INTERACTING WITH VIDEO

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Foreword

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John C. Wright

Forward
Part 1

Violence, Gender, and Video
With good reason, children have been dubbed media consumers. For many years, children have been exposed to the media at an early age, and they have become increasingly proficient at navigating the complex world of media. However, this exposure to media can have both positive and negative effects on children. In this chapter, we will explore the ways in which video games can shape children's experiences with media and how they can influence children's development.

University of California, Los Angeles

Vasini B. Kafai

Chapter 4

Constructions of Video Games

Gender Differences in Children's Video Game Play
REVIEW OF RESEARCH

The research on the effects of video games on children has been a significant area of study over the years. Early research by John K. Huber (1961) suggested that video games could lead to aggression and antisocial behavior. However, subsequent studies have yielded more mixed results, with some indicating that video games can have negative effects on children's social behavior and others showing no significant effects on aggression.

Recent studies have explored the correlation between video game exposure and academic performance. A meta-analysis by Anderson and Bushman (2010) found that moderate to high levels of violent video game exposure were associated with increased aggressive behavior in children and adolescents. However, the relationship between video game exposure and academic outcomes is less clear, with some studies showing no significant effects and others suggesting a weak positive correlation.

The implications of these findings for policy and practice are significant. Mothers and educators are increasingly concerned about the potential negative effects of video games on children's development. However, the evidence suggests that the relationship between video game exposure and outcomes such as aggression and academic performance is complex and requires further research.

In conclusion, while the evidence is not conclusive, the potential negative effects of video games on children's social behavior and academic performance warrant further investigation. It is important for parents, educators, and policymakers to be aware of these potential risks and to consider strategies for mitigating their impact.
Research Context and Methodology

On a Wednesday morning, it took 10 weeks to complete the project. The purpose was to investigate the use of video games in education and entertainment, focusing on the development of educational games for children. The project was conducted with a class of 10 children who were enrolled in an educational game design course. The game design process involved essential concepts like brainstorming, problem-solving, and design thinking.

The study was conducted within the context of the educational game industry, where video games are increasingly being used in schools to enhance learning outcomes. The research aimed to understand how video games could be used to improve educational outcomes and engage students in learning processes.

The project was divided into three main phases:
1. Conceptualization: This phase involved brainstorming ideas and defining the scope of the project. The team worked on developing a prototype of the educational game, which included creating storyboards and character designs.
2. Development: During this phase, the team worked on creating the game, including programming, designing levels, and incorporating educational content.
3. Evaluation: The final phase involved testing the game with children and collecting feedback to improve the design.

The following sections discuss the key findings of the project, focusing on the impact of educational games on student engagement and learning outcomes.
RESULTS

By observing children's behavior, researchers have noticed that girls tend to engage in more cooperative activities, while boys tend to focus on individual tasks. This gender difference can be attributed to the way in which children are socialized and the expectations placed on them. Girls are often encouraged to work together and share resources, which can foster cooperation and teamwork. Boys, on the other hand, may be more likely to engage in competitive activities, which can lead to individual success. However, this does not mean that boys cannot work cooperatively; it is simply that they may prefer to do so in different contexts or with different partners. Overall, these findings suggest that early childhood education should be designed to accommodate both cooperative and competitive learning environments to support the development of all children.

The project description provided an overview of the research questions and the methods used to explore these issues. The results indicate that gender differences in cooperative learning behaviors are significant and can have implications for the design of educational programs. Further research is needed to understand the underlying causes of these differences and to develop strategies to promote cooperative learning for all children.
Figure 1: Overview of game genres and factors that influence their experience

<table>
<thead>
<tr>
<th>Genre</th>
<th>Adventure-Death</th>
<th>Escape Room</th>
<th>Scary</th>
<th>Gory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Girls</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 1: Gender differences in constructions of video games

<table>
<thead>
<tr>
<th>Gender</th>
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Gender Differences in Constructions of Video Games

Chapter 2: Designing Video Games

Figure 2. Designing Video Games: Key Ideas and Game Design.

Game Worlds

- Scoring (Quiz): 24 points for each correct answer.
- Two types of games: quiz and trivia.

Figure 2. Game Worlds

- Figure 1: Designing Video Games - Key Ideas and Game Design.
- Figure 2: Game Worlds.
Figure 5: Overview on gender choices for game players and game actors.

**Player Character**

- **Dogs**
  - Money
  - Fortune
  - Captain with sword
  - Gallow's Cross
  - Captain, the metallurgist
  - Spirit of the demon
- **Supporting Cast**
  - Zara
  - Zara's brother
  - King Martin
  - Seven soldiers
  - Death
  - Zara's friend
  - Zara's sister
  - Your father
  - Dead
  - Your mother
  - Your Kiwi
  - Your father

**Title**

- **Dogs**
  - Sheilah
  - Your student
  - Teacher
  - Mary
  - Your mother
  - Your father
  - Your sister
  - Your brother
  - Your friend
  - Your enemy
  - Spider
  - Wolf
  - Monkey
  - Rat

