fast-paced moment that generates excitement in the audience, caused by a violent act, motivating language, quick film cuts, flashes of color, or exciting music

LINKS/RESOURCES

- Ben 10 Alien Force Rise of Hex Gameplay Trailer (Konami, 2010) http://www.gametrailers.com/games/js005m/ben-10-alien-force--the-rise-of-hex
- Monster High Videogame Trailer (THQ, 2011) http://www.youtube.com/watch?v=pCF3wRnTa0o
- NBA 2K13 All Star Preorder Trailer (Machina Sports, 2010) http://www.youtube.com/watch?v=JbwrMbz2jME&ytsession [Current retrieval information: 2 K Games (2012). NBA 2K13: All-Stars Weekend DLC Trailer. Retrieved from http://www.gametrailers.com/games/d6koej/nba-2k13/videos-trailers]
- Nancy Drew Trail of the Twister Trailer (Her Interactive, Inc., 2010) http://www.herinteractive.com/shop-games/nancy-drew-trail-of-the-twister/
- Hydro Thunder Hurricane Trailer (Microsoft Game Studios, 2010) http://www.gametrailers.com/games/5rgftj/hydro-thunder-hurricane

Jolts in Trailers Worksheet From Critical Media Lesson

A jolt in media refers to a surprising or fast-paced moment that generates excitement in the audience. A jolt can be a violent act, motivating language, quick film cuts, flashes of color, or exciting music

.

Videogame Trailer Name	**Number of Jolts**	**Examples**
1.		
2.		
3.		
4.		

(Wolfe & Fourth R, n.d.).

APPENDIX B

Preintervention Journal Questions

Media/Author Awareness

1. What do you think media is? Explain your answer.
2. Would you consider videogames to be media why or why not? Explain your answer.
3. Is there an author or creator who constructs or puts together a media message such as a videogame or commercial? Explain your answer.

Different Experience Awareness

4. Do you think different people understand media messages differently? Explain your answer.

Branding/Inclusion & Exclusion Awareness

5. Do you think an author or creator of a media message would include certain people in their message on purpose or exclude people on purpose? Explain your answer.

Creative Media Techniques Awareness

6. Do you think creators of media use different creative techniques such as characters, songs, and camera angle changes to get your attention? Explain your answer.

Profit/Power Awareness

7. Do you think creators of media messages make media to gain power over people through ideas or gain profit through money? Explain your answer.

Violence

8. Do you think some videogames contain violence? If so what kind of violence is in games and why do you think the creators would put the violence in the games?

APPENDIX C

Postintervention Journal Questions

Violence Awareness

1. Choose a videogame that uses cartoon violence. Do you think explosions and laser beams scare children? Do you accept that cartoon violence is just art?
2. Think of an example of a videogame that rewards bad behavior. What is the name of the videogame? List some examples of bad behavior that you feel gets rewarded. Does it make it okay if bad behavior is silly and cartoon-like?
3. Do you feel that fighting against robots with rockets and lasers is less disturbing than fighting against people?
4. Do you think children sometimes imitate the violence or bad behaviors they see in videogames in real life?

Videogame Addiction (Linked to Creative Techniques and/or Violence Awareness)

5. Do you think children can get addicted to playing a videogame? Why do you think they can't stop playing the game?

Branding/Inclusion & Exclusion Awareness

6. Do any of the games you play have stereotypes? If so, give some specific examples from a videogame. In your opinion is there anything realistic about these games?

APPENDIX D

Student Journal and Discussion Answers to Various Questions

Is there violence in videogames?

Olivia: No, because some videogames are fun.

What kind of violence is in videogames and why do creators put it there?

Grace: I think people put violence in videogames because some kids (in this generation) like videogame violence.

Michael: Yes, some kinds of violence that are in games are gun shooting, bombing, fighting, and killing. I think creators put violence in games to make it fun.

Daniel: Yes, they would put it in because it is fun with violence.

Joshua: There is shooting and stabbing. They put that in there because some people like that stuff.

Victoria: Some people like violence and think it's fun.

David: To get your attention.

Hannah: Yes, and creators put it into the game to attract people's attention.

Amelia: Some videogames contain violence. I don't know. I think people put violence in games because it attracts some kids.

Charlotte: They put violence in games to make it interesting to play.

Hailey: With weapons, with no weapons. I think they used it to get people's attention so they buy the game.

Jacob: I think they do get your attention. I like videogames with explosions.

Allison: Some videogames do have violence to get your attention.

Audrey: Yes, swords, guns, knives, because they want to get your attention.

Evan: I think videogames do contain violence. Videogames contain gun shooting and name calling to get money.

Why do you like violent videogames?

David: Call of Duty Ghosts- you kill zombies and GTA5 (Grand Theft Auto 5) you steal cars it is a great game.

Charlotte: Castle Crashers-I like it because there is blood and fighting and it is addicting to play. It is about fighting.

Elijah: Black Ops - I like this game because you get to shoot zombies and GTA five because you are a random person and you are wanted. Halo 4- you are the only survivor left on the earth.

Joshua: Zombie Road Trip-I like it because you do flips, kill zombies, and reach different levels.

Michael: I like Call of Duty Black Ops because you can go on missions and shoot people.

Why do you like nonviolent videogames?

Amelia: I like Surface because it is a mystery game and you have to try to save this girl because this evil part of the girl is trying to take control. You get to go into the girl's mind and her mind is so pretty, but it is getting destroyed by the evil part of her. You have to destroy the evil part of her. I like Survival Craft because you can build stuff, explore, and ride horses. I like Just Dance because it takes a lot of energy and it is very fun to dance to the music.

Victoria: Dragonvale -I can take care of dragons and have your own world. In Animal Jam you can play with a friend and have animal avatars go to different worlds.

Allison: Survivalcraft -is one of my favorite games. It is about building things and surviving. I like it because you can choose from a variety of ways you can play it. There are so many animals some very hard to find and you can build anything you can imagine.

Jonathan: Pokemon - because it is an adventure and it has come so far I think from 1977 to 2013. It is about animals and myths. They have different types. They started with fire, water, grass, electric air, rock. The hex one has ghost dragon, steel, ice...

Do you think explosions and laser beams scare children? Do you accept that cartoon violence is just art?

Ethan: Super Smash Bros has violence. Yes, it might scare young children in preschool. I do not agree because it is not good to be shooting or killing people in a game because you might get addicted to it. You might have a bad future.

Grace: The game I chose for number one is Lord of the Rings. I know that game uses violence because my neighbor plays it-the cartoon version. I think sometimes it uses fighting and it might scare some younger children. I kind of accept it because maybe some older children play it, however, it probably would scare the younger kids.

Allison: I don't know a videogame that uses cartoon violence but if I did I think it would have a lot of shooting and killing I think explosions and laser beams do scare young children like in kindergarten. Violent games should not be around children that young. I

don't accept that cartoon violence is just art because it can still scare young children and it could cause bad behavior.

Anna: I think Hungry Shark is a videogame that uses cartoon violence. Yes, I do think explosions and laser beams might scare little preschoolers or kinders or babies.

Joshua: There is a Star Wars game that involves shooting, crashing, and punching. I think that explosions and laser beams will scare the average preschooler or kindergartener. I don't accept that cartoon violence is just art.

Do you feel that fighting against robots with rockets and lasers is less disturbing than fighting against robots with rockets and lasers is less disturbing than fighting against people?

Ethan: Yes, it is less disturbing because robots just break and they rust etc. but people bleed etc.

Grace: I think that fighting against robots with rockets and lasers is less disturbing because if you fight people sometimes there is blood and if you have the volume on the person getting beat up sometimes moans and groans however if you fight robots with lasers and rockets it is less disturbing for me.

Olivia: In one videogame I've played you use fire and bombs to blow up the bad guys. In real life some bombs blow up houses.

David: Yes, because robots are not living things and in humans they have flesh and blood so if you blow them up there will blood.

Audrey: No, because when you fight against robots you know that they don't get hurt or they're not real. When you fight against people you know that they're real and they can actually get hurt.

Charlotte: I think that fighting against robots in games is ok, but when it comes to real people it is not ok because you are murdering people and you could go to jail for that.

Does it make it okay if bad behavior is silly and cartoon-like?

Ethan: Angry Birds- the more stuff you break and the more pigs you kill the more stars and point you get. Like if you get paid to kill someone, which is very bad. No it does not mean it is okay because if you do it on the game you might do it to a friend like say you slap your character and starts acting goofy you might think it's okay to do in real life.

Grace: The game I chose is Sniper Shooter. And what you do is you have a sniper and you go around shooting people and you get rewarded for doing it. It does not really make it okay to do that. Even though it is probably for kids ages 11 and up that does not make it okay for people to shoot other people for fun.

Owen: One videogame that rewards bad behavior is GTA Five (Grandtheft Auto 5). Some bad behavior is name calling, bad words, and kicking. It is not ok to do bad behavior in a cartoon.

David: Grandtheft Auto- punching, shooting, exploding, crashing, stealing, and beating people on the head.

Charlotte: Call of Duty does because there are people that kill other people and they get a reward for it. Killing in videogames, punching, and kicking and saying bad things to one

another all of those things are true in videogames and in real life. No, it is not ok for silly bad behavior in cartoons because little kids that watch cartoons copy it and they will start to be like that.

Anna: I think some videogames that reward bad behavior are Angry Birds because they are killing birds and Deer Hunter 2014 because they kill deer and other animals. I feel saying bad words sometimes gets rewarded or being mean to your friends.

Joshua: There is a game called Call of Duty which rewards you for shooting and stabbing people. It does not make it okay for violence if it is animated or not silly or not.

Owen: Yes, I think some children imitate the violence and the bad behavior they see on tv because they think it is cool and the next thing they know they are in trouble.

Michael: I would say no because kids are smart and they know to not do bad things because then can go to jail and be punished.

Do you think you became more aware of violence in videogames through the critical media literacy lesson and from creating a nonviolent social justice game in Scratch?

Victoria: Yes, because I still knew that there was violence in videogames but I still got to see different videogames and I don't really play violent videogames. I just might have some because my dad works at [a software company] so he gets a bunch of games so but I don't really play it….Well sometimes it depends on what the game is because like if you like say you're playing Halo and or like you are playing an army game trying to save the country it wouldn't really effect you that much because you're trying to save them so I would say you're trying to get better at it instead of trying to be violent.

Jacob: I think it was really fun drawing our characters cause I found this guy that was like a walking boy sprite that I found it's colored him black and put like goggles, paintball gun, and then so I thought it would be better not to shoot weapons because some kids might not like that because there's a monster is like really funny like for like a little kid to see so I wouldn't want to like shoot it if there is like a little kid that wanted to play a game. My friends play violent videogames like at Michael's party they were playing like all the games with blood and I was just playing Halo cause I don't like blood so Halo you can't see that much blood so I don't even know if there's blood. It was really fun when I played it because I kept killing Dave and William. It was really fun.

Ms. Gregg: Do you think those games would make kids do violence in real life?

Jacob: Maybe like movies like Star Wars because people do like shoot stuff in like Star Wars and maybe yeah like in army movies, action movies. I think yeah some people would.

Ms. Gregg: Why do you think people play violent videogames?

Jacob: I think like some people like violence. I like violence in certain games like Star Wars and stuff but some people don't like it because it is kind of scary and because it could be sad.

Jonathan: Well, I sort of don't know but uh. Violence is fighting, punching, kicking, shooting. If they are young kids they would probably copy it since they are like young and they are learning so if they play a violent game they might think that's a part of life and they like do it but if you're older you know that's not what you are supposed to do.

David: Yes, like now that I know that killing and hitting people is violence I won't play any of those games anymore. I think before I did this I thought the games were fun before I learned what they were all about.

Noah: No, I don't play those kinds of games. I just like sports. I don't really like violence. My parents don't either. My parents won't let me play and I don't want to play violent games either. I think probably kids would react to violence if they have it in the game they get addicted to the game and they would probably uh do it like it sometimes happened in my grandma's school. Like they pretended and then they started fighting about it.

Leah: I learned about jolts. The things that you are not supposed to do I am more aware of that. A violent game is hurting and fighting people. They are not being nice to each other or they could say like bad language or mean stuff to the other person. Maybe some people or kids do it because they want to do what the game wants because they like it. But some people don't because they don't it's their best game or they don't like it or maybe they just think it's not good to do it.

Hannah: Yes, because I learned that in violent videogames that have violence they like try to attract people with the violence because it attracts people because some people already played games with violence. I learned that if you watch too much of the violence you could come out as a bad person because if you play videogame violence it might teach you that's it's the right thing to do when it's the wrong thing to do. People use violence to attract people's attention.

Ms. Gregg: Do you think they use violence to market games?

Hannah: Yes, marketing how they sell them. They tried to sell videogames that have violence in them because like people buy them because the violence attracts their attention and most of them do it for profit. A good way is to make it fun but not have violence like it could be sort of like Minecraft, because Minecraft actually is sort of educational because it teaches you how to use your surroundings and they get profit from that because a lot of people like that game because of the different angles and stuff. Like advertising well I feel like confused because there are so many ads and some have violence so I just press the x.

Ms. Gregg: Do you think kids would act out violence they saw in a videogame in real life?

Hannah: Yeah, a lot. Since we talked about it a lot I realized that it could actually happen. I never really thought about it while I was playing the game. I thought it's just a game it will never really happen none of this will happen. Since we talked about it I realized it actually could happen. Yeah, I don't know I'd play the games less. I play those games sometimes. I think it's fun to like run and stuff and I like going fast and running away. I think it's really fun and like exciting to do.

Hailey: I did after you think about it. Violence in games is not good. Before I watched all the videos I knew violence wasn't good, but then once I thought about it I was like violence is so bad. Nonviolent games compared to the violent games are so much better.

Do you feel you became more aware of marketing in games from the lessons and creation of Scratch games?

Victoria: Yes, because I sometimes get to go to work with my dad but I don't really get to but I barely get to see what he does and with the marketing so I did find out more through this.

Like if I see an advertisement that might look cool or something I will go to that page and then and look at what it was before I would go like oh yeah let's download this cause there's ads popping up but it's also really annoying when they just pop up and you're like I just wanna play my game I don't want to just buy this stuff then if you want all the ads to stop you have to pay money or then you have to download or like sign a waiver or something.

Jacob: I think some people like when I was playing Minecraft I really wanted it for free and then I saw this ad on Gametube that said Minecraft for free but I showed my mom and I told her and she told me to go to Minecraft.net and I was like oh I almost got the wrong one and I didn't get it luckily.

Jonathan: Sell, oh yes. Sometimes if you get a certain amount of stuff you have to sell all the stuff and you have to get money to like get all the things that you need. If you need gems and you only get a certain amount of gems every time every year you get like five gems and if you spend all of them at once you need to buy them with more money. They might think like older kids know in this game you have to like buy things so if it I a kid they like try to buy everything they want to complete the game but if they are an older kid they know not to do that so yeah.

David: Yes, just because they show you something that might be really nice it still could mean that there could be bad things back there. Just like with the advertising….Never trust the advertising. Always do some research. That's what I do with my apps I go into the reviews, look at the age ratings. I look it up online to see if the app is good or bad.

Allison: A little bit. Well, it has happened before like sometimes when I buy games on my iPad they're not at all like the advertisement is I mean like at all.

Amelia: Yes, I became more aware of it definitely. For example if I make a videogame and my friend loves it very much and I turn it into a real videogame with a disc and everything I probably am doing it for profit or power or something like that.

Liam: I seen how much videogames costs. Sometimes it's annoying. You think oh I want to get this game and you're like oh I need $20 more or you don't even know. This game we made I say we could sell it for $15.99 or maybe like $15 or $10 because it's newer and I know it would be a fun game to people.

Hailey: I don't need power that much but I would really like pay attention to how much we're selling if we are selling because if we don't sell enough stuff and make enough money then we won't be able to buy the materials for making videogames if we do have a videogame company.

Ms. Gregg: Will your game make money?

Noah: My partner Tyler said we didn't want it to be a money-making game. Actually, we did say we wanted it to be a money making game because if we got more money we would donate something we would make another videogame to make more money and so on.

Victoria: When we got to the computer lab a few minutes later it was kind of difficult to figure out how we were going to set it up so instead we did like a group of dancing- a dance group to raise money for the poor and homeless so they could put on the show so the money that they got they would give to charity.

Do you think you are more aware of marketing after the lessons and Scratch project?

Victoria: I found out about the media-that's the first thing. I found out about like what things do and what you have to do to get it. I thought that there is power if you want power or if you want the money.

Evan: Profits are for like to get the money. They make the game to get more money and power. Power they like create a trailer to make you buy the game. So both of them I think are the same as getting money.

Owen: Yes, some of them have profit and some of them have power for a reason some of power to get attention and profit is to just get money and stuff.

Grace: I think I do know like how they use marketing some people use it for profit and money and some people use it for power. I would use it for power and a little bit of profit so I could donate it to some of the charities and homeless people. You could just be nice to each other and try to help each other for social justice.

Do you think an author or creator of a media message would include certain people in their message on purpose or exclude people on purpose?

Jonathan: Yes, because maybe they want people who are popular.

Leah: They would only want to put certain people.

What is a stereotype?

Hailey: A stereotype was that all Latino sell tacos at taco stands.

Tyler: A stereo?

Victoria: I got this from the name-a type of stereo

Hailey: It's like something that is used in movies often that's not really used in real life.

Victoria: So they're like judging people..

James: Is it like bullying. Stereotypes can be used to bully. That thing you said about like you shoot like a girl it could be mean to two people a boy and a girl. You are stereotyping both people.

Amelia: Wait can I tell you something that happened. I really like to read and I hadn't finished my book because I was late on something a project and they were like that's not fair the only thing you like to do is read. Saying that I wasn't cool or liked anything else. I like to swim. When people like to put you in this grouping and just keep you there.

Hailey: Like in a movie that I watched there were Latino people that had an accent and they were selling tacos and not all Latino people do that and I think that's in a lot of movies. That's a racial stereotype and they think it's funny.

