

Developmental Theory Meets Children's Television

A thesis submitted by

Julia P. Gervais

in partial fulfillment of the requirements for the degree of

Master of Arts

in

Child Study and Human Development

Tufts University

May 2023

© 2023, Julia P. Gervais

Advisor: Julie Dobrow

Abstract

This study investigates interviews with 12 experts who work in children's programming in order to determine how content creators integrate their knowledge of children's social-emotional development into the production of children's media. These participants included writers, producers, and researchers who have worked on a variety of preschool television programs, primarily associated with PBS Kids and WGBH. The interviews were transcribed and analyzed using Qualitative Thematic Analysis. The purpose of this study is to further explore how and understand the ways in which social-emotional learning can be written into television scripts for preschool-aged children specifically. The major research question is: in what way is what we know about preschool-aged children's social-emotional development translated into television programs? The results show an agreement about how social-emotional learning is at the core of all content. Even if it is not the primary curriculum, children's social-emotional learning is considered in many different ways when creating children's programming. This includes, but is not limited to, the use of formal features and capturing children's attention, developing characters, creating interactive features, and writing narrative stories.

Key words: Social-Emotional Development; Social-Emotional Learning; Children's Television; Content Creators; Script Development; Formal Features; Formative Features; Peripherals; PBS Kids

Acknowledgements

I would first like to thank the 12 individuals who willingly found time to be interviewed despite their busy schedules. Without them, this study would not be possible. I am grateful for their enthusiasm and support of my research interests and their thoughtful responses to all of my questions.

Thank you to my admirable committee. To my advisor and mentor, Dr. Julie Dobrow, thank you for introducing me to the world of children's media and convincing me to further explore my interests through this thesis. I appreciate all of your encouragement and kind words along the way. To Dr. Mary Casey, thank you for having faith in me and pushing me to think big. Dr. Deborah Donahue-Keegan, thank you for joining my committee and providing insightful feedback.

I would also like to acknowledge my friends and family. To my fellow cohort members at EP, from the very first day of orientation I knew I would make lifelong friends in this program. The support we have all showed each other these past two years is really special. To my parents and my brother, my very first supporters, I would not be where I am today without you. And lastly, to my boyfriend, Nick, thank you for willingly listening to me ramble on about my findings and for your consolation and support during times of stress.

Table of Contents

CHAPTER 1: INTRODUCTION	6
Background.....	6
Research Problems.....	7
Aims, Objectives, Questions	8
Significance	9
Structure.....	10
CHAPTER 2: REVIEW OF LITERATURE.....	10
Social and Emotional Development in Preschool Children.....	10
How Children Can Learn From Television	11
<i>Narrative Versus Educational Content</i>	12
<i>Peripherals</i>	14
<i>Television Attention, Comprehension, and Retention</i>	15
How Can Research be Facilitated by Content Creators?	17
Content Creators' Use of Current Research	18
<i>Sesame Street</i>	18
<i>Blue's Clues</i>	21
CHAPTER 3: METHODS & MATERIALS	22
Participants.....	22
Procedure	22
Measures.....	22
CHAPTER 4: RESULTS	23
It's Already Baked In!	23
<i>Funding</i>	23
<i>Content</i>	24
<i>Research</i>	25
<i>Challenges</i>	27
Holding Their Attention.....	28

Elements of Production That Are Important..... 31

Lights, Camera, Animation!..... 34

The Term That Shall Not Be Named..... 37

CHAPTER 5: DISCUSSION38

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH42

REFERENCES45

APPENDIX47

Chapter 1: Introduction

Since its invention, the television has captivated audiences of all ages, especially children. In modern times, with the increase in technological development, children's media is readily available for their viewing. When the goal is to produce the best-quality children's television show, there are many factors that researchers within the field need to take into consideration. First of all, the research itself is a long procedure. Additionally, although we may not realize it at first, there are a lot of processes going on within children while they are consuming television. An understanding of these processes can lead to better products. When you understand the way a kid thinks, it is easier to make content that they can understand and enjoy. Researchers within the fields of children's media and child development have aimed to discover more about these processes of television consumption. It is important to have an understanding of how children process what they are seeing on screens and how much of it they retain and comprehend. With more knowledge about how children interact with television, professionals in the industry can gain a better understanding of how to provide the best possible programs they can for children. From existing research, we know that some people behind popular television series have used formative and summative evaluation to establish where there is room for improvement (Anderson et al. 2009; Fuenzalida 2017; Crawley et al. 1999; Rasmussen et al. 2016). What I want to further investigate is both how social-emotional information can be incorporated into children's television and to understand more about the ways in which this can be written into television scripts for preschool-aged children specifically.