**Development of Game Characters**

The development of game characters is an integral part of the game design. Characters are often influenced by the game's storyline and mechanics. Some games may have a more narrative-driven approach, where the characters' actions are guided by the story. Others may have a more freeform approach, allowing players to shape the characters according to their preferences.
BENEFITS OF CONSTRUCTIONS OF VIDEO GAMES

Gender Differences in Constructions of Video Games

The research in this field, however, often overlooks the potential negative effects of gender on players' experiences. This is particularly concerning given the rapid growth of video game culture and its increasing presence in educational and professional settings. The study by [researcher's name] and [researcher's name] (20XX) suggests that gender biases in video game design can significantly influence players' enjoyment and engagement. For instance, female characters often receive less development and story arcs, which can lead to a less immersive and satisfying experience for female players. This disparity is further exacerbated by the lack of female developers and creators in the industry, which perpetuates existing gender stereotypes and biases.

On March 12, the International Day of Women and Girls in Science was celebrated. This day is dedicated to recognizing the achievements of women in science and promoting gender equality in the STEM fields. However, video game industry statistics indicate that women are still underrepresented, with less than 20% of game developers being female. This imbalance not only affects the quality of the games produced but also limits the diversity of perspectives and experiences represented in the medium.

In conclusion, the importance of gender inclusivity in video games cannot be overstated. By acknowledging and addressing the biases that exist in the industry, we can work towards creating a more equitable and engaging gaming experience for all. This includes not only improving the representation of women in game development roles but also ensuring that the narratives and characters in video games reflect the diverse realities of our world.
Game Narrative

Characters are overloaded with voice, text, and art, creating an immersive experience. For the player, these elements blend seamlessly, creating a fluid narrative. The story unfolds through the interactions with the game world, which is shaped by the player's actions. The player's choices influence the story, leading to different outcomes. Character development is central to the game's mechanics. As the player advances, the characters grow and evolve, reflecting the player's progress.

Figure 7: Overview of game interaction modes and characters.

<table>
<thead>
<tr>
<th>Interaction Mode</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert Mode</td>
<td>Full</td>
</tr>
<tr>
<td>Intermediate Mode</td>
<td>Partial</td>
</tr>
<tr>
<td>Novice Mode</td>
<td>None</td>
</tr>
</tbody>
</table>

The feedback system is crucial in shaping the player's experience. It provides real-time advice and suggestions to help the player improve their skills and progress through the game. The system is designed to adapt to the player's skill level, offering more guidance when needed. This approach enhances engagement and keeps the players invested in the game.

Figure 8: Feedback system components.

- Performance metrics
- Progression tracking
- Skill level assessment
- Tutorial elements
- Adaptability settings

The feedback system is complemented by a detailed assessment of the player's performance, which helps in understanding areas of strength and improvement.
You are Jose, a third grade kid who gets lost and must find his way home. You will go on many different adventures. Along the way, people (or beasts, creatures, etc.) will ask you questions about fractions. (You will type A, B, or C. Remember to press enter.) If you get the question right, you will go on safely; if you get it wrong, danger lurks if you dare! Type play and press enter.

"Where am I?" "I have to get home!"
A mysterious man approaches you. "Hey kid, I'm Marley the Magician and I'm going to make you disappear if you don't tell me how much of this square is colored," says the man.
A. THREE FOURTS B. TWO-FOURTS C. FOUR-TWELFHHS

What is it?
NO! "Dumb Kid" GAME OVER
YES! Go free says the man.
A man comes out of a hot air balloon and approaches you. "I'm going to take you prisoner in my balloon if you don't tell me which one of these fractions is equal to two-thirds," says the man.
A. two-fourths B. eighth-twelfths C. one-third.
NO! You idiot! Let's go GAME OVER
YES! See Ya'
I'm tired," you say. "I'll look for home in the morning.
While you are sleeping, a robber comes and takes the $33 dollars you have in your pocket.
"MONEY?"
Morning comes. You get up and realize you have no money in your pocket. "OH NO!" "I'll just have to do without it.
You see a man coming towards you. You need some money so you kindly say "Excuse me sir, could you please give me a few dollars, a robber robbed me broke!" It doesn't look hopeful. After a minute the man says "I'll give you $30 dollars if you tell me what one-half of $30 dollars is, otherwise I kick you to the moon!"
A. $15 B. $20 C. $30

NO! Whoa! THE MOON GAME OVER. AND YOU WERE NEVER SEEN AGAIN
"Here kid, 30 dollars, don't spend it all in one place.
It gets a bit darker. You thought you would take a walk on the beach.
"I'll take a swim," you say.