Student Journal Explanations of Their Games and Follow-up Questions

Non-Violent Goober Race

Victoria and Olivia: Our game is like a race with Goober and Leon Mouse and Quackers the Duck. Leon the Lion are doing a race for different schools. Leon is at zoo school and Goober is at an alien monster universe school. Goober has a car he is racing in and Leon has a rug he is racing on. They are racing on a playing field. Quackers is the oldest person there.

The Fox Song

Abigail: It's like a music game that is about a popular music video that everybody loves. At the end the fox moves 30 steps. He gets scared and wants to leave the stage and you have to grab a mouse to keep him doing it over again.

Dragon and Knight

Noah: When a player clicks on the dragon the dragon says, "I am your worst nightmare."

Ms Gregg: Why did you pick the dragon?

Noah: Dragons are usually scary and they give you nightmares sometime. I chose the name of Sir Bob for the Knight because Bob is funny and a lot of knights always start with sir. In my game they are going to battle each other. One will win.

Social Justice Game: Mitsu's Return

Natalie: Our game is called, "Mitsu's Return." The point of the game is to catch all the spinning flowers without stepping in the lava three times. If you step in the lava even once you lose a point. Our company name is Matsu Mitsu star games because we want to do something Japanese. A creative jolt we have is whenever you step in the lava not only do you lose a point but lightening flashes. Mitsu is the main and only character in our game. This game mostly appeals to girls because we wanted it to have flowers. You don't die in the game because we didn't want to send a violent message. It is a little too girly for some people such as boys. We do not care if we make a profit or not we just care about kids having fun.

Allison: It is about a girl who is walking around and she is catching some flowers to save the world as she touches a flower she gets a point but we couldn't get that to work well. You can die by stepping in lava.

Ms. Gregg: How is your game a nonviolent or social justice game?

Allison: You can't die in it so I guess that works. Well, she is trying to heal the world by catching the flowers because the volcano is erupting everywhere.

Violent Game: Torpedo Dodge

Joshua and Daniel: Our videogame is about a person dodging torpedoes under water. Our company is called Dodge the Company because you need to dodge stuff in our games. We are going to have flashes movement and music. We are including a torpedo, a person, excitement, action, and explosions. People who like action and excitement. We are excluding people who don't like action, excitement. We excluded them because that's what we wanted the game to be and we knew people won't like it. It sends a nonviolent message because nobody gets hurt or dies. People who like action and that stuff will say wow this game is cool and people who don't like this stuff will say this game is boring. We want to make profitable because we want to give the money to the poor.

Joshua: It's nonviolent like no one gets hurt. It doesn't really look violent it's like dodgeball sort of and it's fun.

Violent Paintball War

Jacob: Do you think our game is too violent?

Ms. Gregg: What do you think?

Jacob: Well it's just paintball. Our game is about two kids that are great at paintball but a portal appeared and monsters come out and are destroying their city. Help them destroy the monsters, retrieve the red thunder bolt and save the city. Equip your weapons and armor and have the experience of your life. The game is free and you can download it on ant and william.com. Good Luck!

Ms. Gregg: How did you decide what your game was going to be about?

Jacob: When I was in my room I had a sketchbook that I wanted to draw in. I was drawing these paintball guys and I was drawing like these scary demons and there are just little kids that have to get this thing called a red thunderbolt that saves their city from the monsters that came through a portal. I don't know how but I just made that up and they are terrorizing the city and the king of the thunderbolt is a devil and that's how I started it and then William and I were going to do something else so then I told him about this cause like we didn't know what to do so I told him about the thing that I was drawing. I don't think we're quite finished with the game because we didn't get to do like our title screen and stuff but I think we did good and it was really cool. On the storyboard I wrote the pictures of the trailer and I think that's good. I think I did a great job. I think it was really fun drawing our characters cause I found this guy that was like a walking boy sprite that I found it's colored him black and put like goggles, paintball gun, and then so I thought it would be better not to shoot weapons because some kids might not like that because there's a monster is like really, really funny like for like a little kid to see so I wouldn't want to like shoot it if there is like a little kid that wanted to play a game.

Ms. Gregg: How would this game be nonviolent?

Jacob: Well I have to say it's nonviolent cause like we do have paintball guns but they don't shoot anything. They just touch the monster and the monster touches us so it's not really that violent so I was thinking about that and we didn't figure out a way to shoot at people that probably would be too hard for too hard for us. I think it's easier without shooting each other with the monster just touching the character.

Nonviolent: The Monkey King

Michael: My game company is called cool game company because we make cool games and we're cool. Some jolts in the game are cool songs, a monkey climbing a tree, jumping, moving, and a flash. Who I am including in the game are monkeys, bananas, kings, and trees. The target audience I am looking for are people that like animals. People that wouldn't be interested in my game are people that are athletic because they are into sports and not playing videogames. In the game it can send a non-violent message and say there's no violence and say social justice can make the world better. Some people could not understand a message because they can speak another language and not understand what's going on in the game. I want my game profitable so I can save money for a better life. This is about our monkey game. Game message is in the words and the target audience is people that like animals. Our videogame is about a monkey that was getting bananas for a king and the king thanked him and then he made a house with his gold and he lived happily ever after. It's a nonviolent game because there's no fighting or killing or hurting each other. They are just helping. He helps the king by the two monkeys getting him bananas.

The Rainbow Group

Our game is about four animals searching for a lost friend Hammy the Hamster. The four friends are named Larry the Hedgehog, Flareiana the Phoenix, Minx the seal, and Anthrax the dog. They're searching for Hammy in the woods. Every level is different. In all the levels a different animals needs to be saved. If you want to find out more play. We are the authors and Animal Journey is our company. We called it this because we are doing a game about a group of animals

saving other animals all over. A group of animals rescue animals in the sky, on the land, in the sea, and in houses. Our creative media techniques are different super powers, backgrounds, and weather. We are trying to include people that like animals and kids play. We would exclude babies, parents, people who don't like videogames and people who don't like animals. The game sends a non-violent message because you rescue animals. People will think it is cute other people will think it is bad. We want it to be profitable because we can make more with the more money we have.

Ms. Gregg: Do you think creators of media messages make media to gain power over people through ideas or gain profit through money?

Noah: I think they do because people buy the games and some of the money goes to them.

Profit and Power: Hamster in Candyland

Anna: Hamster in Candyland is about a hamster who travels in Candyland and has to collect 100 pellets of candy or hamster food to complete each level. Each level is completely different. In every three levels there's a different hamster. In the first three levels there is a teddy bear hamster and in the next other three levels there's a winter white hamster. We want to hopefully sell our game and get money, but don't worry it's going to be used for very good causes. But hold on I almost forgot about both hamsters have to find a new person or special candy to complete each level or else you have to restart each level. Also in some levels the hamster will meet a new friend such as a blind gummy worm. Thanks for listening hope you have a chance to play it. Buy Hamsters in Candyland. We want the game to be profitable because we are going to give to a great cause.

Profit or Power: Super Gaming

Isaac and Samual: It's going to show the audience the racers, carts, power ups, and more "Super Gaming" because we hope people like our videogames. Lights, boats, and more. We are including penguins, tigers, pandas, shark, goldfish, chicken, bunny, dogs, animal lovers, racers, and some children. People who are teenagers, animals, haters, and adults are excluded because they might not like our game. It sends a profitable message by raising money for the animals at the animal shelter. They will think that it's mean to just get money. Yes, so I can raise money for the poor. When start clicked you will pick your charity.**Different Experiences: Dragon Princess**

Grace and Amelia: Our videogame trailer is going to be about a prince who has to get past a dragon to save a princess. We would name our company Doodle games because our games would be kind of like doodles. We are going to do vivid colors and fast motion. We are including a prince, a princess, and a dragon. Our target audience is people who love fantasy. People who don't like fantasy won't play our game. We choose to exclude them because our game is fantasy. It shows a non-violent game by one person trying to save another person. Some people might say it is very fun others might say that it is boring and silly. We think it should be profitable so we can donate to the poor or needy. They might understand that there is a dragon and it's cool. They might understand that there is a prince and a princess and think that it's cute.

Grace: It's about you're a prince and there is a princess and a dragon and you have to save the princess and the world because the world is in danger.

Amelia: There's a prince, a princess, and a dragon and the dragon wants to keep the princess and he wants to keep her from the world. So he was protecting the world so now everything is going to go bad. The prince saves the princess and the world and when you get to the princess and save the princess you get 10 points and then you can change backgrounds. It looks really cool. The backgrounds- there's one in the woods, the desert, underwater, Taco Bell, tree, moon, nothingness, there used to be a happy face but Grace just deleted it because she knew it was funny and we also got a flower garden and that one looked really cool. We got a castle we used to have a beach but there was people on the beach so we couldn't do it anymore.

Grace: Well you have to save the princess so it's social justice by saving. I noticed that at first when Lilly and I thought of the idea I thought that could be kind of violent with the dragon but then I realized it was trying to save it and not trying to be violent.

Amelia: We are trying to save the world and someone's life well not their life but I guess. The children say some might think it's violent but we think it's social justice by saving. People who don't like fantasy are not going to like our game and they might think it's boring.

Branding: Shoot Out: Lobster Basketball

Ethan: Our game is about basketball because we like it. We would name our game Shoot Out because it matches our company name. We are going to have cool music and cool dunks. Basketball players from each team. People who like NBA and sports, boys and maybe girls will be included and like our game. It is a social justice game because it might encourage them to play basketball. If some people don't play basketball they might not get

it. Yes, we think it should be profitable so we can donate the money to charity. We are going to name our company sp because it stands for sport people. Our creative techniques will be loud cool music and cool dunks. We are excluding adults because they don't play videogames that much. Our game is nonviolent because it is a sport and there is no violence in sports. Like boys will understand how to play and some girls might not. Our game is also social justice because I want to get some money to donate to charity and the Philippines.

Liam: I thought it would be fun using animals because it would be funny because you could see fake animals playing. Like if you brought on a unicorn you wouldn't because it would be weird. It would make it odd let's just say a unicorn playing basketball it would not be funny. If it doesn't really match what you're doing then it won't really like work. We picked the cat and the crab because the cat looks like he is having a good time and the crab looks like he is guarding the other person. A unicorn looks like he should be doing something else.

Liam: Basketball. So once when the green flag was clicked you would be controlling your guy with the mouse so wherever the mouse goes you would follow. Then when you press the spacebar the guy would shoot and then we had a sprite on the basketball hoop so that whenever the basketball hit it, it would score two points and then just to make it funny there was two crabs that were trying to guard the guy so yeah that's how our game goes and yeah you have to score as many points as you can and we'll use ourselves like to time you to see how many you can make in like 30 seconds we could do that to make it more challenging.

Catch a Thief

Jonathan and David: There is a crime you are the cops chasing the thieves. The thief gets a taxi. The taxi takes the thief to a maze. You change to the thief. The thief runs through the

maze while the cops are chasing you. If you end up getting to the finish you win. If you don't you lose. We are the authors and the name of our company is danger racer. The creative techniques we are using are cool music, cuts, flashes, changing clothes, and characters. We are including people who like adventures games and the game gravity guy. We are excluding people who don't like adventure, loud music, and the game gravity guy. Different people might say the game is good, others might say it's boring. It's a social justice game because a cop is catching a thief. Our game would be profitable because we put a lot of time into this game.

David: It was about when we made a game where you are a cop and someone just stole something....A thief just stole something. Then you try and catch the thief but then he goes into a small maze. Then you turn into the thief and you try to make your way through the maze while the cop is chasing you. And if you get to the end it will change into a little small arena where you run through and the cop is chasing you.

Jonathan: It is about a cop who is trying to chase a thief in a maze and when you get to the end of the maze you are supposed to click the left button and then you can go into an arena. You are supposed to click the left key on the mouse and when you do that you should...You are supposed to go into an arena but I was trying to make like a countdown so if you stay in the circles for like five seconds you win but I couldn't do that so and uh we were also trying to do something with a taxi driver when uh the thief is supposed to touch the taxi driver he's supposed to go into the maze but we sort of had trouble with that so we didn't do it and then I think that should be it.

Media Authorship Awareness: Soccer

Noah and Tyler: Our videogame is about two soccer teams fighting for the championship. We named our company sf soccer. We would put cool shots. We would put soccer players, coaches, fans, and Refs. Kids and teenagers who don't like sports will not like our game. When somebody gets hurt the teammates help him. People will react differently by having different feelings. We would want to use the money for another videogame. Some people would like it cause not that many people in this school like soccer. Most people that like soccer would like it because they know how to do it and it would be easy for them. But new people who are just like getting to know soccer they probably would have a hard time.

Class Discussion about Stereotypes and Branding

Victoria: Yeah because people don't always do research on what people like until like after they make the game because sometimes it might not be a big hit if they are like trying to sell it to a bunch of girls and they put a bunch of stuff in it like dresses I say it's good and bad to brand because you don't always know what people like...You do but you still have to find out what they like so you can have a good game.

Jonathan: Maybe because you are trying to attract boys you include all stars in basketball games, football stars, hockey players. In a girl games you could include girls things that girls like. If you are not doing the stereotype you could include other things that girls might like.

Leah: Some people like if they want to make a game they might exclude some people just to make it perfect or they might add new people like to get a better game and like to have more characters.

Hannah: I learned that they exclude from some people because other videogame makers might have some stuff that people would like so they could make some stuff that the other people could have liked.

Evan: Yeah like I don't think they mean to exclude people but with like NBA and football games boys just like love sports - some might not- but the majority of boys like sports and I don't think they meant to exclude girls cause most girls don't really like sports. Some do but most don't really like sports and I don't really think they meant to exclude them I think they just made a game that they thought would be fun.

Evan: They create a different brand for some people. Say like boys some might like baseball so they make a baseball game and people who don't like sports will be excluded from the game and people that like sports will think it's cool.

Grace: Some people might be thinking they don't want to play because they are thinking it's weird or it's just not for them.

Amelia: Branding well in makeup games probably boys are excluded and girly girly are included. Tomboys are very discluded [*sic*] and adults definitely are excluded in that stuff.

Hailey: I guess I got a little more aware I'm really like I think that branding is important because it brings out what most of your games are going to be about. For example, if somebody's brand is funny game somebody is going to think their games are really weird and funny.

Victoria: Yes, because people put like stereotypes in the games like some people without knowing but sometimes it's intentional. Um, people say that girl have to like like dolls and like

dresses and the color pink but that's not what I like. I don't like dolls, I like blue and I don't like wearing dresses.

Jacob: Yeah cause like my sister watcher movies and they call people like names and stuff in videogames they don't really do that because in some videogames they don't really talk. Like in both of game like in Minecraft and in Pokemon you can type what you want to say. In Pokemon you don't say anything only the other people talk to you. It's really cool I like it.

Ms. Gregg: Do you think you became more aware of stereotypes in games?

Jonathan: Well yes because stereotypes are things like if you make a videogame girls you might think of dressing stuff like that or stuff that girls usually like unicorns stuff like that. If it's a nonstereotype and it's like a girl it could be like stuff boys do and if it's like a boy stereotype they might think football, basketball rock music things like but if you don't like them you don't like the game since you don't like like it.

David: Yes. It's when it's like it won't appeal like a violent videogame with zombies and stuff like it might not appeal to girls...more to boys. Because girls don't really like zombies its like they look ugly they're hideous they're bleeding all those things.

Allison: Yes, because stereotypes in our game it does appeal a little bit more to girls but it is not completely for girls. It's not like Magic Barbie or anything.

Leah: I think stereotypes are like a Girl or boy trying to be mean saying like you play like a girl. The boy wouldn't feel good because the other boy is being really mean to him. In some videogames there are like maybe some games that have violence or something like that.

Hannah: A stereotype is sort of like how…uh, I remember, oh yeah. I sort of remember but not that much. There are good stereotypes and bad ones. I learned to only do good stereotypes. You shouldn't do bad stereotypes because they could hurt people. A good stereotypes is going up to someone who is sad and going up to them and asking them to play with you and a bad one would be like making fun of someone because of the way they talk.

Evan: Stereotypes are like using someone's race in a bad way. I don't know if like a Mexican person is on the sidewalk selling tacos like that's the stereotype. A taco is a Mexican meal but all Mexican's aren't on the sidewalk selling tacos. It's mean to people in Mexico and Mexican people because you are making fun of their race.

Owen: Yeah, cause there are some things out there that will hurt people's feelings saying something that hurts people's feelings and stuff.

Grace: Some stereotypes are in videogames and I am aware when I see it. If like maybe like you are doing something to be brave and there was like a boy and a girl and the boy says to the girl you can't like do it because this is a man's job.

Amelia: I sort of knew what they were before and more like aware of stereotypes there's a lot of games with stereotypes and it's kind of offensive to girls and boys because like once I was playing a game with someone with boys someone came up to me and said you're not allowed to play this it's only for boys so it's kind of like yeah.

Joshua: I used to not know what a stereotype was and now I know what it is. Saying bad stuff about people when they aren't and saying bad stuff on yard.

Anna: A stereotype is when somebody is being mean to someone for a reason because of how they act or how they look or because of their skin color. Such as if someone is being mean to someone because a person has white skin and the other person has darker skin. They're being to them because they have dark skin that's a stereotype and they're being mean to them for a reason. They're being mean to them because they want to because for a reason and here's another example. If a girl has brown hair and all of her friends have brown hair and now another girl has blond hair. She only wants to be friends with brown haired girls. It's a stereotype because she's not being friends with the blond haired girl because she's only friends with brown haired girls so a stereotype is someone being mean to someone for a reason it's not like just because. It's being mean to them for how they look and how they act.

Michael: A stereotype is when someone is saying mean stuff to you if you like get out of knock out and stuff and they say stuff like you're a bad shooter.

Hailey: A stereotype is something people use in videogames, media, and music because that's what they think that's what it is supposed to be like. For example, people think girls are all about pink but some girls are really into black and dark things. Some girls are feminine and pretty and some are more masculine. Like in movies everyone thinks girls are so valley and pink and blingy but not all girls are like that.