Background

Research on children's television is particularly interesting in today's times. For the last three or so years, the COVID-19 pandemic has caused an influx of consumption of children's programs. In other words, screen time has significantly increased, which we can see from the

following two studies. Common Sense Media, a nonprofit organization committed to reviewing and rating media and technology and funding research on the role of media in the lives of children, has found that on average, children from birth to age eight use about two and a half hours of screen media per day (The Common Sense Census, 2020). Seventy-three percent of this screen media consumption is television/video viewing (shown in Figure A of the Appendix). Stucke et al. 's study from 2022 found that children ages three, four, and five (94 % of whom were at home in their parents' care) spent an average of 1.2 hours of 17 average hours awake watching television. This means that children regularly spent 7.06% of their day watching television (Stucke et al. 2022). What this tells us is, even with the increase in available platforms for children to consume media, children are still watching television— and a lot of it. Given that television is such an important part of kids' lives and given what we know about how much kids learn from television, it is important to understand both how social-emotional information can be portrayed in children's television and to understand more about the ways in which this can be written into scripts. Social-emotional learning (SEL), as defined by the Collaborative for Academic, Social, and Emotional Learning (CASEL), is the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions (CASEL, 2023). Throughout this thesis, this is the working definition of SEL.

Research Problems

There is a lack of research that targets exactly how social-emotional development plays a role in how a television script is written. Much is known about how children pay attention to, retain, and comprehend television, and much more is known about social-emotional

development. The problem is that there is little known about the combination of these concepts. When it comes to the development of scripts, a scriptwriter who wishes to write for children must be knowledgeable with the audience's goals and needs, their cognitive capacities, child-friendly humor standards, the fundamentals of writing for puppets and animation, and more. It helps to have the ability to create captivating stories that appeal to children's hearts and to adore the characters that they adore. From formative and summative research/evaluation, content creators and researchers have the ability to assess how children are interacting with their program. This research is used to further develop content and make it as appealing as possible to children. There are few television networks that use this kind of research to make high-quality content, and we know that only a handful of networks follow an educational curriculum. What else is missing is a detailed analysis of developmental theories that specifically have an influence on the creation of content for children's television shows. The interviews included in my study will help us get an insider's view of how developmental theory and children's television are intertwined. Through examining common themes from these interviews, a detailed analysis is possible. This kind of knowledge would be of great value to people in the field of children's television because it could help provide insight into how children would best benefit from television.

Aims, Objectives, Questions

The purpose of this study is to gather information from children's television content creators, producers, and researchers to gain knowledge about how current research on children's social-emotional development is incorporated into television scripts for preschool-aged children. My goal is to get a better understanding of how these professionals judge whether a show is educational or not and how, if at all, it follows a curriculum. If a show does have a curriculum,

how is that curriculum developed, and what kind of learning outcomes may be expected from a show? My research questions are as follows:

1. In what way is what we know about preschool-aged children's social-emotional development translated into television programs?
2. Given that children are exposed to and learning from a large amount of media content, how can we ensure that best practices are being used to produce television?

The hypotheses are:

1. Developmental theory plays a critical role in the process of creating educational television.
2. The combination of formative and summative research, the use of peripherals and formal features, and knowledge of developmental theories would result in the best possible content for television.

I will evaluate how children's media producers test for the effectiveness of social-emotional content prior to a show's distribution and the research supporting this testing through interviews with these content creators and researchers.