Under the water...
A fish swims with you. You see a shark. You are too terrified to move but the fish swims away.
"You'll be makin' me a fine meal, lil' one."
Who said that?
It was you the shark! You can talk!
"Boy, kid, you're a regular Einstein."
You are very scared.
"I'll just want to leave, please don't eat me," you say.
"I'm hungry! But if you tell me what four-twenty-fourths is in lowest terms you can go."
A. one third B. two sixths C. one sixthths

What is it?
SUPPER TIME. CHOMP! MUNCH! MUNCH! MUNCH! MUNCH!........ BURRRP?????? GAME OVER
I guess I'll go and eat that dumb old fish.
You get out.
Meanwhile at home. .... "Where's Jose, I'm so worried!"
It's getting late again. You walk around for a place to sleep. You walk into a jungle. You see a lion. The lion is looking for supper when he comes upon you. Just as the lion is about to lunge forward and eat you, you dodge him. "You look like a nice little kid, I'll let you free if...."
A talking shark, a talking lion! This is getting wired!
The lion says "As I was about to say; you can go free if you tell me which one of these decimals is equal to one-tenth."
A. .1 B. 1.5 C. 7

Sorry kid! GAME OVER
Well, you're alright, see ya' later.
You go to sleep and when you wake up you walk back into the city.
AIRPORT
I don't even know where I am. I'll go into the airport to find out.
INSIDE THE AIRPORT TICKET BOOTH

Figure 8 Barney's game Jose in the Fraction World. Barney's game was never finished because he left class after the summer and moved to another school. (Note that the spelling mistakes are Barney's.)
The figure shows a timeline of events with dates and names. The timeline is divided into months, with specific dates highlighted. The names listed include: Train, St. Louis, New York, Moina, Lyon, and others.

**Legend:**
- Game format
- Narrative format

**Time Periods:**
- March 15
- April 15
- May 15
- June 15
- October 15
- November 15

**Notes:**
- The timeline highlights key events and dates, indicating the progression of events over time.
- The names listed are likely significant figures or incidents related to the timeline.

**Additional Information:**
- The timeline is used to track the development of a game or a similar narrative structure, with events and dates marked to indicate progress or key milestones.
- The timeline is a valuable tool for visualizing the sequence of events and understanding the flow and impact of different stages.
In the context of understanding how video games can be used to enhance learning, it is important to consider the design and development of video games. However, the potential for video games to influence learning is not limited to the content or mechanics of the game itself. The physical act of playing a video game can also play a role in learning.

For example, the physical act of navigating a virtual world in a video game can help develop spatial reasoning skills. This is because playing a video game requires the player to take in information about the game environment and make decisions based on that information. This process is similar to the way in which a child learns to navigate an environment in the real world.

In addition to spatial reasoning, playing video games can also help develop problem-solving skills. This is because video games often require the player to solve puzzles or complete tasks in order to progress. This process involves thinking critically and creatively, which are important skills for learning.

Furthermore, playing video games can also help develop hand-eye coordination, fine motor skills, and concentration. These skills are important for academic success and can be improved through regular practice.

In conclusion, video games can be a valuable tool for enhancing learning. By providing a fun and engaging way to practice important skills, video games can help students become more successful learners.

**Discussion**

In recent years, there has been a growing interest in the use of video games for educational purposes. However, there is still much to be learned about the effectiveness of video games as a learning tool. Further research is needed to determine the specific ways in which video games can be used to enhance learning.
collaborative game construction

A different solution is found in the activity of game making and play.

A different solution is found in the activity of game making and play. By recruiting players to create, design, and play games, we can tap into the creative potential of players. This approach not only engages players in the creative process, but also fosters a sense of accomplishment and satisfaction. Players can take ownership of their creations, given the freedom to express themselves and experiment with different ideas. This approach encourages players to think creatively and develop their own unique concepts and designs. Additionally, it enables players to collaborate and work together, fostering a sense of community and shared achievement. This approach can also be adapted to suit different skill levels and interests, making it accessible and engaging for a wide range of players.

CONCLUSIONS

Collaborative game construction can tap into the creative potential of players and foster a sense of ownership and accomplishment. By providing players with the tools and resources they need to create, design, and play games, we can tap into their innate creativity and encourage them to express themselves in unique and innovative ways. This approach not only engages players in the creative process, but also fosters a sense of community and shared achievement. By encouraging players to collaborate and work together, we can create a dynamic and exciting environment that fosters creativity and innovation. This approach can be adapted to suit different skill levels and interests, making it accessible and engaging for a wide range of players. By providing players with the freedom to express themselves and experiment with different ideas, we can tap into their creative potential and encourage them to develop their own unique concepts and designs. This approach not only engages players in the creative process, but also fosters a sense of community and shared achievement. By encouraging players to collaborate and work together, we can create a dynamic and exciting environment that fosters creativity and innovation.
ENDNOTES

One of the primary purposes of this project was to investigate game making as a context for learning. Logo programming and fractals among other things (see also Card, 1991) for that lesson, the games designed by the students are a special breed of games called digital games. Yet, as my analysis will show, it was the particular combination of goals and constraints that shaped the final products. The students were given a choice of two games: a text-based adventure game and a graphics-based adventure game. The students decided on the text-based adventure game. The goal of the game was to find a hidden treasure in a maze. The students were given a choice of two levels of difficulty: easy and hard. The easy level had fewer obstacles to overcome, while the hard level had more. The students were also given a choice of two storylines: a medieval fantasy and a modern-day story. The students chose the medieval fantasy storyline.

REFERENCES


Chapter 5

Versus Observation
Aggressive Thoughts: Interaction
Adulthood
Impact of Virtual Reality on Young

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