Ms. Gregg: Can you give some examples of jolts?

Hailey: Like sometimes in a videogame when you press a button and then you go like really fast.

David: When you're in a haunted house and somebody likes jumps up.

Evan: You know in videogames when you fall off a cliff.

Logan: Like a volcano, like erupting.

Ben: When the train stops suddenly.

James: When you do film cuts I think I know what you mean. Let's say you are in a videogame and you jump into a hole and then it goes all black and then you are like in the hole then you enter another world.

Tyler: Most of my PS3 game like my racing games mostly like every game they have once you get in a tunnel it gets darker and when you come out its like real life when you come out it just flashes.

Class Discussion about Jolts, Creative Methods, and Addiction

Joshua: Yes, I think people can get addicted to videogames. I think they can't stop playing the game because it can be fun, it can have really cool music, or you can just really like the game. Addiction is when you like something a lot and you can't stop doing it. An example is when you smoke, it is usually really hard to stop. A way you can stop is by going to hypnosis or by throwing away the material.

Audrey: Yes, I do think they can get addicted to it because they might be playing it 24/7.

Charlotte: I think they can because there are kids in this world that just can't stop playing and they love the game so much they would want to play it all day long. They can't stop playing because they love it so much.

Jonathan: Yes, I do because if it is a long game with like 150 levels and you beat 10 in a day so you just want to keep playing till you beat the game and when you beat the game and there

are 50 bonus levels you want to keep playing and if there is a two of that game and there is 300 levels and 100 bonus levels you just want to keep on playing and then they make a three and there is 450 levels and 150 bonus levels you just want to beat that and so on.

Leah: I think people can get addicted to playing a videogame. I think they can't stop because they like it so much that they can't stop. And they are so addicted to it. Some kids can play for like about two hours. I think that's not good for your eyes or your brain.

Elijah: Yes, I think children get addicted to videogames. I think that children can't stop playing videogames because they are fun.

Hannah: I think that children can get addicted to videogames because they use violence and to some kids violence catches their attention and then they cannot stop playing the videogame.

Grace: I think that some children do get addicted to videogames. I think that these children can't stop playing because once they start to play them they start to really like them they just can't stop playing the game.

Allison: I think that any child can get addicted to any videogame. They might not want to stop playing the game because it might be the type of game they were always trying to get. It might be that it is the type of game that they love and that they might be addicted to the jolts.

Class Discussion about the Definition of Media

Daniel: Videogames.

Natalie: I thought you wanted a definition. It's any types of technology like movies, technology, news, newspaper, Facebook, Twitter, security cameras, film. It's the equipment

you use iphone, Scratch program. There are jobs in your classroom. Jobs in media done by people- this is the end product. Photographer, journalist who writes newspaper articles, computer programmer, engineer, director of a play, producer looking at the product, DJ, announcer.

David: Cameraman, celebrity, artists, animator, stuntmen. We were creating media products.

Jonathan: My daddy [and mom work for media companies at different types of professional jobs.]

APPENDIX E

Student's Descriptions of Their Scratch Videogame Trailer Projects

Figure E-1. Student-created Example of a Nonviolent Videogame Trailer, Goober Race. This is a screen view of a student project illustrating a race between animals and the commands the creators designed to be used to play the game. Adapted from Scratch project created by Victoria and Olivia, December 2013. Used with permission.

Goober Race Videogame Trailer: Victoria and Olivia

Goober Race is a videogame about three children from different schools who compete in a race (See Figure E-1). Goober is an alien kid from Alien Monster Universe School. Goober is competing in the race against Leon the mouse from Zoo School. Goober races in a car against Leon who races on a flying rug. An adult referees the race, Quackers the Duck, so the competition will be fair. The children considered the game to be non-violent because there is no

physical violence and a social justice game because the referee was ensuring that the race would be fair.

Figure E-2. Student-created Example of a Videogame Trailer, Based on Popular Media, Fox Song. This is a screen view of a student Scratch project created before the intervention mimicking games available in popular media. Commands indicate how the game works for players. Adapted from a Scratch project created by Ava and Abagail, December 2013. Used by permission.

Fox Song Videogame Trailer: Ava and Charlotte

The Fox Song is a videogame about a fox and his band of dancers who sing a popular Fox Song video from You Tube (See Figure E-2). Fox and his two female backup singers dance and sing until they get scared with stage fright. The game player must grab fox in time before he runs off the stage from fright. The child considered the game to be non-violent because there is no blood or physical violence in the game.

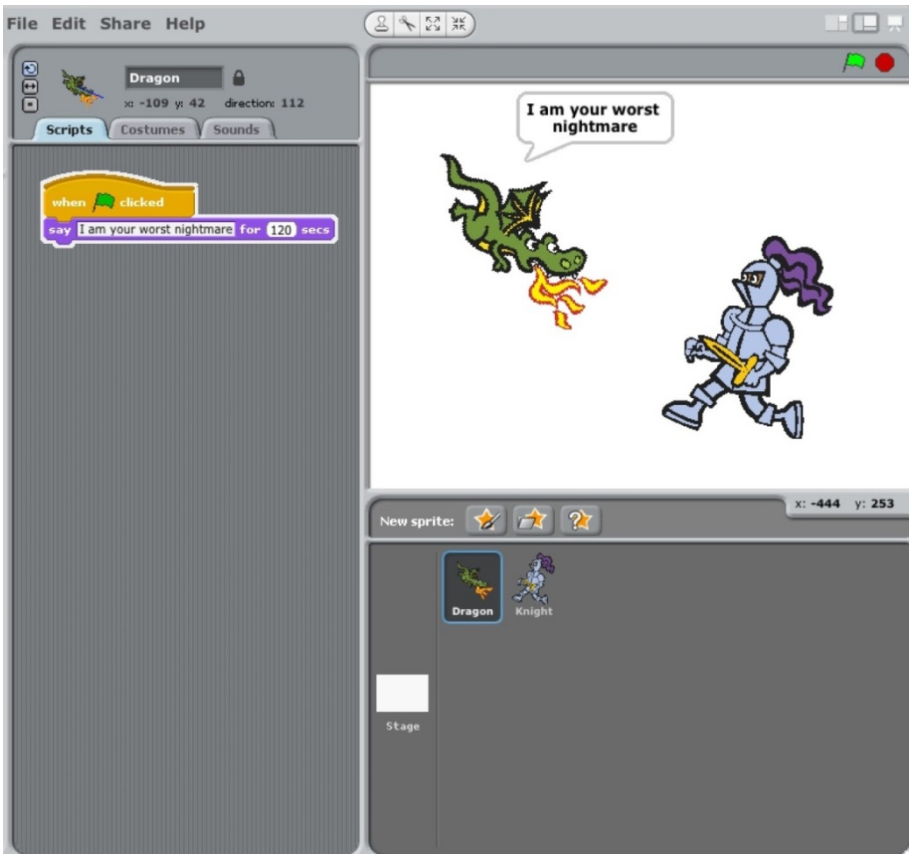

Figure E-3. Student-created Example of a Violent Videogame Trailer, Dragon and the Knight. This screen view of a violent videogame created before the intervention is tpical of the idea that destroying the enemy is part of the fun and excitement of a videogame. Adapted from a game created by Noah, December 2013. Used with permission.

Dragon and the Knight Videogame Trailer: Noah

Dragon and the Knight is a videogame about a knight name Sir Bob who is on a mission to kill a dragon that embodies his worst nightmare (See Figure E-3). The child considered the game to be violent because there is killing.

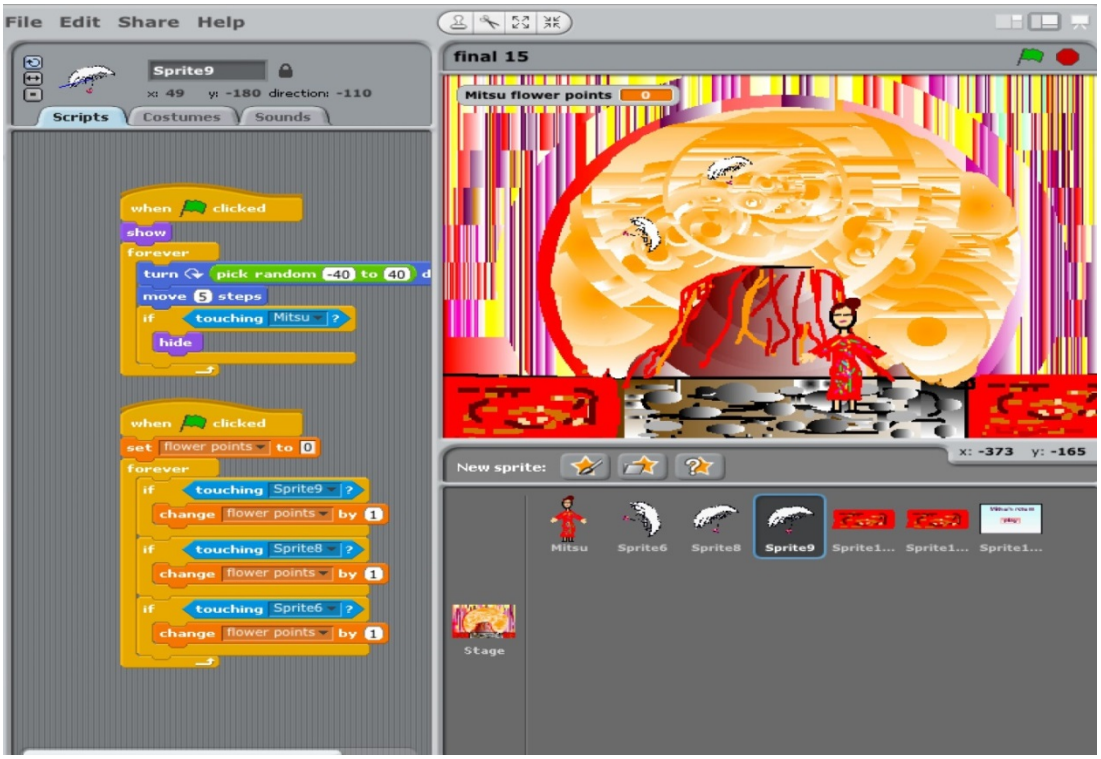

Figure E-4. Student-created Example of a Nonviolent Videogame Trailer, Mitzu's Return . This is a screen view of a videogame trailer in which Mitzu, the only character saves the world by picking flowers. Adapted from a post-intervention Scratch project by Allison, December 2013. Used with permission.

Mitzu's Return Videogame Trailer: Allison and Nathalie

Mitzu's Return is a videogame about a Japanese girl who is trying to save the world (See Figure E-4). A volcano has erupted that will destroy everything. Mitsu's job is to heal the world by catching all the flowers before they fall into the lava. If flowers fall into the lava the player loses point. If Mitsu steps in the lava she can die. The children considered the game to be a social justice game, because she is healing the world and preventing violence from happening.

Figure E-5. Student-created Example of a Videogame Trailer, Torpedo Dodge. This is a screen view of postintervention Scratch project with torpedoes firing at a person, considered by the students nonviolent because no one is killed. Adapted from project by Joshua and Daniel, December 2013. Used with permission.

Torpedo Dodge Videogame Trailer: Joshua and Daniel

Torpedo Dodge is an action videogame about a diver who has to dodge torpedoes in the water (See Figure E-5). The game is an underwater form of dodge ball. The children considered the game to be non-violent, because if the torpedo hits you nobody gets hurt or dies.

Figure E-6. Student-created Example of a Violent Videogame Trailer, Paintball War. This is a screen view of a post-intervention student Scratch project which students considered nonviolent because there was no killing. Adapted from project by Jacob, December 2013. Used with permission.

Paintball War Videogame Trailer: Jacob and Ben

Paintball War is a videogame about two children who are great at paintball that are playing paintball when suddenly a portal appears and monsters come out and start destroying their cities (See Figure E-6). The kids' job is to destroy the monsters and retrieve a red thunderbolt to save the city. The children considered the game to be non-violent because they were only touching the monsters with their paintball guns instead of shooting them.

Figure E-7. Student-created Example of a Nonviolent Videogame Trailer, The Monkey King. This is a screen view of a post-intervention Scratch project in which helping is the theme. Adapted from project by Michael, December 2013. Used with permission.

The Monkey King Videogame Trailer: Michael and Logan

The Monkey King is a videogame about a monkey that is getting bananas for a king (See Figure E-7). If the monkey brings enough bananas to the king the king thanks him and builds him a house with gold where the king and the monkey can live happily ever after. The children considered the game to be non-violent because there is no fighting, killing, or hurting.

Figure E-8. Student-created Example of a Videogame Trailer Designed for Profit, The Rainbow Group. This is a screen view of post-intervention Scratch project in which animals dance. Students intend to contribute profit made from the game to charity. Adapted from project by Victoria, December 2013. Used with permission.

The Rainbow Group Videogame Trailer: Victoria and Ava

The Rainbow Group is a videogame about a group of dancing animals who dance and sing to raise money for charity (See Figure E-8). The children considered it to be a social justice game because the animals were raising money for animals that were homeless.

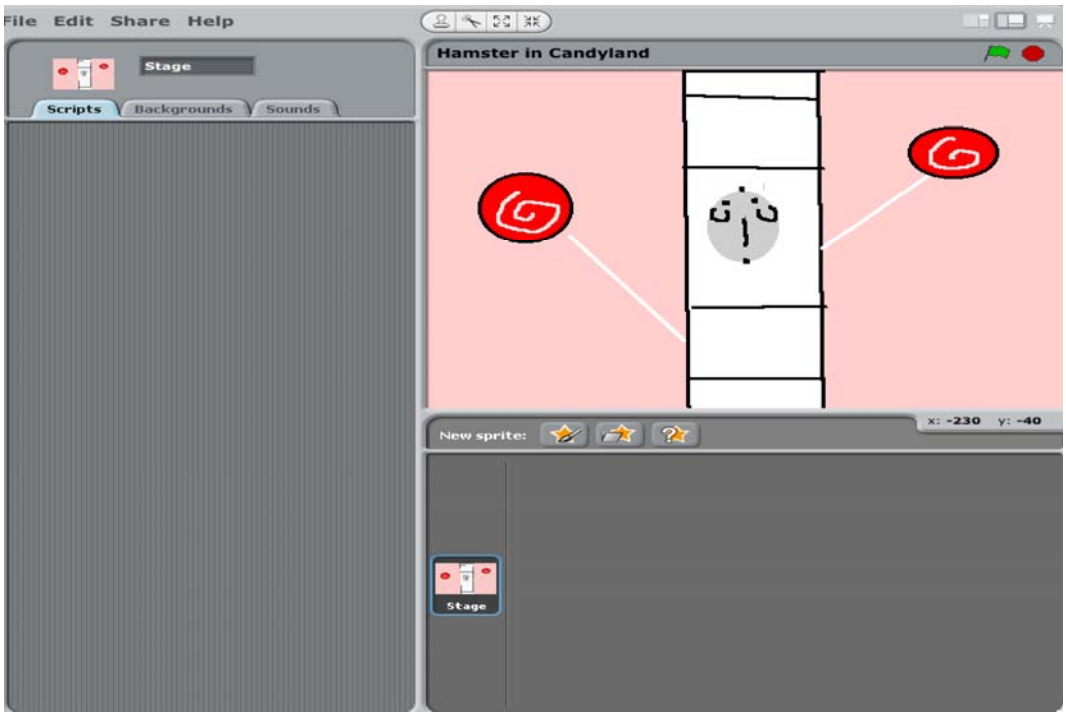

Figure E-9. Student-created Videogame Trailer to Generate Profit, Hamster in Candyland. This is a screen view of a postintervention Scratch project from which students hoped to gain profit to donate to charity. Adapted from project by Anna, December 2013. Used with permission.

Hamster in Candyland Videogame Trailer: Hailey

Hamster in Candyland is a videogame about a hamster that's travelling in Candyland that has to find at least a100 pieces of food pellets or a 100 pieces of a special candy at each level (See Figure E-9). Every level he needs to find either a special friend in a shop like another hamster or a special kind of candy that's hard to find. At different levels Candyland is decorated for different holidays like Christmas, Halloween, and the Fourth of July. You win in the last level when you meet Bella, a winter white hamster. The children considered it to be a non-violent game because no one was getting hurt or fighting.

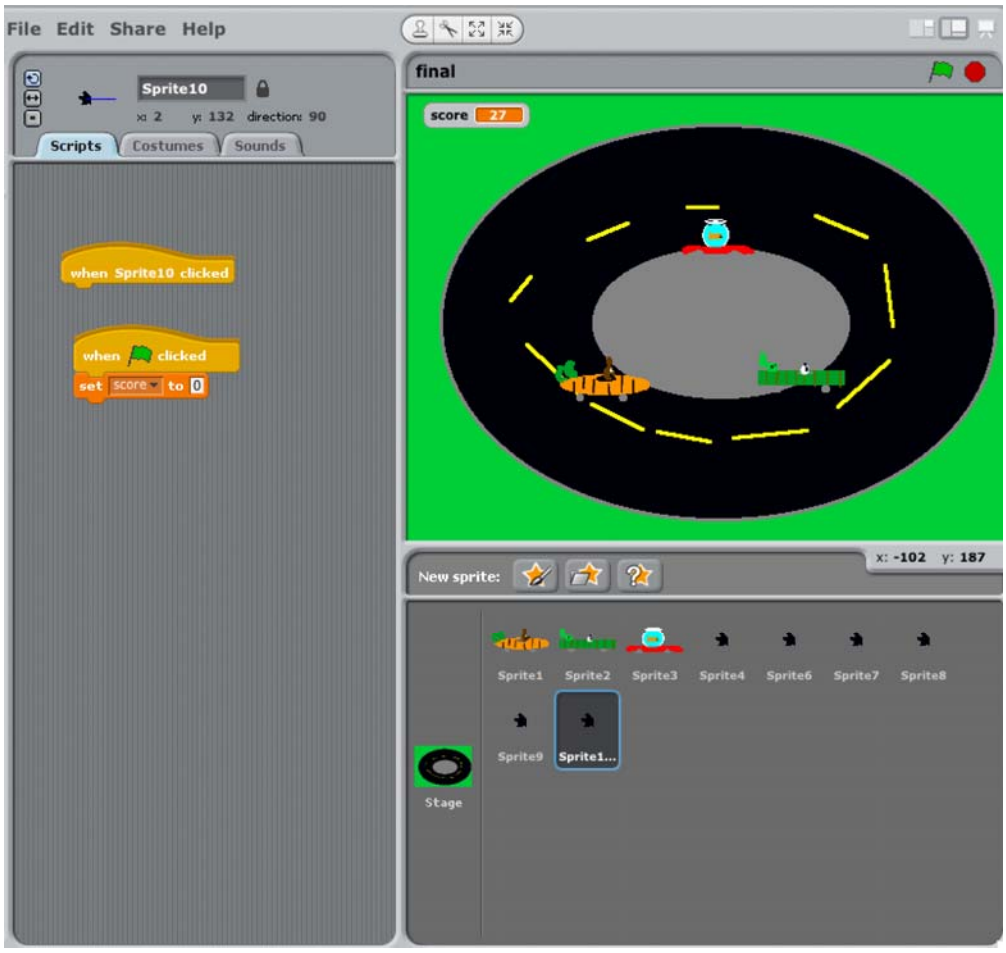

Figure E-10. Student-created Example of a Videogame Trailer to Generate Profit, Super Gaming. This is a screen view of a student postintervention Scratch project which would enable the user to donate to a favorite charity as part of the sign on process. Adapted from project by Evan, December 2013. Used with permission.