Significance

This study will contribute to the body of knowledge on the development of scripts for children's television. While there has been a fair amount of research about how best to infuse educational content that is geared towards kids' academic or cognitive gains, there has been relatively less work done on how to infuse educational content about social-emotional learning. This study will help address the current shortage of research in this area and it might be of value to content creators who are attempting to integrate social-emotional content into shows for preschoolers.

Structure

The study's context was provided in Chapter One. The value of this type of research has been argued as well as the research's objectives and questions. In Chapter Two, I identify current literature about preschool-aged children's social-emotional development, theories that underscore how children learn from television, and empirical literature on how what we know about social-emotional development gets incorporated into actual television programs. For this reason, I discuss the current literature that describes how children can learn from television and how prosocial television can be incorporated into scripts. I aim to dive deeper into how content creators can incorporate this research into their television scripts. I will review some key theories as well as empirical evidence about this topic. The theoretical framework will be described in Chapter Three. The decision to use a qualitative thematic analysis will be mentioned, and the larger research design and its drawbacks will be covered.

Chapter 2: Review of Literature**Social and Emotional Development in Preschool Children**

We know that social and emotional development is a cornerstone in the lives of young children. The process of gaining social and emotional skills is a critical part of a child's development. For preschool-aged children, these goals include, but are not limited to, building relationships with others, developing a sense of self, and being able to self-regulate. Included in these goals is the ability for a child to engage in a positive relationship with both adults and other children. Additionally, children must be able to acknowledge that they are an individual with distinct opinions and feelings. They should also learn how to manage their impulses and express and regulate their own emotions (Rhode Island Early Learning Development Standards website).

We know that children are oftentimes influenced by the media they consume. Frequently we hear about the negative impacts that violent video games and other media have on children, but what about positive impacts from nonviolent and even educational resources? In their 2010 study, Greitemeyer and Osswald discuss positive effects of exposure to media on social behavior. They state that there is evidence that television with prosocial content fosters prosocial behavior (Greitemeyer & Osswald, 2010). Further, Rasmussen et al. (2016) discuss how exposure to the television show *Daniel Tiger's Neighborhood* instilled lessons on empathy, self-efficacy, and emotion regulation (Rasmussen et al., 2016). After viewing 10 episodes of *Daniel Tiger's Neighborhood* and participating in active mediation (parent-child conversations specifically about media and media content), the children in this study exhibited greater empathy, as reported in surveys filled out by parents (Rasmussen et al., 2016). From these two studies we can conclude that there is a positive relationship between exposure to prosocial media and social behavior. What I would like to dive deeper into is whether content creators are incorporating this research into their television programs, and if so, how.

How Children Can Learn from Television

To know how to provide the best television content for children, we must first understand how they integrate the programs they are viewing. Very few mechanisms have been suggested to explain how children take in and understand the educational components of television. Shalom M. Fisch proposes a systematic model, labeled the Capacity Model, to explain this process (Fisch 2000). This model is composed of three components: processing of narrative, processing of educational content, and distance. These components are explained in the following paragraphs.

Narrative Versus Educational Content

Fisch's model consists of a theoretical construct with three basic components: processing of narrative, processing of educational content, and distance. Although both narrative and educational content are present in children's television, it is important to note that they are two separate concepts. The term "narrative" refers to the story that is told in the program, including the events that take place, the objectives that the characters establish and accomplish, etc. The term "educational content" refers to the underlying educational ideas or messages that a program is meant to convey. Declarative knowledge (such as historical facts) and procedural knowledge are both examples of educational content (e.g., problem-solving strategies) (Fisch, 2000). Distance describes how closely or distantly related to the story the educational content is. The term can be better explained in this paragraph from Fisch (2000).

Distance can be conceptualized in terms of the role of the educational content in the causal chain or hierarchical structure of story events. Specifically, a small distance between narrative and educational content corresponds to educational content that is embedded in causal-chain events (i.e., events that are causally connected to a large number of subsequent events) or at relatively high levels in the hierarchical structure of the story. A large distance corresponds to educational content that is embedded in dead-end events (i.e., events that do not forward the story) or at lower levels in the hierarchy (page 73).

Researchers and content creators have used this model to determine the types of aids that enhance learning from television programs.