Super Gaming Videogame Trailer: Isaac and Samuel

Super Gaming is a videogame about animals competing in a professional car race (See Figure E-10). The child considered the game to be social justice because when you start the racing game you can have the player pick a charity to donate to when the game starts.

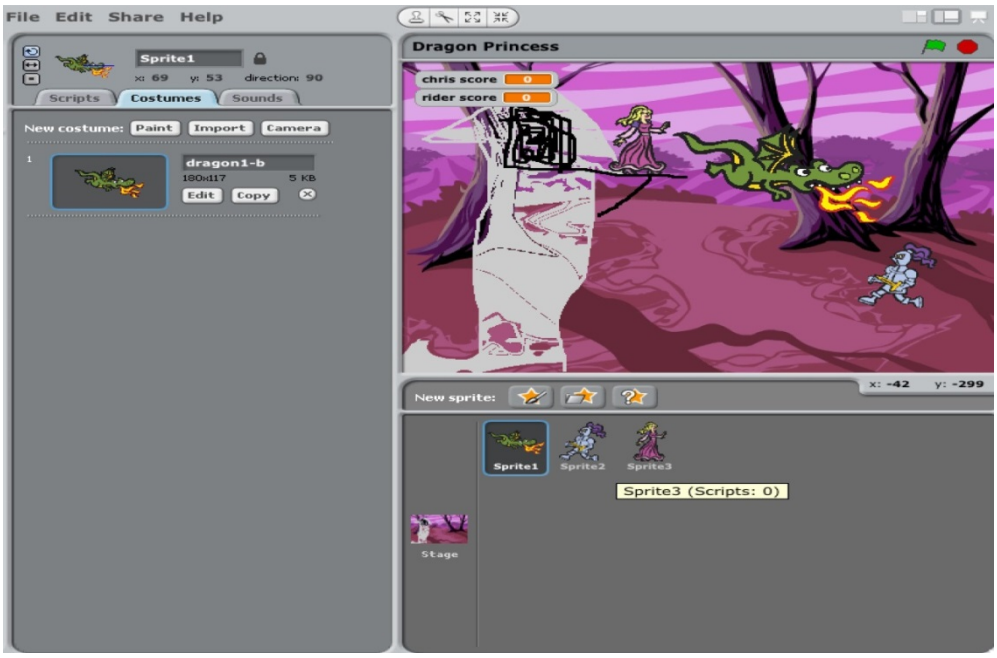

Figure E-11. Student-created Videogame Trailer as an Example of Different Reactions to Videogames, Dragon Princess. This is a screen view of a Scratch project created to attract people who enjoy fantasy, indicating student awareness of target marketing. Adapted from project by Grace and Amelia with permission.

Dragon Princess Videogame Trailer: Grace and Amelia

Dragon Princess is a videogame about a prince who has to get past a dragon to save a princess (See Figure E-11). The children considered the game to be social justice because the prince was saving the life of a person by killing the dragon.

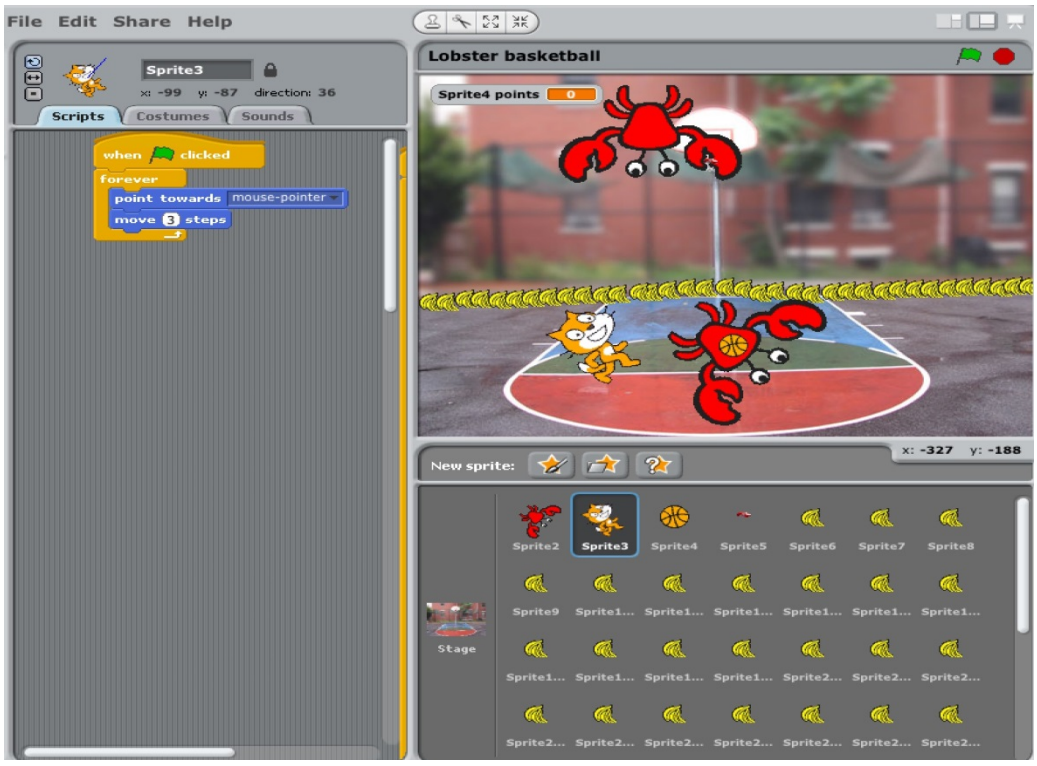

Figure E-12. Student-created Videogame Trailer as an Example of Branding, Shoot Out Lobster Basketball. This is a screen view of a student Scratch project illustrating the concept of branding using the NBA model of basketball. Students designed the game with lobsters playing basketball because they thought that would be amusing. Adapted from project by Ethan and Liam, December 2013. Used with permission.

Shoot Out Lobster Basketball Videogame Trailer: Liam and Ethan

Shoot Out Lobster Basketball is a game about a cat and two lobsters that are playing basketball (See figure E-12). The object of the game is to shoot the ball into the hoop and hit hidden objects that appear when the basketball hits the hoop. The children considered the game to be a non-violent game because it was about sports.

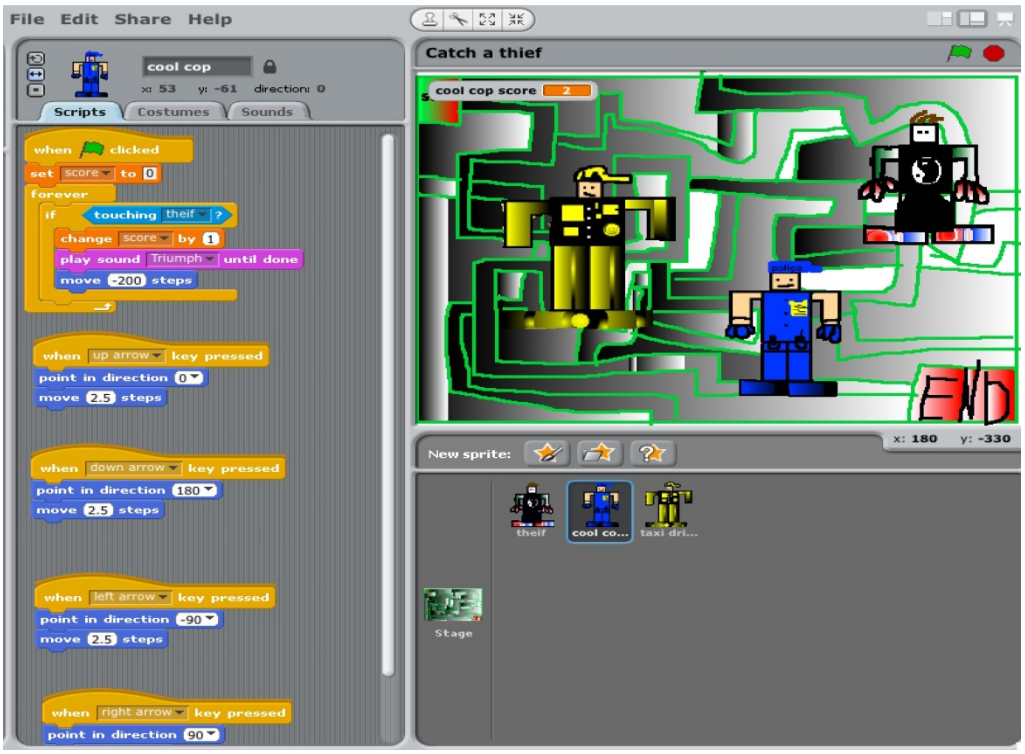

Figure E-13. Student-created Videogame Trailer as an Example of Use of Creative Techniques, Catch a Thief. This is a screen view of a student Scratch project which included jolts to create excitement. Adapted from project by Jonathan and David, December 2013. Used with permission.

Catch a Thief Videogame Trailer: Jonathan and David

Catch a Thief is a videogame about cops chasing thieves who committed a crime. The thief gets in a taxi and takes it through maze (See Figure E-13). The thief runs through the maze while the cop chases him. As a player you can be either the character of the cop or thief. If you are the thief and you get to the finish line of the maze you win. If you are the cop and you catch the thief you win. The children considered it to be a social justice game because you were doing social justice by catching a criminal.

Figure E-14. Example of Student-created Videogame Trailer, Piggy Ghostbusters. This is a screen view of a Scratch project showing the students' design of movement and sound and other design options. Adapted from a project created by Hannah and Audrey, December 2013. Used with permission.

Piggy Ghostbusters Videogame Trailer: Hannah and Audrey

Piggy Ghostbusters is a videogame about pigs that are Ghostbusters. They are always ghost busting (See Figure E-14). Every time they suck up a ghost they gain a point. If too many ghosts get them gummy worms fall from the sky. The player tries to get as many ghosts as they can. If the player scores 10 points they win. The children considered the game to be a social justice game because the Ghostbusters were helping people to get ghosts out of their house.

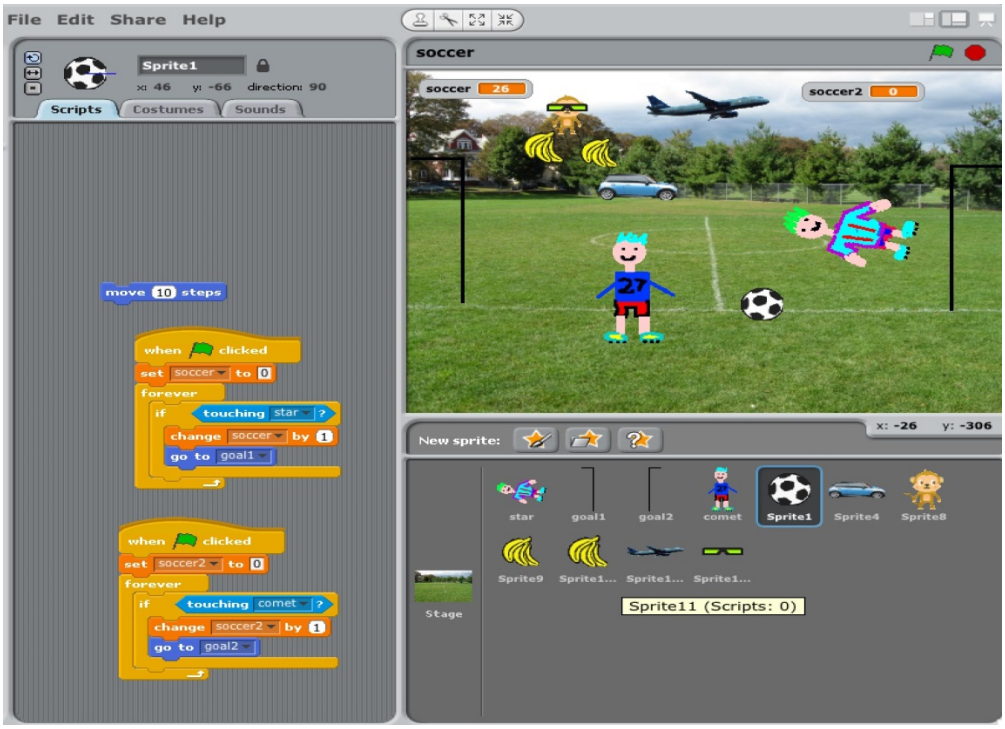

Figure E-15. Student-created Videogame Trailer as an Example of Student Media Awareness. This is a screen view of the post-intervention videogame trailer Soccer showing original characters and actions not reflecting commercial videogames currently popular with children. Adapted from videogame trailer created by Tyler and Noah, December 2013. Used with permission.

Soccer Videogame Trailer: Noah and Tyler

Soccer is a videogame about two soccer players trying to score goals in a soccer field (See Figure E-15). One player tries to get a goal while the other player blocks them. There is a referee to make sure the game is fair. The children considered the game to be non-violent and social justice because there are no explosions guns, shooting, or blood and the game is just a friendly soccer game. At the end of the game characters shake hands and they do not argue.

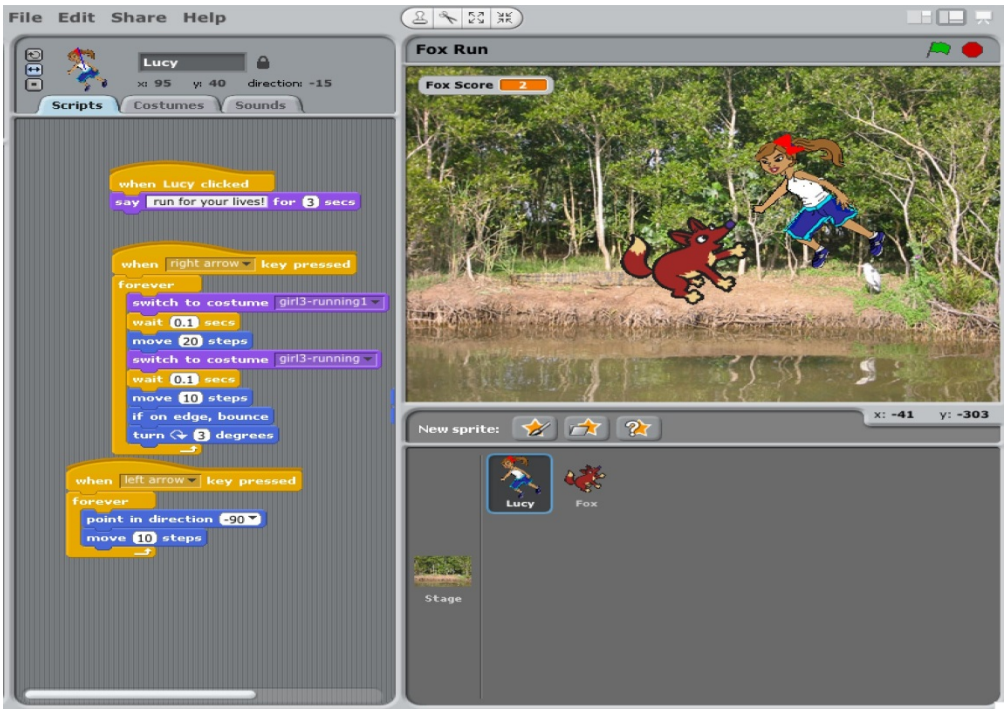

Figure E-16. Student-created Videogame Trailer as an Example of Scratch Coding, Fox Run. This is a screen view of a student project, showing characters and action commmands designed in Scratch coding, and options for actions to be performed. Adapted from Olivia's and Leah's project, December 2013. Used with permission.

Fox Run Videogame Trailer: Leah and Olivia

Fox Run is a videogame about a fox trying to get the girl (See Figure E-16). When the fox gets the girl the fox gets a point. The girl must run away from the fox. The children considered the game to be non-violent because the fox is just trying to touch her like in a game of tag and she is not trying to hurt the fox either.

Figure E-17. Student-created Videogame Trailer, Monster Football. This is a screen view of a Scratch project showing commands for moving the characters and scoring in a videogame trailer. Adapted from a project created by Evan and Owen, December 2013. Used with permission.

Monster Football Videogame Trailer: Evan and Owen

Monster Football is a videogame about basketball players and a football player that are running away from monsters (See Figure E-17). The monsters are bouncing off walls trying to get the player. The football player tries to run away from the monsters. If a monster gets the football player the monster gets a point. Points in the game are bad for the football player. If the monster gets too many points the game is over. The children considered this to be a non-violent

because it is a fantasy game that will never happen, because monsters aren't real and they would never chase a football player in real life.

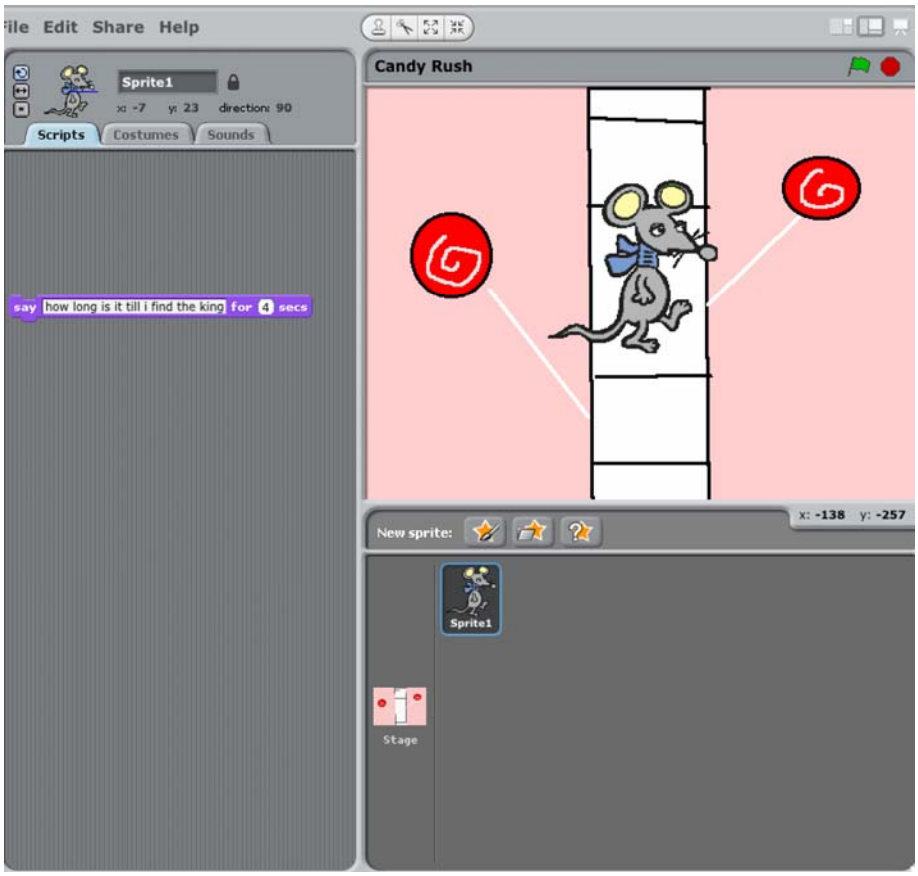

Figure E-18. Student-created Videogame Trailer, Candy Rush. This is a screen view of a Scratch project using animals as main characters. Adapted from a project created by Anna and Charlotte, December, 2013. Used with permission.

Candy Rush Videogame Trailer : Anna and Charlotte

Candy Rush is a videogame about animals that get stuck in a different dimension (See Figure E-18). On the first level they get stuck in Candyland. The animals must follow a trail of different types of fruit to help each animal find their way out of the different dimensions. On the first level there's a pig, then there's another pig, and a then there's a hamster. When they are in different dimensions there's angry gummy bears and sour patch worms chasing them. The characters are stuck in a different dimension like in the movies and the universe gets all messed up. The children considered the game to be non-violent because the game does not contain

violence like weapons or treating things. The player just has to help animals get out of dimensions for fun so there is no violence.

APPENDIX F

Interview Questions

Violent, Non-violent, or Social Justice Videogame Categorization

1. What is your videogame about?
2. How is your game a nonviolent or social justice game?

Media/Author Awareness

3. Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

Violence Awareness

4. Do you think you became more aware about violence in videogames?

Branding/Inclusion & Exclusion Awareness

5. Do you think you became more aware of stereotypes in games?
6. Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

Marketing Awareness

7. Do you feel you became more aware of marketing in videogames?

Different Experience Awareness

8. Do you think you became more aware about how different people experience a videogame?

Symbolic Interactionism and Scratch Programming

9. Do you feel it was easier to create, program a game with a partner?
10. Would you like games or creating games to be a part of your learning in school?

APPENDIX G

Scratch Videogame Project Questions

Violent, Non-violent, or Social Justice Videogame Categorization

1. What is your videogame trailer about?
2. How does your game send a powerful nonviolent or social justice message?

Media/Author Awareness

3. What would you name your videogame company and why?

Different Experience Awareness

4. How does your game send a powerful nonviolent or social justice message?

Branding/Inclusion & Exclusion Awareness

5. Who and what are you including in your videogame? What target audience are you trying to appeal to?
6. Who would not like your game? Why did you choose to exclude them?

Creative Media Techniques

7. What jolts or creative techniques are you using to attract your audience?

Profit/Power

8. Would you want your game to be profitable why or why not?

APPENDIX H

Transcription and Analysis of Interviews

Interviewer: Ms. Gregg

Student: Victoria

00:00:00 What is your videogame about?

00:00:04 Olivia was my partner and in the paragraph we wrote that they were a group of friends trying to get other animals.

00:00:09 OK

00:31:00 When we got to the computer lab a few minutes later it was kind of difficult to figure out how we were going to set it up so instead we did like a group of dancing- a dance group to raise money for the poor and homeless so they could put on the show so the money that they got they would give to charity.

00:33:37 Do you think that there are other ways to help with social justice besides just giving money and stuff?

00:33:37 Yes, uh social justice there's um you can like say there's like you go to a country or something and you see someone being treated bad- a black person be treated bad. We would stand up for them and say why are you picking on them if you don't want this to happen to you.

00:02:48 Can I still tell about my game?

00:02:48 Sure

00:02:49 Um so there were a lot of different scripts that we tried out to see if they would work but then we....So we tried different scripts out and we finally got a script that would work so um so we added different characters we drew all of them pretty much. We drew all of them...we

designed...we put fake confetti all around the stage then we made everything change color and so we called them the rainbow group since they would change color. And then we also put some sound together. Our isn't really like a game it's kind of like a skit more than a game

00:04:37 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:05:00 Yes. Before I didn't know what media was but then I figured out it was kind of like advertising and technology.

00:05:26 Did working in Scratch with a partner help you to create and program your Scratch project?

00:06:00 I say it was a lot better being with a partner than working alone. Because if you are working alone you don't always get a better job. You don't always have better stuff because sometimes you need two people to think on it to get better ideas. So yeah I like it better You don't really get stressed when you're working on it with a friend. You get better ideas.

00:07:30 Do you think you became more aware about um violence in videogames?

00:07:31 Yes, because I still knew that there was violence in videogames but I still got to see different videogames and I don't really play violent videogames. I just might have some because my dad works at a software company so he gets a bunch of games so but I don't really play it.

00:08:11 What do you think about the violence in the videogames do you think kids get effected by it or not?

00:08:12 Well sometimes it depends on what the game is because like if you like say you're playing Halo and or like you are playing an army game trying to save the country it wouldn't

really effect you that much because you're trying to save them so I would say you're trying to get better at it instead of trying to be violent.

00:09:06 Do you feel you became more aware of marketing in videogames and like selling stuff?

00:09:10 Yes, because I sometimes get to go to work with my dad but I don't really get to but I barely get to see what he does and with the marketing so I did find out more through this.

00:09:29 Like what kind of stuff did you find out?

00:09:29 I found out about the media-that's the first thing. I found out about like what things do and what you have to do to get it. I thought that there is power if you want power or if you want the money.

00:09:57 What do you mean by what things do?

00:09:58 Like what you have to do to get a videogame going.

00:10:46 Do you think you become more aware of stereotypes in games?

00:11:00 Yes, because people put like stereotypes in the games like some people without knowing but sometimes it's intentional. Um people say that girls have to like like dolls and like dresses and the color pink but that's not what I like. I don't like dolls, I like blue and I don't like wearing dresses so....

00:11:34 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:12:24 Yeah because people don't always do research on what people like until like after they make the game because sometimes it might not be a big hit if they are like trying to sell it to a bunch of girls and they put a bunch of stuff in it like dresses I say it's good and bad to brand

because you don't always know what people like...you do but you still have to find out what they like so you can have a good game.

00:13:52 When you are playing games have ads ever popped up?

00:14:02 Like if I see an advertisement that might look cool or something I will go to that page and then and look at what it was before I would go like oh yeah let's download this cause there's ads popping up but it's also really annoying when they just pop up and you're like I just wanna play my game I don't want to just buy this stuff then if you want all the ads to stop you have to pay money or then you have to download or like sign a waiver or something.

00:15:12 Would you like games or creating games to be a part of your learning in school?

00:15:13 Coding games would be fun. But sometimes you like play games it's like the only time you get to like stop learning something like if you like it I guess you should have it too like if you want to learn if you like it or if you need a practice. I don't like how it's always constant learn, learn, learn 'cause games are like the only time that kids don't have to learn.

From Victoria's interview there are positive female stereotypes. She can identify violence, marketing, and the five principles of critical media literacy. She didn't consider violence in Halo to be violence because you were helping people. Her dad works at a software company so she may have more experience than most. She is aware of marketing and branding to girls. She wants games to be a fun time for escape. Even with her background the word media was a foreign word. Social justice is listed as giving or in another country. Although Nelson Mandela had died the day before the interview. She experimented with her partner on creating complicated coding scripts.

Interviewer: Ms. Gregg
Student: Jacob

00:00:00 What is your videogame about?

00:00:07 When I was in my room I had a sketchbook that I wanted to draw in. I was drawing these paintball guys and I was drawing like these scary demons and there are just little kids that have to get this thing called a red thunderbolt that saves their city from the monsters that came through a portal. I don't know how but I just made that up and they are terrorizing the city and the king of the thunderbolt is a devil and that's how I started it and then William and I were going to do something else so then I told him about this cause like we didn't know what to do so I told him about the thing that I was drawing. I don't think we're quite finished with the game because we didn't get to do like our title screen and stuff but I think we did good and it was really cool. On the storyboard I wrote the pictures of the trailer and I think that's good. I think I did a great job.

00:03:00 How is your game a nonviolent or social justice game?

00:03:04 Well I have to say it's nonviolent cause like we do have paintball guns but they don't shoot anything. They just touch the monster and the monster touches us so it's not really that violent so I was thinking about that and we didn't figure out a way to shoot at people that probably would be too hard for us. I think it's easier without shooting each other with the monster just touching the character.

00:03:20 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:3:25 So when you think about it it's a lot of work....Well every job you have to work and I guess I know how it is to work hard in like a job.

00:04:00 Did you know that there was like that much work in videogame jobs before?

00:04:03 Cause I don't build videogames but I play a lot. Marcus person is an author of a videogame I think he's the creator of Minecraft but I don't play Minecraft that much anymore. I have no idea who created Pokémon 'cuz that is the thing I like the most but I don't know who created them I really don't. I know Nintendo and Game Freak and those things but I don't know who like started it.

00:05:00 Do you know what media is?

00:05:04 Yes, media is like things that you can save and share. That you save and like sometimes that you don't want to share just like memory you can send emails and you can send something weird like you download a video from the Internet and then you like email a video to someone then you can't really take it off there unless you get to the computer.

00:06:00 Do you feel you could be an author of media?

00:06:04 Yes, I can be an author of videogames because I am very skilled with videogames. I think I'll be able to create a videogame and I think I got the right piece of brain for it. I think people like my games

00:06:25 How did you feel about working with a partner on the game?

00:06:30 Partner it was fun. You can play two people. Ben's favorite color is yellow and my favorite color is blue so I made my guy blue and his is yellow so then you could pick your yellow or blue guy I have to say and if you do multiplayer then you can pick like a guy and then

you can pick someone else. Like one person can do wasd and the other person can do up arrow down arrow left and right arrow

00:07:42 Do you feel programming was easier with a partner?

00:07:42 I think it was really fun drawing our characters cause I found this guy that was like a walking boy sprite that I found and I colored him black and put like goggles, paintball gun, and then so I thought it would be better not to shoot weapons because some kids might not like that because there's a monster is like really really funny like for like a little kid to see so I wouldn't want to like shoot it if there is like a little kid that wanted to play a game.

00:08:42 Was there any time it was challenging to use the Scratch programming code?

00:09:00 It wasn't that challenging for the "wasd" and the up and down arrow but it was a little confusing cause we had to use like the code book like there is the point 90 degrees and negative degrees so it was a little complicated zero degrees , 180, 90 , -90 but I think the mouse pointer thing was really cool cause it follows the mouse. I think I did a great job.

00:09:27 Do you think you became more aware about violence in videogames?

00:09:28 Yes, because my friends play violent videogames like at Michael's party they were playing like all the games with blood and I was just playing Halo cause I don't like blood so Halo you can't see that much blood so I don't even know if there's blood. It was really fun when I played it because I kept killing Dave and Ben. It was really fun.

00:09:43 Do you think those games would make kids do violence in real life?

00:09:44 Maybe like movies like Star Wars because people do like shoot stuff in like Star Wars and maybe yeah like in army movies, action movies. I think yeah some people would.

00:10:37 Do you think you became more aware of how games are used to market or sell stuff?

00:10:40 Yes, I think I know why people do game for free and for money because for money they are like better programs and they are not all glitchy and laggy like the other games. But some games if they are connected to the Internet you could get like messed up because you could move away from the spot for the Internet and it could like freeze but yeah the games that are free are not as good as the ones that are paid for.

00:11:01 Do you think advertisers try to sell kids stuff while you are like playing games?

00:11:08 I think some people like when I was playing Minecraft I really wanted it for free and then I saw this ad I Gametube that said Minecraft for free but I showed my mom and I told her and she told me to go to Minecraft.net and I was like oh I almost got the wrong one and I didn't get it luckily.

00:11:16 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:11:30 I think you should include as many people that are as talented as you can so that they can like help you out and like make it better then it was just by yourself. I actually wouldn't really exclude anyone unless they're not talented and they don't even know how to program or maybe I can maybe I can teach them before I like hire them.

00:12:00 Do you think you become more aware of stereotypes in games?

00:12:11 Yeah cause like my sister watcher movies and they call people like names and stuff in videogames they don't really do that because in some videogames they don't really talk. Like in both of game like in Minecraft and in Pokémon you can type what you want to say. In Pokémon you don't say anything only the other people talk to you. It's really cool I like it.

00:12:43 Would you like games or creating games to be a part of your learning in school?

00:13:00 Yeah because I think people should learn how to do it because the video that you showed us with the computer teacher everyone should learn how to program the computer because all the people on that video like it I think more people would like it because they are like famous people like basketball players, singers, and like really famous people.

00:13:12 Do you think you became more aware about how different people experience a videogame?

00:13:26 I think so. I know some people don't like videogames because they can hurt your eyes and probably in like 2050 or something they will create things like glasses or something that can protect your eyes or they can make the games less so they don't like hurt your eyes.

00:13:30 Why do you think people play violent videogames?

00:13:37 I think like some people like violence. I like violence in certain games like Star Wars and stuff but some people don't like it because it is kind of scary and because it could be sad.

Jacob likes violent videogames. He is skilled at programming. 5cml's and violence addressed here. He sees violence as fun and challenging and games for sale as part of a good game selling in the product world. People may or may not react to game violence. Communication, not isolating people, working in community, and understanding violence and its effect on the other.

Interviewer: Ms. Gregg
Student: Jonathan

00:00:00 What is your videogame about?

00:00:10 It is about a cop who is trying to chase a thief in a maze and when you get to the end of the maze you are supposed to click the left button and then you can go into an arena. You are supposed to click the left key on the mouse and when you do that you should. You are supposed to go into an arena but I was trying to make like a countdown so if you stay in the circles for like five seconds you win but I couldn't do that so and uh we were also trying to do something with a taxi driver when uh the thief is supposed to touch the taxi driver he's supposed to go into the maze but we sort of had trouble with that so we didn't do it and then I think that should be it.

00:01:37 How is your game a nonviolent or social justice game?

00:01:38 Social justice is like because you are trying to catch the thief to bring justice to them. It's nonviolent because there is no shooting or fighting or stuff and to move the thief you are supposed to use the mouse. To move the car person you have to use the keys up and down, left and right.

00:02:18 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:02:20 Yes, I am pretty sure. Media is technology. Media jobs are People who work in media so uh like uh, photographer, engineer, person who does codes.

00:03:15 Do you think you became more aware about violence in videogames?

00:03:16 Well, I sort of don't know but uh. violence is fighting, punching, kicking,

shooting. If they are young kids they would probably copy it since they are like young and they are learning so if they play a violent game they might think that's a part of life and they like do it but if you're older you know that's not what you are supposed to do.

00:04:54 Do you think you became more aware of stereotypes in games?

00:04:55 Well yes because stereotypes are things like if you make a videogame girls you might think of dressing stuff like that or stuff that girls usually like unicorns stuff like that. If it's a non-stereotype and it's like a girl it could be like stuff boys do and if it's like a boy stereotype they might think football, basketball rock music things like but if you don't like them you don't like the game since you don't like it.

00:06:03 Do you feel you became more aware of marketing in videogames?

00:06:04 Sell oh yes. Sometimes if you get a certain amount of stuff you have to sell all the stuff and you have to get money to like get all the things that you need. If you need gems and you only get a certain amount of gems every time every year you get like five gems and if you spend all of them at once you need to buy them with more money. They might think like older kids know in this game you have to like buy things so if it's a kid they like try to buy everything they want to complete the game but if they are an older kid they know not to do that so yeah.

00:08:10 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:08:11 Maybe because you are trying to attract boys you include all stars in basketball games, football stars, hockey players. In a girl games you could include girls things that girls like. If you are not doing the stereotype you could include other things that girls might like.

00:09:44 Do you think you became more aware about how different people experience a videogame?

00:09:45 Like if it is like a violent game it might scare people and if it is trying to like destroy things and like big booms to try and blow up something it makes loud sounds and it might hurt your ears.