Aladé and Nathanson (2016) have also investigated Fisch's Capacity Model when it comes to processing television content. Much of their work is centered around working memory. When processing television content, working memory is limitedly utilized. Children use working memory to temporarily process information. If the exigencies of processing a television program surpass the capacity of working memory, then comprehension is hindered (Aladé and Nathanson 2016). Additionally, they believe that "familiarity with certain situations and settings can

facilitate comprehension of new information that matches easily into that prior knowledge structure” (Aladé and Nathanson, 2016, pg. 410). This means that if a child sees something on television that they have seen before, they are more likely to have an easier time processing it and understanding what it means.

Brain-imaging research has shown us what is going on in a child’s mind while they are watching television. According to Anderson (2007), specific brain regions that are selectively stimulated by different visual stimuli are used by a brain-based explanation of video comprehension. In the context of Anderson's research, those stimuli were activated if they took place in the rich and intricate context of a Hollywood film that was shown on a video screen. Each subject processed the same complicated stimuli using the same neural networks at the same times. The fact that 17 areas of the brain were used while watching television supports the idea that video comprehension requires a great deal of cognitive energy, which we can assume begins at an early age (Anderson, 2007).

In a prosocial television show, it is likely that the main characters will learn lessons relating to moral reasoning. Exposure to these kinds of lessons can have a lasting impact on children’s judgments. Cingel and Krcmar (2019) discuss the phenomenon of “social persuasion”, which is the theory that “individuals’ intuitions are influenced by the moral judgments of others, potentially including media” (page 357). Children's basic instincts about fairness and caring may become even more salient in their minds if they are exposed to moral content on television that encourages consideration of others' thoughts and feelings in general and promotes evaluation of whether actions were fair and caring. According to this theory, repeated exposure to this kind of prosocial television can affect moral awareness (Cingel & Krcmar, 2019). In summary, if a child

is watching television with morally focused content, the chances are high that they will pick up on the themes being promoted in the show.

Peripherals

Producers of children's television have been able to add more "peripherals" to their program due to the expansion of devices that children can access. Digital games, applications, podcasts, and books that are linked to the program and enhance its brand are considered "peripherals" (Dobrow, Class Lecture #9, November 9, 2022). In other words, a peripheral is non-television content that references a television program. Television programs have expanded to children's smartphones, tablets, video games, and computer monitors. Therefore, it's crucial to look at both the shows themselves as well as the full "brand" and their peripherals. Media peripherals have become more and more well-liked among children and their families in recent years. Because of their increasing popularity, peripherals, especially those targeted towards children, have been developed in increased amounts. One peripheral that is particularly well-liked is podcasts. According to a study by Kids Listen (2021), more than 75% of children who listen to podcasts are "active" listeners who concentrate only on that material while it is playing (Kids Listen, 2021). Additionally, 33% of children listen to podcasts for educational objectives, while 49% do so for enjoyment and entertainment (Kids Listen, 2021). This highlights the enormous potential of podcasts as a teaching tool. Although we know that not all podcasts are peripherals, we can use this information to better understand the increasing popularity of podcasts and why children's television creators would want to use them.

Online games and mobile apps have been the subject of extensive research, but parents and educators still have mixed feelings about their use. Most studies on how children's development is impacted by online games focuses on addiction, exposure to violence and sex,

and its detrimental effects on physical and mental health. Meanwhile, educational applications have garnered somewhat better feedback. The Joan Ganz Cooney Center at Sesame Workshop conducted research that revealed an increase in the number of kids using mobile apps on their parents' devices as young as age three. Major children's entertainment companies have flooded this market, the iTunes store has developed a section specifically for kids' apps, and educational media giants like Sesame Workshop and PBS now have a ton of kid- and parent-friendly apps available (Chiong & Shuler, 2010). Even though there is evidence of a surge in this market, it is still regarded as an "emerging technology" (Goodwin & Highfield, 2012) and there hasn't been much investigation into the efficacy of these mobile apps. Ultimately, there is little data on how media peripherals affect learning. These results, however, are encouraging and show that children can benefit from media peripherals. In order to better understand how children learn through media peripherals, what they learn from them, and how to construct media peripherals to structure children's learning, further research in this field is required.