00:10:25 Do you feel it was easier to create, program a game with a partner?

00:10:26 I liked it a lot because we sort of took turns on making the characters and like doing things. Like I did the background and he did the costumes for the characters. We took turns with the background, costumes. Because if you are alone you can if you are trying to do things one while he's doing that you can do the other thing that you like want to do.

00:11:42 Would you like games or creating games to be a part of your learning in school?

00:11:43 Well if you create videogames you can do things like you never did before like coding people and stuff.

Jonathan's interview- Social justice is about catching a cop. Nonviolence is not shooting. Five principles of critical media literacy, violence, and marketing understood.

Interviewer: Ms. Gregg
Student: David

00:00:08 What is your videogame about?

00:00:11 It was about when we made a game where you are a cop and someone just stole something. A thief just stole something. Then you try and catch the thief but then he goes into a small maze. Then you turn into the thief and you try to make your way through the maze while the cop is chasing you. And if you get to the end it will change into a little small arena where you run through and the cop is chasing you.

00:01:05 How is your game a nonviolent or social justice game?

00:01:09 It's nonviolent because you don't hit him in any way you just try to chase him. You don't like try to shoot him or anything.

00:01:35 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:01:38 Yes, I understand more about it. I understand that they can what they do for their job is they try to make the news or other stuff really out into the world. Like for the news if something happened they might exaggerate to make it better.

00:02:32 Do you think you became more aware about violence in videogames?

00:02:37 Yes, like now that I know that killing and hitting people is violence I won't play any of those games anymore. I think before I did this I thought the games were fun before I learned what they were all about.

00:03:31 Do you think you became more aware of stereotypes in games?

00:03:37 Yes. It's when it's like it won't appeal like a violent videogame with zombies and stuff like it might not appeal to girls. More to boys. Because girls don't really like zombies its like they look ugly they're hideous they're bleeding all those things.

00:04:19 Do you feel you became more aware of marketing in videogames?

00:05:00 Yes, just because they show you something that might be really nice it still could mean that there could be bad things back there. Just like with the advertising. Never trust the advertising. Always do some research. That's what I do with my apps I go into the reviews, look at the age ratings. I look it up online to see if the app is good or bad.

00:06:13 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:06:15 I want to include all people in my game. I think that it teaches you not to be bad guy like the bad guy in this game is doing that is getting him chased.

00:07:15 Do you think you became more aware about how different people experience a videogame?

00:07:20 Yes, I understand it because um they might know what happens but then the media got it wrong. It's completely different.

00:08:14 Do you feel it was easier to create, program a game with a partner?

00:08:20 I like it because I had someone to back me up if I didn't get something right and if they made a mistake they would always have my back to help me.

00:08:46 Would you like games or creating games to be a part of your learning in school?

00:08:50 Yes, I would like to create like games to learn about violent videogames and how we could prevent violent videogames from getting out into the world.

Interviewer: Ms. Gregg
Student: Allison

00:00:40 What is your videogame about?

00:01:41 It is about a girl who is walking around and she is catching some flowers to save the world as she touches a flower she gets a point but we couldn't get that to work well. You can die by stepping in lava.

00:01:58 How is your game a nonviolent or social justice game?

00:01:59 You can't die in it so I guess that works. Well, she is trying to heal the world by catching the flowers because the volcano is erupting everywhere.

00:01:60 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:01:70 I did. A media job is like working with the computer or working with something electronic.

00:02:00 Do you think you became more aware about violence in videogames?

00:02:01 A little bit well because watching violence….I don't feel comfortable creating a violent game. Knowing that if I did create a violent game that it just did.

00:03:00 Do you think you became more aware of stereotypes in games?

00:03:01 Yes, because stereotypes in our game it does appeal a little bit more to girls but it is not completely for girls. It's not like Magic Barbie or anything.

00:04:00 Do you feel you became more aware of marketing in videogames?

00:04:01 A little bit. Well, it has happened before like sometimes when I buy games on my iPad they're not at all like the advertisement is I mean like at all. It has happened before not at all how ads is.

00:05:00 Do you feel it was easier to create, program a game with a partner?

00:05:01 It was great working with a partner hearing all her ideas because most of this game was her idea. I loved working with her. Well, a little bit with coding. It definitely made me more comfortable doing it.

00:06:39 Would you like games or creating games to be a part of your learning in school?

00:06:40 Yes because creating games to be a part of your learning is fun and because you are learning so it would be great.

Interviewer: Ms. Gregg
Student: Noah

00:00:40 What is your videogame about?

00:00:41 Our game was about soccer so we made two soccer players. We didn't get them out of the new sprite we drew them and we created the goals. We also did a lot of keys for example we did the part where you put one click right arrow move right and the other ones. We also did a sensor when the ball hit one of us when it tried to get into the goal so you could block it. We did a car in the background and we did it on the soccer field. We also did a referee.

00:00:59 How is your game a nonviolent or social justice game?

00:01:00 There are no explosions guns, shooting, or blood. We didn't do social justice just a friendly soccer game. Characters when the game was over they would shake hands at the end of the game. We didn't make them argue.

00:02:01 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:02:04 I just got to figure out what media means. I found out that media has to be something like TV, radio, videogames, and like electronics maybe.

00:02:27 Do you think you became more aware about violence in videogames?

00:03:01 No, I don't play those kind of games. I just like sports. I don't really like violence. My parents don't either. My parents won't let me play and I don't want to play violent games either. I think probably kids would react to violence if they have it in the game they get addicted to the game and they would probably uh do it like it sometimes happened in my grandma's school. Like they pretended and then they started fighting about it.

00:04:00 Do you think you became more aware of stereotypes in games?

00:04:07 Yes, we put not that loud music but kind of when somebody scored the ref would blow a whistle and then the song would play. We put kind of loud music and a song would play.

00:04:37 Do you feel you became more aware of marketing in videogames?

00:05:01 My partner Tyler said we didn't want it to be a money making game. Actually, we did say we wanted it to be a money making game because if we got more money we would donate something we would make another videogame to make more money and so on. Social justice doesn't only have to be giving money. Like maybe if somebody is lost I could help them. I could tell them where the closest bus is I could give them some money to get home. If they were just crying that they lost their mom and dad I would try to help them. On an iPad there's like ads so like when I play it pops up I can't play my videogame like sometimes I have to answer like rate my videogame and they put ads to buy stuff in the app store but in videogames on an Xbox or Wii they don't have that. They might have it in the corner but usually not. I usually get rid of the ads. When they say to rate us later or now I say later and never rate it. But if it's to upgrade the game I probably will if it's a game I like.

00:12:00 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:12:01 Some people would like it cause not that many people in this school like soccer. Most people that like soccer would like it because they know how to do it and it would be easy for them. But new people who are just like getting to know soccer they probably would have a hard time.

00:13:00 Do you think you became more aware about how different people experience a videogame?

00:13:01 [silence]

00:14:00 Do you feel it was easier to create, program a game with a partner?

00:14:01 I liked it. We got along and had fun. Yeah, we both had a chance to look and agree on the code.

00:15:00 Would you like games or creating games to be a part of your learning in school?

00:15:01 It was fun for me. I don't know about everybody else. Some people it was a challenge for them but not that many people but not that many people because a lot of people are smart.

Interviewer: Ms. Gregg
Student: Leah

00:00:05 What is your videogame about?

00:00:06 My videogame is about a fox trying to get the girl. When the fox gets the girl the fox gets a point he gets like another point. So like the girl tries to run away and like she moves her arms and legs we got her to do that. Use the mouse pointer tracker thing to have the fox move around and try to get the girl. Then we used the points and then we had the stage in the forest.

00:01:08 How is your game a nonviolent or social justice game?

00:01:09 It's not a violent game because they're not like fighting or trying to hurt each other they are just running and the fox is just trying to touch her and the fox is not like hurting her and the girl's not hurting him either. So I think it's not a violent game.

00:02:10 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:03:00 I forgot what media is. Isn't media like the people who like make the videogame.

00:03:12 Do you think you became more aware about violence in videogames?

00:03:13 I learned about jolts. The things that you are not supposed to do I am more aware of that. A violent game is hurting and fighting people. They are not being nice to each other or they could say like bad language or mean stuff to the other person. Maybe some people or kids do it because they want to do what the game wants because they like it. But some people don't because they don't it's their best game or they don't like it or maybe they just think it's not good to do it.

00:05:28 Do you think you became more aware of stereotypes in games?

00:05:29 I think stereotypes are like a Girl or boy trying to be mean saying like you play like a girl. The boy wouldn't feel good because the other boy is being really mean to him. In some videogames there are like maybe some games that have violence or something like that.

00:05:30 Do you feel you became more aware of marketing in videogames?

00:05:31 Like maybe some want to be profit just for money or maybe some just want kids or adults to like the game and they want them to enjoy it. Ads for like new games there was an ad in the app store about it. Like for a new game there was like an advertisement and I checked it out on the app store I thought it was like a good game so I got it and liked it.

00:06:00 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:06:01 Some people like if they want to make a game they might exclude some people just to make it perfect or they might add new people like to get a better game and like have more characters.

00:10:26 Do you think you became more aware about how different people experience a videogame?

00:10:27 People might not think like a game they might not like it. They don't exactly like it how I like it. They don't have exactly the same feelings or likes that I do or have.

00:10:30 Do you feel it was easier to create, program a game with a partner?

00:10:31 Um it was good. It was good because we both got to use mouse. It was fun because we both got to work together. We are really good friends and we like to play

together and do stuff and I just think it was fun. It made it easier because maybe something I didn't know or she didn't know we helped each other figure it out. We work together. If we didn't know we just asked the teacher.

00:11:00 Would you like games or creating games to be a part of your learning in school?

00:11:01 Yes, maybe some because some of the games are learning games and I use those sometimes. Maybe with computer class or if I have to do something on the computer at home that could help me a lot.

Interviewer: Ms. Gregg
Student: Hannah

00:00:05 What is your videogame about?

00:00:06 It was about pigs that were Ghostbusters. They're always ghost busting. If they had too many ghosts gummy worms would fall from the sky. Every time they sucked up a ghost they would get a point. And that is pretty much how you win the score at most is 10 and you try to get as much ghosts as you can.

00:01:10 How is your game a nonviolent or social justice game?

00:01:11 Because the pigs help people by getting the ghosts out of their houses.

00:01:43 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:02:00 Yes, well I learned before I didn't really understand what the media was but then I learned it was like videogames sort of. Videogame makers is a media job. Yes, because I learned a lot from what you taught us. I could be a videogame author.

00:02:17 Do you think you became more aware about violence in videogames?

00:02:18 Yes, because I learned that in violent videogames that have violence they like try to attract people with the violence because it attracts people because some people already played games with violence. I learned that if you watch too much of the violence you could come out as a bad person because if you play videogame violence it might teach you that's it's the right thing to do when it's the wrong thing to do. People use violence to attract people's attention.

00:03:14 Do you think you became more aware of stereotypes in games?

00:03:15 A Stereotype is sort of like how...uh, I remember, oh yeah. I sort of remember but not that much. There are good stereotypes and bad ones. I learned to only do good stereotypes. You shouldn't do bad stereotypes because they could hurt people. A good stereotypes is going up to someone who is sad and going up to them and asking them to play with you and a bad one would be like making fun of someone because of the way they talk.

00:06:30 Do you feel you became more aware of marketing in videogames?

00:06:31 Yes, marketing how they sell them. They tried to sell videogames that have violence in them because like people buy them because the violence attracts their attention and most of them do it for profit. A good way is to make it fun but not have violence like it could be sort of like Minecraft because Minecraft actually is sort of educational because it teaches you how to use your surroundings and they get profit from that because a lot of people like that game because of the different angles and stuff. Like advertising well I feel like confused because there are so many ads and some have violence so I just press the x.

00:08:30 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:08:31 I learned that they exclude from some people because other videogame makers might have some stuff that people would like so they could make some stuff that the other people could have liked.

00:08:32 Do you feel it was easier to create, program a game with a partner?

00:08:33 Without working with a partner that would be really hard. Because sometimes I don't understand things that might partner does and they explain it to me. Like if I miss something and they heard it and I didn't they tell me and I would understand it better.

00:10:00 Would you like games or creating games to be a part of your learning in school?

00:10:01 I think it's really fun to do that. It teaches me more about media. It's fun because like you can do like any videogame that you want that you just make up and it could help you with a lot of other jobs in your life like if you wanted to work for the Apple company you would know sort of how to do because of what we're learning.

Interviewer: Ms. Gregg
Student: Evan

00:00:05 What is your videogame about?

00:00:06 There were basketball players and a football player and they are running away from monsters. The monsters are bouncing off walls and then you are the football player and you are running away and if you touched the monster you get a point and how many points you got shows how bad you are doing. If you get a point it's not good. Each time you hit him you get one point. That's not a good point.

00:00:53 How is your game a nonviolent or social justice game?

00:00:54 It's nonviolent because it's fantasy. It will never happen. Monsters will never chase football players. I don't think a monster would appear or that a football player will run away from them. A violent game is like shooting and stuff and it could actually happened but like our game had monsters and stuff and monsters aren't real.

00:02:00 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:02:01 Like television like stuff associated with technology. I don't know like computers, TV, radio because its all technology. Being a football player isn't a media job but being a reporter is a media job like in order for it to be a media job it has to have some type of technology. I can create a website. With the stuff I learned I guess I can somehow create something like the stuff that I learned with Scratch the backgrounds of different stuff like transferring from one background to another. I think that would be like that would kind of look

like a website. Like with websites you go from one place to another if you like click on it. I bet you can do that with Scratch if you really wanted to.

00:03:58 Do you think you became more aware about violence in videogames?

00:03:59 Yeah, a lot. Since we talked about it a lot I realized that it could actually happen. I never really thought about it while I was playing the game. I thought it's just a game it will never really happen none of this will happen. Since we talked about it I realized it actually could happen. Yeah, I don't know I'd play the games less. I play those games sometimes. I think it's fun to like run and stuff and I like going fast and running away. It think it's really fun and like exciting to do.

00:05:02 Do you think you became more aware of stereotypes in games?

00:05:53 Stereotypes are like using someone's race in a bad way. I don't know if like a Mexican person is on the sidewalk selling tacos like that's the stereotype. A taco is a Mexican meal but all Mexican's aren't on the sidewalk selling tacos. It's mean to people in Mexico and Mexican people because you are making fun of their race.

00:06:22 Do you feel you became more aware of marketing in videogames?

00:06:23 Profits are for like to get the money. They make the game to get more money and power. Power they like create a trailer to make you buy the game. So both of them I think are the same as getting money.

00:07:56 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:07:57 Yeah like I don't think they mean to exclude people but with like NBA and football games boys just like love sports - some might not- but the majority of boys like sports and I

don't think they meant to exclude girls cause most girls don't really like sports. Some do but most don't really like sports and I don't really think they meant to exclude them I think they just made a game that they thought would be fun.

00:08:54 Do you think you became more aware about how different people experience a videogame?

00:08:55 Yeah, some people might think they're telling you what to do when someone attacks you. For instance in a game when someone attacks, you might think to kill them. I think some people might think you should actually do that but you don't you can just run away or something. You don't kill them.

00:09:33 Do you feel it was easier to create, program a game with a partner?

00:09:34 That was really helpful. My first one that we did like with Owen not with Ethan, Ethan was very helpful for the stuff that I didn't know. He would like help me out and with Owen he helped me because I didn't know all of the stuff and he gave me like suggestions of what to do for our game and I would never think of that. It was kind of helpful because our game would never be our game if they didn't give me an idea of what we could do. It was helpful. I could ask Ethan for stuff I didn't know. Owen helped me with suggestions of what to do like ideas for games. It could never have been our game if we never got an idea for what we could do differently.

00:10:50 Would you like games or creating games to be a part of your learning in school?

00:10:51 Do I like games that give me education? Not really I don't really like those games. No offense but I think they're kind of boring learning how to do something because it's like going to school and waking up to go to school is not very fun. But like games like playing

games like football it's fun because it's really fun to play. Like skateboarding games are fun to play because I skateboard a lot - it's fun and that's what I do and it's fun. Making my own game is fun because I got to do a game that I liked- that I really, really liked because most games aren't perfect. I always want to do something that I can't do and like with making your own game it's like you can do what you want to do.

Interviewer: Ms. Gregg
Student: Owen

00:00:04 What is your videogame about?

00:00:08 A football player being chased by monsters.

00:00:19 How is your game a nonviolent or social justice game?

00:00:20 Monsters are fantasy so that will never happen.

00:00:21 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:02:19 Media is like music jobs, musician, reporter, sports announcer, dj. I guess an author because you can create different kinds of music and videogames.

00:03:43 Do you think you became more aware about violence in videogames?

00:03:44 Yes, I did because some games have some violence some don't. To compare them violence has weapons and hurting people and like nonviolent games are like peaceful and have justice and stuff like that.

00:04:00 Do you think you became more aware of stereotypes in games?

00:04:01 Yeah, cause there are some things out there that will hurt people's feelings saying something that hurts people's feelings and stuff.

00:04:29 Do you feel you became more aware of marketing in videogames?

00:04:30 Yes, some of them have profit and some of them have power for a reason some of power to get attention and profit is to just get money and stuff.

00:04:55 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:04:56 They create a different brand for some people. Say like boys some might like baseball so they make a baseball game and people who don't like sports will be excluded from the game and people that like sports will think it's cool.

00:05:40 Do you think you became more aware about how different people experience a videogame?

00:05:41 Some people might say this is the best game ever you should go get it and the person who gets it will saw awww it's not the best game don't buy it it's a waste of money and the other people would say but it's a good game.

00:06:00 Do you feel it was easier to create, program a game with a partner?

00:06:01 Because he was helpful and there is not another partner like him that could have done the job better. It was fun and difficult at the same time. Because sometimes they could be hard to program...to make it move and stuff and like sometimes it was easy to make it like to say words and stuff.

00:06:30 Would you like games or creating games to be a part of your learning in school?

00:06:31 Um...creating games...oh um....I don't know.

Interviewer: Ms. Gregg

Student: Grace

00:00:05 What is your videogame about?

00:00:11 It's about you're a prince and there is a princess and a dragon and you have to save the princess and the world because the world is in danger.

00:00:33 How is your game a nonviolent or social justice game?

00:00:37 Well you have to save the princess so it's social justice by saving.

00:00:47 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:00:50 Any kind of technology. You could be a director producer maybe a photographer. Author yeah I think I could create a videogame.

00:02:20 Do you think you became more aware about violence in videogames?

00:02:21 I noticed that at first when Amelia and I thought of the idea I thought that could be kind of violent with the dragon but then I realized it was trying to save it and not trying to be violent.

00:02:59 Do you think you became more aware of stereotypes in games?

00:02:60 Some stereotypes are in videogames and I am aware when I see it. If like maybe like you are doing something to be brave and there was like a boy and a girl and the boy says to the girl you can't like do it because this is a man's job.

00:03:00 Do you feel you became more aware of marketing in videogames?

00:03:01 I think I do know like how they use marketing some people use it for profit and money and some people use it for power. I would use it for power and a little bit of profit so I could donate it to some of the charities and homeless people. You could just be nice to each other and try to help each other for social justice.

00:04:37 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:04:38 Some people might be thinking they don't want to play because they are thinking it's weird or it's just not for them.

00:05:00 Do you feel it was easier to create, program a game with a partner?

00:05:01 I thought Amelia was a really great partner. I really liked working with her. She was nice and she agreed with me when I had an idea. At some points I was like what do I do now and she helped me.

00:05:53 Would you like games or creating games to be a part of your learning in school?

00:05:54 I like doing a lot of fantasy game but it wouldn't hurt to try that.

Interviewer: Ms. Gregg
Student: Amelia

00:00:03 What is your videogame about?

00:00:04 There's a prince, a princess, and a dragon and the dragon wants to keep the princess and he wants to keep her from the world. So he was protecting the world so now everything is going to go bad. The prince saves the princess and the world and when you get to the princess and save the princess you get 10 points and then you can change backgrounds. It looks really cool. The backgrounds there's one in the woods, the desert, underwater, taco bell, tree, moon, nothingness, there used to be a happy face but Grace just deleted it because she knew it was funny and we also got a flower garden and that one looked really cool. We got a castle we used to have a beach but there was people on the beach so we couldn't do it anymore.

00:01:59 How is your game a nonviolent or social justice game?

00:02:01 We are trying to save the world and someone's life well not their life but I guess.

00:02:07 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:02:20 I did it's videogames. I had no idea what it was before. Jobs are actor, a reporter, a videogame programmer, a videogame maker. Well there has to be a policeman using technology.

00:03:32 Do you think you became more aware about violence in videogames?

00:03:33 Yes, definitely sometimes I didn't realize there was violence in videogames and I kind of got it. I don't what games but I probably deleted them already.

00:05:12 Do you think you became more aware of stereotypes in games?

00:05:13 I sort of knew what they were before and more like aware of stereotypes there's a lot of games with stereotypes and it's kind of offensive to girls and boys because like once I was playing a game with someone with boys someone came up to me and said you're not allowed to play this it's only for boys so it's kind of like yeah.

00:05:55 Do you feel you became more aware of marketing in videogames?

00:05:56 Yes, I became more aware of it definitely. For example if I make a videogame and my friend loves it very much and I turn it into a real videogame with a disc and everything I probably am doing it for profit or power or something like that.

00:06:03 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:06:14 Branding well in makeup games probably boys are excluded and girly girly are included. Tomboys are very discluded and adults definitely are excluded in that stuff.

00:06:46 Do you think you became more aware about how different people experience a videogame?

00:06:57 Do you feel it was easier to create, program a game with a partner?

00:06:59 So one person controls the dragon and one person controls the prince and the dragon has to get the prince and stop the prince from getting 10 points and the prince has to try to get ten points so there are pretty much two people included in the game. I think it was probably easier making up the game not programming. It was pretty hard because we had to make a bunch of backgrounds and decorate them. We had to make the controls and make the prince, the princess, and the dragon speak. It was kind of hard with that stuff.

00:07:10 Would you like games or creating games to be a part of your learning in school?

00:07:19 Well yeah for example I like these games I think that the company that makes them is called elephant games or big fish or something and they train your brain and you have to look for stuff. One took me like months to do it was so hard and like math games. I want to make videogames for learning definitely.

Interviewer: Ms. Gregg
Student: Isaac

00:00:07 What is your videogame about?

00:00:08 Game is about animal racing game and you use the mouse to make your animal move.

00:00:11 How is your game a nonviolent or social justice game?

00:00:12 No animals get hurt.

00:01:00 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:02:02 Media is electronics like TV, music, radio and smart boards phones. Music, radio, smart board, phone, disc jockey, a photographer, a journalist, author of a media product TV.

00:02:40 Do you think you became more aware about violence in videogames?

00:02:41 Kind of how not because I don't like violence that much because it is scary.

00:03:02 Do you think you became more aware of stereotypes in games?

00:03:03 I kind of don't know.

00:03:04 Do you feel you became more aware of marketing in videogames?

00:03:05 I don't like how people use it for market or power. Like getting money.

00:03:43 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:03:44 Do you think you became more aware about how different people experience a videogame?

00:03:45 Do you feel it was easier to create, program a game with a partner?

00:03:46 Kind of fun. Didn't argue kind of easy sometimes it was hard because I did not know what to use and other times I knew what to use.

00:04:08 Would you like games or creating games to be a part of your learning in school?

00:04:16 I would like to do it because I really like videogames and they are really fun.

Interviewer: Ms. Gregg
Student: Joshua

00:00:08 What is your videogame about?

00:00:09 You get to choose either a person or a torpedo and if you are the person you try dodging the torpedo. If you're the torpedo you have to use the mouse to try catching the diver person and within around 100 seconds the background changes to like an ocean back and forth.

00:01:04 How is your game a nonviolent or social justice game?

00:01:05 It's nonviolent like no one gets hurt. It doesn't really look violent it's like dodge ball sort of and it's fun.

00:01:41 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:01:42 Media is videogames, TV, basically anything that includes electricity. Photographer, editor, director, actors, people that make videogames. I would be an author of a game maybe if I have nothing to do or probably not if I have a lot of stuff to do extra.

00:02:46 Do you think you became more aware about violence in videogames?

00:02:47 Yes, I've become more aware of it. If I see someone get hurt or killed or something... Maybe a little less violent games but I guess sort of a little.

00:03:30 Do you think you became more aware of stereotypes in games?

00:03:31 I used to not know what a stereotype was and now I know what it is. Saying bad stuff about people when they aren't and saying bad stuff on yard.

00:03:50 Do you feel you became more aware of marketing in videogames?

00:03:51 Yeah I guess. Some games have like music and the commercials make it seem cooler and stuff.

00:03:52 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:03:53 Some games are only about one thing not thinking about other people. Because they want more profit or power or they just don't think.

00:03:54 Do you feel it was easier to create, program a game with a partner?

00:03:55 I liked it. We work together well, we were always on same page, took turns doing stuff we never really got mad at each other. It was way easier to make the game there were quite a few things he knew and I didn't. Once again he helped with stuff.

00:05:00 Would you like games or creating games to be a part of your learning in school?

00:05:01 It could be for some little kids who are in preschool or something they could learn from the game like in abc math or something.

Interviewer: Ms. Gregg

Student: Liam

00:00:07 What is your videogame about?

00:00:08 Basketball. So once when the green flag was clicked you would be controlling your guy with the mouse so wherever the mouse goes you would follow. Then when you press the spacebar the guy would shoot and then we had a sprite on the basketball hoop so that whenever the basketball hit it, it would score two points and then just to make it funny there was two crabs that were trying to guard the guy so yeah that's how our game goes and yeah you have to score as many points as you can and we'll use ourselves like to time you to see how many you can make in like 30 seconds we could do that to make it more challenging.

00:01:28 How is your game a nonviolent or social justice game?

00:01:29 It's not violent because like Joshua and I love basketball we know that if you play it right it won't be a painful sport with violence so that's why our game goes nicely without violence because basketball is meant to be played fairly with no pain.

00:03:03 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:03:14 Jobs would be like brightness or editing. You won't your game to be too bright so you can edit the game so the ball goes where you want it and you can edit like music cause its always fun when there is music. You can also edit the background if you start like disliking your background you can like edit it to make it look nice so that can be a job.

00:03:51 Do you think you became more aware about violence in videogames?

00:03:52 Yeah I've learned that videogame violence can change how you are it can make you not as formal. Formal is being kind not rude. Try to be nice and be on your best behavior not say mean things change you are to be nice to everybody. Violent videogames can change how you are.

00:04:09 Do you think you became more aware of stereotypes in games?

00:04:10 I think I'm more aware of stereotypes. Stereotypes aware of I've learned a lot. Ethan and I worked together and learned together about stereotypes. It's taught us to be kind to support each other in games. Like in a real life game if your friends makes a shot you can cheer them on that will make them feel good.

00:05:36 Do you feel you became more aware of marketing in videogames?

00:05:37 I seen how much videogames costs. Sometimes it's annoying. You think oh I want to get this game and you're like oh I need $20 more or you don't even know. This game we made I say we could sell it for $15.99 or maybe like $15 or $10 because if it's newer and I know it would be a fun game to people.

00:06:00 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:06:01 I thought it would be fun using animals because it would be funny because you could see fake animals playing. Like if you brought on a unicorn you wouldn't be it would be weird. It would make it odd let's just say a unicorn playing basketball it would not be funny. If it doesn't really match what you're doing then it won't really like work. We picked the cat and the crab because the cat looks like he is having a good time and the crab looks like he is guarding the other person. A unicorn looks like he should be doing something else.

00:06:26 Do you think you became more aware about how different people experience a videogame?

00:06:45 Do you feel it was easier to create, program a game with a partner?

00:06:46 Yes, it helped a lot. Because Joshua is very smart when it comes to how computers work and he pays attention so much and he's a good friend of mine so I know I can count on him. I know he can do everything on the computer and I know we can always make a good team.

00:06:57 Would you like games or creating games to be a part of your learning in school?

00:06:59 Yes we could make the same game but make it for a different age. Like say you like a little kid got this game and the kid had to get better at adding so you had to like answer a question to get like the shot. Like two plus two equals four and if they got it right they would like get a point and then if they got it wrong they learn it would be a miss.

Interviewer: Ms. Gregg
Student: Anna

00:00:07 What is your videogame about?

00:00:08 It's about a hamster that's travelling in Candy land that has to find at least a100 pieces of food pellets or a 100 pieces of a special candy at each level and he will not complete each level if he doesn't find all the stuff that he needs to find and every two or three levels he needs to find a person or else he'll never win or he has to find a special kind of candy that's hard to find or else he won't complete the levels and at least one time in the six levels he needs to find like a special friend that's another hamster in like a shop or something and then in the next level he'll travel with him, then he needs to find the king in level three, and he needs to find the queen in level five. In level six the last level he needs to find a hamster to go on with to the other levels. And so like every level is going to be like a different place. He's going to be in Candy land but in the sixth of fifth level Candy land is going to be decorated for Christmas so in like every level it's decorated for a holiday but in the first two levels it's Candy land but in the third level it's like Valentine's day in the fourth it's like Halloween and then in the fifth Thanksgiving. Then there's one that's like the Fourth of July and then there's another it's Christmas. At the end of the level if he completes all seven levels there is like a big surprise telling him he's completed it and then he gets to make a friend named Bella and that's another hamster it's a winter white hamster so he gets to meet him and that's when he gets to complete another level. So like in level eight, he kind of just starts all over again but he's with another hamster. And sometimes it will be like raining and stuff and like hailing and stuff if he eats five of that stuff that is raining that can count till he gets 100 pellets and stuff.

00:03:29 How is your game a nonviolent or social justice game?

00:03:30 Well there isn't fighting and stuff. It's just kind of fun and not really violent and just kind of flowing and it's just like fun. And me and Charlotte did really want to make it a violent game so we just wanted to make it a fun game with no shooting or anything.

00:04:18 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:05:00 Do you think you became more aware about violence in videogames?

00:05:01 In a violent videogame to solve the problem you would just kill the person and you wouldn't really talk it through and like make it better. You would just go with the easiest way to solve it. You would be meaner to people in a violent videogame and you really wouldn't try to be nice and you really wouldn't try to solve the problems you would just like try to make it happen kind of.

00:05:47 Do you think you became more aware of stereotypes in games?

00:05:48 A stereotypes is when somebody is being mean to someone for a reason because of how they act or how they look or because of their skin color. Such as if someone is being mean to someone because a person has white skin and the other person has darker skin. They're being to them because they have dark skin that's a stereotype and they're being mean to them for a reason. They're being mean to them because they want to because for a reason and here's another example. If a girl has brown hair and all of her friends have brown hair and now another girl has blond hair. She only wants to be friends with brown haired girls. It's a stereotype because she's not being friends with the blond haired girl because she's only friends

with brown haired girls so a stereotype is someone being mean to someone for a reason it's not like just because. It's being mean to them for how they look and how they act.

00:01:20 Do you feel you became more aware of marketing in videogames?

00:01:21 Getting money so people do that because maybe they just need some money because they want to make it a good game so maybe they could get money back for it or maybe it's just really an expensive game and they just need it to kind of get the money back by selling it and stuff or they sell it for good causes like the homeless but that doesn't happen a lot.

00:02:00 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:02:01 Why I think people do that is because they kind of like their idea and they don't really want to change it if they did all this work just because a few people like say some people don't like it. Say I'm doing a hamster game I don't think I would change the game just because a few people don't like hamsters or maybe a lot because if they like it they like it and if they don't they don't like it. We don't want to exclude people but we like the game idea and we don't really want to change it cause it would be a lot of work to change it just because a few people don't like hamsters and maybe we will make a game for everyone sometime but for our deal this is a hamster game for people that like hamsters.

00:02:57 Do you think you became more aware about how different people experience a videogame?

00:04:30 Do you feel it was easier to create, program a game with a partner?

00:04:31 I really liked working with a partner except it was kind of hard because it wasn't working out and my partner wasn't letting me do that much stuff and it was kind of difficult but really fun at the same time. If I liked something and she liked something then we would have to come up with something that really went with both of our ideas not just hers or mine so it's fair for both of us. It was fun but it was definitely challenging but its fun to be challenging but it was fun working with Abigail and working with both of our ideas for stuff and making them into one idea of doing the hamster idea. I would do like a picture of one of the stages and then she would do it and then we would mix it together to make it better. I thought it was fun to do it with a partner. I definitely would not have wanted to do it by myself and I would have been lonely doing it on my own and it was a lot of work and it kind of went by faster with a partner because she helped me with the writing and the pictures with the storyboard and she kind of helped me with the backgrounds so it wasn't just me doing all the work. I wanted to do it to so it was fair I could say. In case I got behind on something she would know what to do. I would both like to work with someone and not to work with someone because not to work with someone is not that bad but if you are kind of behind on something they can help you catch up and to see how they work differently and how their brain kind of works differently from yours. It's kind of cool seeing that. When you do your codes and see more codes and when you are doing different codes in a videogames and watching your partner doing codes it's cool to see if they remember them or not so I like that.

00:08:20 Would you like games or creating games to be a part of your learning in school?

00:08:21 Yeah, I would not just for fun I would like to learn about videogames and how to do

more stuff and actually put the effort into it and like I want to soon learn more about it and stuff.

Interviewer: Ms. Gregg
Student: Michael

00:00:04 What is your videogame about?

00:00:05 Our videogame is about a monkey that was getting bananas for a king and the king thanked him and then he made a house with his gold and he lived happily ever after.

00:00:37 How is your game a nonviolent or social justice game?

00:00:38 It's a nonviolent because there's no fighting or killing or hurting each other. They are just helping. He helps the king by the two monkeys getting him bananas.

00:01:30 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:01:31 Media is like what's going on in the game. It's like jolts explosions. What's going on jolts explosions. I can make a cool game and make it fun. I could make a cool game a kid game and put some jolts to make it fun. Little kids could get into it and not do bad stuff.

00:02:15 Do you think you became more aware about violence in videogames?

00:02:16 Yes, there's not going to be any violence and no fighting because in the game they are nice instead of being mean to each other. Violence is bad and me and my partner didn't want to put it there and we wanted it to be a nice game. Well it's kind of fun can you can do stuff in it. Sometimes if it's violent it's still fun can you can do stuff in it. I can like change it cause violent games are bad for you and I kind of like to really just play racing games. And it can be bad to learn.

00:4:00 Do you think you became more aware of stereotypes in games?

00:04:08 A stereotype is when someone is saying mean stuff to you if you like get out of knock out and stuff and they say stuff like you're a bad shooter.

00:04:29 Do you feel you became more aware of marketing in videogames?

00:04:30 Yes, because it could be like a good videogame and people might see the trailer and be like it's a cool game I play it and then when it comes out people will come and buy it.

00:04:31 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:05:47 I would say yes cause we can make money out of the game instead of just selling it for free and stuff. You don't want to sell it for free because they can just like think it's bad and then they'll just throw it away.

00:06:07 Do you feel it was easier to create, program a game with a partner?

00:06:08 Programming with a partner pretty fun. If you have a mistake you can ask them and they help you and stuff.

00:06:30 Would you like games or creating games to be a part of your learning in school?

00:06:31 I would say yes because it's fun to make videogames and you can use a lot of cool characters in the game. And it's not just about violence it's still a fun game.

Interviewer: Ms. Gregg
Student: Hailey

00:00:08 What is your videogame about?

00:00:09 It's about like these animals that get stuck in a different dimension. On the first level they get stuck in candy land. What you are supposed to do is follow a trail of different types of fruit to help each animal find their way out of the different dimensions. On the first level there's a pig, then there's another pig, and a hamster, or something. When they are in different dimensions there's gummy bears and sour patch worms chasing them angry you know how in some movies when people get stuck in a different dimension the universe gets all messed up.