Television Attention, Comprehension, and Retention

New developments in child psychology and an increase in technological devices has led to greater understanding of children's attention and comprehension of television programs. Media comprehension is a "complex computation task" (Anderson, 2007) and many cortical areas are activated during the process. Contrary to early beliefs about television viewing, it is now known that television viewing is not a mindless activity. With the aid of fMRI, Anderson (2007) found 17 brain areas in activity when adults and children watch visual scenes from movies (page 80).

Additionally, each child brings their own perceptions and attributions to the viewing process. Because media provides complex perceptual, cognitive, and emotional cues, there is no

guarantee that each person will process them similarly (Anderson, 2007). When they see a demonstration similar to the way they think, they have a greater appreciation for what they are watching. Children are most attracted to characters they can relate to. A relatable character helps a child understand and take in the world. When television shows encourage imaginative thinking and exploration, these concepts are often reflected in the way children play. J. Singer and D. Singer (2005-2006) would say that pretend play is a precursor to narrative consciousness. Children's understanding of storytelling can be seen through pretend play. During this kind of play, they are actively using their imaginations to come up with a narrative for whatever they are playing. Much about what children know can be seen in the way they play. In summary, children who use storytelling during imaginative play are more likely to have a better understanding of narrative (J. Singer & D. Singer, 2005-2006).

One of the most successful ways for a television show to capture a child's attention is through the use of formal features. These are key determinants for children's attention to the screen and they prompt kids to investigate the subject matter (Fuenzalida, 2017). The formal features used in a television show can include a multitude of things such as colors, animation, special effects, music, voices, sound effects, rhyming, alliteration, and asking answerable questions (Dobrow, Class Lecture #2, September 14, 2022). Formal features should suitably match age-appropriate perceptual development in children (Fuenzalida, 2017). For example, a middle-school aged child may not appreciate a show with nursery rhymes or lullabies, whereas a preschool-aged child might.

Oftentimes children and adults alike tend to multitask or have television on in the background while doing something else. Anderson and Pempek (2005) make the distinction between foreground and background television. Foreground television is that which is intended

for very young children and to which they generally pay attention. Foreground television might theoretically educate very young children and have a positive effect in addition to or instead of the impact that is often believed to be detrimental. The term "background television" describes programming that young children don't actively watch and that isn't specifically made for them. It is difficult to think of any way that background television could be beneficial (Anderson & Pempek, 2005). One of the most common ways to gather information about television consumption is to survey parents about their children's television use. A problem that can occur through this method is how (if at all) parents distinguish between foreground and background television consumption. Cognitive meaningfulness of television is an important driver of attention in children as young as 24 months, and we can conclude that foreground television would be the only way to provide cognitive meaningfulness in terms of viewing television.

How Can Research Be Facilitated by Content Creators?

If we can understand the process of extracting educational components, then we can make sure that our television shows provide the right resources to make that happen for children. For example, television viewing uses both auditory and visual information simultaneously, and it is not self-paced, unlike what happens when someone is reading (Fisch 2000). While reading, a person can review material they are having difficulty understanding. While watching television, the comprehension process must keep up with the pace of the program itself. Obviously, preschool children are unable to read yet, but this concept can be applied to my study because content creators can use this knowledge about comprehension to slow down the pace of a show or add time for children to reflect on a scene they just viewed. Whether this is done through the characters pausing to engage with the viewer by asking questions, or through similar tactics, there is potential for more time to process.

Coyne et al. (2017) state that the way we measure prosocial media should more closely mirror the way that developmental scholars measure prosocial behavior, which is with an ever-increasing eye toward the multidimensional nature of prosocial behavior. Their findings show that prosocial media was positively associated with prosocial behavior and empathic concern and negatively associated with aggression. These findings suggest that prosocial media has a stronger immediate impact on behavior as opposed to a lengthier effect.