00:01:46 How is your game a nonviolent or social justice game?

00:01:47 It doesn't contain any violence like weapons or threatening things. You just have to help animals get out of dimensions so there is no violence at all. It's just a game for fun.

00:02:46 Do you feel you became more aware of what media is, what the jobs associated with the media are, and how you can be an author of a media product such as a videogame by doing this project?

00:02:47 Media is technology, music, radio, TV, movies, TV shows, news, and tech things. Jobs are journalist, actor, actresses, singers, producers, editor. My dad is a producer editors for movies directors and singers.

00:04:18 Do you think you became more aware about violence in videogames?

00:04:19 I did after you think about it. Violence in games is not good. Before I watched all the videos I knew violence wasn't good but then once I thought about it I was like violence is so bad. Non violent games compared to the violent games are so much better.

00:05:27 Do you think you became more aware of stereotypes in games?

00:05:28 A stereotype is something people use in videogames, media, and music because that's what they think that's what it is supposed to be like. For example, people think girls are all about pink but some girls are really into black and dark things. Some girls are feminine and pretty and some are more masculine. Like in movies everyone thinks girls are so valley and pink and blingy but not all girls are like that.

00:06:48 Do you feel you became more aware of marketing in videogames?

00:06:49 I don't need power that much but I would really like pay attention to how much we're selling if we are selling because if we don't sell enough stuff and make enough money then we won't be able to buy the materials for making videogames. If we do have a videogame company.

00:07:00 Do you feel you became more aware about how videogame creators include and exclude characters from a game in order to create a brand for their game?

00:07:01 I guess I got a little more aware I'm really like I think that branding is important because it brings out what most of your games are going to be about. For example, if somebody's brand is funny game somebody is going to think their games are really weird and funny.

00:07:10 Do you think you became more aware about how different people experience a videogame?

00:07:19 Do you feel it was easier to create, program a game with a partner?

00:07:29 It was helpful you get more ideas from each other. When you are just working by yourself you only just have a certain amount of ideas. When you are working with a partner

there are a bunch of ideas that you can mix up and then you get new ideas. I like working with a partner a lot more then just working by myself.

00:07:30 Would you like games or creating games to be a part of your learning in school?

00:07:38 I like to make learning a fun process so why not make coding a fun process for learning. I like learning and I like fun so like combining that together is like totally awesome to me. I love making videogames and I love making up stories and code.

APPENDIX I

Pre- and Posttest on Videogame Violence and Critical Media Literacy

Adapted from *Beyond Blame: Challenging Violence in the Media*,

Center for Media Literacy,2007 www.medialit.com[5]

1. What is your age?

8

9

10

2. What is your gender?

Male

Female

3. What is your ethnic background?

African American

Native American

Caucasian

Asian/Pacific Islander

Other

4. How often do you play videogames?

a. less than 1 hour a week

b. 1-3 hours a week

c. 3-6 hours a week

d. 6-10 hours a week

e. 10 or more hours a week

[5] Adapted from Center for Media Literacy, (2010). *Beyond Blame: Challenging Violence in the Media*. Adaptation reprinted with permission.

5. Which of the following are types of media (Choose all that apply)?

a. television

b. movies/videogames

c. department stores

d. newspapers

e. sporting events

f. radio

6. Identify the jobs associated with the media (Choose all that apply

a. reporter

b. journalist

c. photographer

d. disc-jockey

e. car salesperson

f. teacher

g. restaurant owner

7. Do videogames have an influence on people?

a. Yes

b. No

c. Not sure

8. Do videogames use violence to get your attention?

a. Yes

b. No

c. Not sure

9. Does your neighborhood have media?

a. Yes

b. No

c. Not sure

10. Does your school have media?

a. Yes

b. No

c. Not sure

11. What is violence? (Circle all that apply)

a. Talking loud

b. Threatening words

c. Physical force

d. Running fast

e. Beating someone up

f. Carrying a weapon

12. What types of violence are portrayed in videogames? (Circle all that apply)

a. Violence with weapons

b. Violence without weapons

c. Crashes or explosions

d. Yelling, threatening, name-calling

13. Which videogames are usually violent? (Circle all that apply)

a. First person shooters

b. Role-Playing

c. Simulation

d. Adventure

e. Puzzle games

f. Fighting game

g. Maze games

14. Do all stories with conflict also have violence?

a. Yes

b. No

c. Not sure

15. What are some real-life consequences of violence? (Circle all that apply)

a. Getting arrested

b. Going to the hospital

c. Being scared

d. Feeling good

16. Watching videogame violence could make someone act aggressively.

a. Strongly agree

b. Agree

c. Not sure

d. Disagree

e. Strongly disagree

17. Watching videogame violence could make someone less scared of the real world.

a. Strongly agree
b. Agree
c. Not sure
d. Disagree
e. Strongly disagree

18. Watching videogame violence could make someone more willing to help someone in trouble.

a. Strongly agree
b. Agree
c. Not sure
d. Disagree
e. Strongly disagree

19. Watching videogame violence makes people want to watch more media violence.

a. Strongly agree
b. Agree
c. Not sure
d. Disagree
e. Strongly disagree

20. People who make videogames attract players' attention with exciting "jolts."

a. True
b. False
c. Not sure

21. The use of different camera angles is a technique videogame makers use to attract my attention.

a. True
b. False
c. Not sure

22. A target audience is the group of people for which something is created.

a. True
b. False
c. Not sure.

23. The creative techniques of music can make a videogame feel scary.

a. True
b. False
c. Not sure

24. People react to videogame violence differently**.**

a. Strongly agree
b. Agree
c. Not sure
d. Disagree
e. Strongly disagree

25. Videogame violence is different than real-life violence.

a. Strongly agree
b. Agree
c. Not sure
d. Disagree
e. Strongly disagree

26. Our point of view influences how we react to videogame messages.

a. True

b. False

c. Not sure

27. Company advertisers create symbols to represent their products and/or services. Symbols such as logos and/or slogans also represent values, ideas and even personalities. This is known as branding. Choose all the brand logos below.

a. Nike – Just Do It

b. Apple – Think Different

c. $

d. %

28. Consumers benefit from branding.

a. Strongly agree

b. Agree

c. Not sure

d. Disagree

e. Strongly disagree

29. Videogame media are based on a desire for influence, profit and power.

a. Strongly agree

b. Agree

c. Not sure.

d. Disagree

e. Strongly disagree

30. Videogame violence can be branded for profit and/or power.

a. True
b. False
c. Not sure

31. People can protect themselves from the effects of media violence on themselves by limiting the amount of time they spend engaged with it.

a. True
b. False
c. Not sure

32. There are five key questions of media literacy. In the list below, two questions are incorrect. Choose the incorrect key questions.

a. Who created this message?
b. Where do media messages come from?
c. What creative techniques were used to attract my attention?
d. How might different people understand this message differently?
e. What values, lifestyles, and points of view are represented in, or omitted from, this message?
f. How many different types of media exist?

33. There are five core concepts of media literacy. In the list below, only three are correct. Choose the three correct core concepts of media literacy.

a. Media messages are not constructed.
b. Media messages are constructed using a creative language with its own rules.
c. Different people experience the same media message differently.
d. Media have embedded values and points of view.
e. Most media messages are constructed to improve health and safety.

34. The main goal of a videogame trailer advertisement or commercial is to….

a. Entertain

b. Sell

c. Teach

35. Photographs always show people and things just the way they are in real life:

a. True

b. False

36. The Internet, newspaper, TV, and radio news tell us….

a. Only the truth

b. Only lies

c. Only some of the information

d. Everything we need to know

37. Cartoons in videogames look fun, with bright colors and music because…

a. Cartoons are fun to watch

b. Parents like the cartoons

c. Cartoons get my attention

d. Watching cartoons will make you a fun person

38. It is important to ask questions about what videogame advertising tells us because…

a. Advertising makes us do things

b. Advertising is bad

c. Asking questions helps us make better choices.

d. The teacher told me

39. Which is the best question to ask after seeing a commercial message that advertises a videogame?

a. Where can I buy this videogame as soon as possible?

b. When will I be able to play this videogame?

c. Why was this message sent?

40. Everyone my age likes the same music that I like:

a. True

b. False

41. How important is it to do whatever my friends do?

a. Not important

b. A little important

c. Very important

d. The most important thing

42. I feel that I can help my friends live healthier lives**:**

a. True

b. False

43. Videogames might seem to be free but who ultimately pays for them?

a. Consumers

b. Videogame companies

c. Advertisers

44. It is important to consider who created the videogame advertising message in order to**:**

a. Know who to blame

b. Find the bias that always exists

c. Find who created the music on the commercial

45. Videogame media messages affect me:

a. True

b. False

c. Not sure

APPENDIX J

Interview and Journal Review Protocol

What effect does a critical media literacy curriculum that incorporates creating and programming nonviolent, socially just videogame trailers in Scratch have on students' critical media literacy awareness of violence, marketing, and the five critical media literacy factors?			
Themes	Key Words/Phrases	Interviews	Journals
Violence	Fighting, weapons, blood, bad words, killing, shooting, gets hurt, explosions, punching, kicking	x	x
Marketing	Advertisements, get money, selling, raising money	x	x
Media Authorship	Videogame company, products, photographer, camera person, movies, television	x	x
Creative Techniques	Jolts, music, colors, cool characters, backgrounds, jumps, explosions, loud noises	x	x
Different Experiences	Some people might like or not like, boring, cool for kids, scared, worried, awesome, interesting, funny, exciting, too violent	x	x
Include/ Exclude: Branding	Stereotypes, brands, sports, like adventure, girly girl, boys, fantasy lovers	x	x
Profit and Power	Popular, get money, attract people, profits to be rich, power over, power to watch, power to buy	x	x
Addiction	Can't stop, play all day, violence fun, violence addictive	x	x
Social justice/non-violence	Helping, no blood, sports, no bad words, saving the world, you can't die or get hurt, no fighting, singing, chasing, racing	x	x
Scratch coding	Programming blocks, control commands points, use of arrow keys	x	x
Symbolic Interactionism	Worked with partner, helped learning, figured out together, shared ideas, talked about how to make the project		

Note. Adapted with permission for Center for Media Literacy, 2007.

APPENDIX K

IRB Consent and Child Assent Forms - Intervention School

Loyola Marymount University

Teaching Critical Media Literacy Through Videogame Creation in Scratch Programming

1) I hereby authorize Elizabeth Gregg, Ed. D. candidate to include my child in the following research study: Teaching Critical Media Literacy Through Videogame Creation in Scratch Programming.

2) I have been asked to allow my child to participate in a research project, which is designed to study the effects of videogame creation on students' critical media literacy awareness and their awareness of violence and marketing in videogames, which will last a total of 5 weeks. The five-week curriculum is part of the regular fourth-grade Language Arts, computer, and math curriculum. The parts of the research study, the pretest and posttest survey, will take 20 minutes the first week of the study and 20 minutes the last week of the study. The individual student interviews that are part of the research will take 10-15 minutes each. Approximately 15 students will be interviewed over the course of 2 days. Total time for the interviews of all 15 students will take 2 hours.

3) It has been explained to me that the reason for my child's inclusion in this project is that my child is in the intervention group.

4) I understand that if my child is a subject, they will take a pre- and posttest; they will participate in a lesson on videogames and critical media literacy; and they will create a Scratch project. The investigator will write reflection notes during Scratch and critical media literacy lessons, and interview participants using a tape recorder. The evidence collected will be used to write a dissertation on how a critical media literacy curriculum in which students create and program nonviolent, socially just videogame trailers in Scratch effects students' critical media literacy awareness of the five principles of critical media literacy and their awareness of violence and marketing in videogames. Elizabeth Gregg, principal and doctoral student, has explained these procedures to me.

5) I understand that my child will be audiotaped during interviews. It has been explained to me that these tapes will be used for teaching and/or research purposes only and that my child's identity will not be disclosed. I have been assured that the tapes will be destroyed after their use in this research project is completed. I understand that I have the right to review the audiotapes of interviews made as part of the study to determine whether they should be edited or erased in whole or in part.

6) I understand that the study described above may involve the following risks and/or discomforts: my child may not like comments others make about their Scratch project, my child may not like talking about violence, marketing, and the five principles of critical media literacy in videogames.

7) I also understand that the possible benefits of the study are that my child will learn computer programming skills and critical media literacy skills.

8) I understand that Dr. Edmundo Litton who can be reached at EdmundoEdward.Litton@lmu.edu will answer any questions my child or I may have at any time concerning details of the procedures performed as part of this study.

9) If the study design or the use of the information is to be changed, I will be so informed and my consent re-obtained.

10) I understand that my child has the right to refuse to participate in, or to withdraw from this research. I understand that circumstances may arise which might cause the investigator to terminate my child's participation before the completion of the study.

11) I understand that no information that identifies my child will be released without my separate consent except as specifically required by law.

12) I understand that my child has the right to refuse to answer any question that they may not wish to answer.

13) I understand that if I have any further questions, comments, or concerns about the study or the informed consent process, I may contact
David Hardy, Ph.D. Chair, Institutional Review Board,
1 LMU Drive, Suite 3000, Loyola Marymount University,
Los Angeles CA 90045-2659
(310) 258- 5465, david.hardy@lmu.edu.

14) In signing this consent form, I acknowledge receipt of a copy of the form, and a copy of the "Subject's Bill of Rights".

15) Subject is a minor (age)_____Date_____

16) Mother/Father/Guardian_____Date_____

Child Assent Form for Intervention School

Teaching Critical Media Literacy Through Videogame Creation in Scratch Programming

I am doing a study to learn about how videogame companies use violence and advertising to sell videogames to children. I am asking you to help because we don't know very much about whether kids your age are aware of the violence and marketing being used to sell videogames. I am interested in understanding if children can learn to be more aware of violence and advertising in videogames if they create and program their own non-violent videogame. If you agree to be in our study, I am going to ask you some questions about videogames and advertising. For example, I might ask you a question such as is videogame violence different than real life violence? I will also ask you to create and program a non-violent videogame in Scratch programming after watching and talking about some popular videogame trailers. I may interview you about the videogame you create in Scratch, have you write answers to some journal questions, and I may ask you questions about what you learned. You can ask questions about this study at any time. If you decide at any time not to finish, you can ask me to stop. There are no right or wrong answers because this is not a test. If you sign this paper it means that you have read this and that you want to be in the study. If you don't want to be in the study don't sign this paper. Being in the study is up to you, and no one will be upset if you don't sign this paper or if you change your mind later.

Your signature_____Date_____

Your printed name _____Date_____

Signature of person obtaining consent_____Date_____

Printed name of person obtaining consent _____Date_____

APPENDIX L

IRB Consent and Child Assent Forms - Control Group

Teaching Critical Media Literacy Through Videogame Creation in Scratch Programming

1) I hereby authorize Elizabeth Gregg, Ed.D. candidate to include my child in the following research study: Teaching Critical Media Literacy Through Videogame Creation in Scratch Programming.

2) My child has been asked to participate in a research project, which is designed to study the effects of videogame creation on students' critical media literacy awareness and awareness of violence and marketing in videogames, which will last for approximately 20 minutes the first week of the study and 20 minutes the 5th week of the study.

3) It has been explained to me that the reason for my child's inclusion in this project is that my child is in the control group.

4) I understand that if my child is a subject, my child will take a pre and posttest. The investigator(s) will ask the teacher at the school to administer a pre and posttest. The evidence collected will be used to write a dissertation on how a critical media literacy curriculum in which students create and program non-violent, socially just videogame trailers in Scratch affects student's critical media literacy awareness and awareness of violence and marketing in videogames. Elizabeth Gregg, principal, and doctoral student has explained these procedures to me.

5) I understand that the study described above may involve the following risks and/or discomforts: My child may not like answering pre- and posttest questions about the five principles of critical media literacy and about violence and marketing in videogames.

6) I also understand that the possible benefits of the study are increasing knowledge of how students can learn critical media literacy skills and how children can learn to be more aware of marketing and violence in videogames.

7) I understand that Dr. Edmundo Litton who can be reached at EdmundoEdward.Litton@lmu.edu will answer any questions I may have at any time concerning details of the procedures performed as part of this study.

8) If the study design or the use of the information is to be changed, I will be so informed and my consent re-obtained.

9) I understand that my child has the right to refuse to participate in, or to withdraw from this research at any time without prejudice.

10) I understand that circumstances may arise which might cause the investigator to terminate my child's participation before the completion of the study.

11) I understand that no information that identifies my child will be released without my separate consent except as specifically required by law.

12) I understand that my child has the right to refuse to answer any question that they may not wish to answer.

13) I understand that if I have any further questions, comments, or concerns about the study or the informed consent process, I may contact
David Hardy, Ph.D. Chair, Institutional Review Board,
1 LMU Drive, Suite 3000, Loyola Marymount University,
Los Angeles CA 90045-2659
(310) 258- 5465
david.hardy@lmu.edu.

14) In signing this consent form, I acknowledge receipt of a copy of the form, and a copy of the "Subject's Bill of Rights".

Subject is a minor (age_____), _____

Mother/Father/Guardian_____ Date_____

Child Assent Form for Control Group

Teaching Critical Media Literacy Through Videogame Creation in Scratch Programming

I am doing a study to learn about how videogame companies use violence and advertising to sell videogames to children. I am asking you to help because we don't know very much about whether kids your age are aware of the violence and marketing being used to sell videogames. If you agree to be in my study, you are going to be asked some questions about videogames and advertising. An example question would be is videogame violence different than real life violence. You can ask questions about this study at any time. If you decide at any time not to finish, you can ask your teacher to stop. The questions asked are only what you think. There are no right or wrong answers because this is not a test. If you sign this paper, it means that you have read this and that you want to be in the study. If you don't want to be in the study, don't sign this paper. Being in the study is up to you, and no one will be upset if you don't sign this paper or if you change your mind later.

Your signature: _____Date_____

Your printed name: _____Date_____

Printed name of persons obtaining consent: _____Date_____

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