Content Creators' Use of Current Research

Sesame Street

It is important to note which companies are incorporating this existing research into their television network (see Figure B). The first educational children's program to combine cutting-edge production methods and a comprehensive, methodically created curriculum was *Sesame Street* (Anderson et al. 2000). Mares and Pan's 2013 meta-analysis is the first comprehensive assessment of *Sesame Street's* success, based on studies of the program's effects carried out in 15 countries. It looks at "how children outside of the U.S. may learn from viewing *Sesame Street* in diverse social, political, and economic circumstances — including in some of the world's poorest regions" (page 140). From its findings, the meta-analysis suggests the idea that television can be used as a possible source of informal early education. The success of the program can be credited to its efforts in research within the field of children's television. For example, The Children's Television Workshop (CTW) approach, which places an emphasis on the incorporation of formative research into the creative process and the application of summative research to assess the educational impact of the show after it is broadcast, shapes international co-productions of the show (Mares & Pan, 2013). For the millions of preschool-aged children across the world who access *Sesame Street* via their televisions, the positive effects on cognitive, learning, and

socioemotional outcomes constitute actual educational benefits. Because of this, the meta-analysis goes as far as claiming *Sesame Street* to be “an enduring example of a scalable and effective early childhood education intervention” (page 149).

Only a few years after the show aired, studies on *Sesame Street* already began to be published. Lesser, (1972), suggests that *Sesame Street* has made an effort to offer an additional educational experience to aid in preparing kids for school by piquing their interest in learning. Its particular objectives include training in: “1) Symbolic Representation — letters, numbers, geometric shapes (2) Cognitive Process — perceptual discrimination, relationships, classification, ordering (3) Reasoning and Problem-Solving, and (4) ‘The Child and his World’— concepts regarding the self, social units, social interaction, and the man-made and natural environment” (Lesser, 1972, page 233). The teamwork between the creative producers and the writers behind *Sesame Street* is what led to the success of the show. The challenge for creative producers and writers was to develop learning objectives that could be translated into useful television programming. They wanted to combine production and research efforts into a single force that worked to continuously enhance the program. In addition to learning how to make insightful observations about what did and did not work with children, researchers also learned how to communicate this knowledge to the producers. The producers gained knowledge on how to take in, make use of, and collaborate with the research team.

Based on the existing studies on the program, we know that *Sesame Street* has an impact on topics like children's attention, literacy, math skills, and spreading prosocial messages, in addition to its formal features as they relate to children’s attention (Fisch et al.,1999). The review of 30 years of research on *Sesame Street* written by Fisch et al. (1999) discusses findings on the following areas: School Readiness; Social Development; and Coproductions in other Countries.

Much of what we know about *Sesame Street* is about school readiness and academic gains— what is useful to my study from this review is its findings on social development. The broad goals developed by *Sesame Street* producers that are related to social interactions and social units are as follows: Differences in Perspective; Cooperation; Behaving by Rules and Recognizing Fairness and Unfairness; Identifying the Role of Family and Individuals from One's Neighborhood, City, or Town, Knowing What Their Responsibilities Are; and Recognizing the Form and Function of Institutions that Children May Encounter (school, airport, post office) (Fisch et al. 1999). In its third season, internal production and research teams made a significant effort to revise the definition of social behavior in the show and give it more importance, especially in the area of cooperation. The social development objectives for season 30 of *Sesame Street* were revised with input from numerous esteemed professionals. (See Figures B and C in the appendix). According to several studies, watching prosocial episodes of *Sesame Street* was linked to prosocial learning effects specific to the program but not to enhanced prosocial activity during free play. Another study revealed that regardless of whether watching was followed by related activities and discussion, prosocial behavior during free play rose after viewing the prosocial segments. Some examples of the topics related to social development that *Sesame Street's* episodes discuss include dealing with death; divorce, love, marriage, and pregnancy; and race-relations (Fisch et al. 1999). This information is rather out of date, and we could benefit from a study of a similar sort based on research on the program conducted in the thirty years following its publication. To wrap up this section on *Sesame Street*, a quote from Heintz & Wartella (2012) does an amazing job of summarizing the efforts of the people behind *Sesame Street* to provide the best quality television show for children. They said:

Dr. Fuenzalida begins his article by asking if media can become 'a key place to think about development, combating poverty, and working for equity'. This question was

famously addressed in the U.S. by the creators of the long-running program, *Sesame Street*, which began airing on U.S. public television stations in 1969. The success of this program to address both the academic and the socio-emotional needs of children has spurred more than 20 international co-productions of this program, as well as the creation of hundreds of educational children's series (page 22).

Blue's Clues

Like *Sesame Street*, formative research is an essential part of the development of each episode of *Blue's Clues* (Anderson et al. 2000). Since its introduction, the creators of *Blue's Clues* have encouraged "systematic academic research" on the program and have provided funding to support the research (Anderson et al. 2000). The 1996 television series *Blue's Clues* was created with consideration for the inner capacities of the young viewers at home. The problems and questions in this program are presented to the audience at various degrees of difficulty to account for the audience members' diverse comprehension and response abilities (Anderson, 2004, as cited in Fuenzalida, 2017). Both programs are great examples of programs that use current research on children and media to further enhance their content.

Crawley et al.'s study (1999) analyzes the relationships between different aspects of learning and repeated exposure to an episode of *Blue's Clues*. Based on formative research done by the producers, the researchers chose the episode used for the study because it was designed to be fully understandable but intellectually challenging to 4-year-olds. Their theory was that repetition should make the program more comprehensible which would lead to increased attention. Many times during the presentation, the audience is asked to "help" solve different challenges. It was hoped that giving viewers a chance to contribute would make them concentrate on the show more. Researchers were able to observe the kids as they watched the episode and concluded that solving the tasks fosters a sense of mastery that keeps kids interested and entertained. According to the study's findings, visual attention stayed steady throughout time. With each repetition of an episode, verbal and nonverbal interactions, particularly

responses and imitations, significantly increased. Children's comprehension improved, and they applied a demonstrated problem-solving technique more frequently to both the program's shown and unshown problems.

Chapter 3: Methods & Materials

Participants

In total, 12 individuals from the United States participated in this study. These participants were chosen because of their expertise in the field of children's media and content creation and/or research within the field. Participants included writers, producers, and researchers who have worked on a variety of preschool television programs. They were recruited via email. Participants were given an option of identifying themselves by name. I have used pseudonyms for those who did not want to be identified.

Procedure

These interviews were conducted over Zoom and recorded in order to be transcribed. The duration of these interviews lasted between 30 minutes to an hour and were conducted by the principal investigator. The full list of interview questions can be found in Figure D of the Appendix. The purpose of these questions was to offer some structure and reliability to the qualitative information collected. However, all questions were open-ended, and there was flexibility to how they were asked and answered.

Measures

Using qualitative thematic analysis, the interviews' transcriptions were examined for several themes. With the participants' consent, direct quotes were used. The perspectives of people who may decline to allow their comments to be used in direct quotes were compiled and presented collectively.

Chapter 4: Results

After conducting 12 interviews, I reviewed and transcribed the transcripts and from them extracted some of the major themes that emerged from my data. The results from the analysis of these interviews are reported thematically. Each theme is labeled as a subheading and under each theme are examples and quotes from participants.

It's Already Baked In!

Arguably the most critical piece of information that came from these interviews was that the majority of my respondents reported that social-emotional learning is already baked into their mission when it comes to creating content. A good majority of the participants either work for GBH, the primary public broadcast system (PBS) member television station in Boston, and/or PBS, or work at other production companies that make content that is broadcasted by GBH and PBS. The distinction between GBH and PBS was confusing to me, but one participant, who I will call Selena, better explained it by saying:

GBH in Boston is a member station, and they are the largest group producer of shows in the system. But then there are other producers who are not part of the PBS system like Sesame Workshop, who creates *Sesame Street* and other shows, or Fred Rogers Productions in Pittsburgh who do *Daniel Tiger*, etc.

These are separate companies, but they are affiliated with each other.

Funding

One thing I did not know before this study is that particularly for shows that are done for PBS Kids and its affiliates, curriculum development is an essential part of how these companies procure funding. A lot of public broadcasting is funded through grants from the Department of Education or other sources that then have different levels of requirement around curriculum and evaluation. According to Nicole Velez, Senior Producer at GBH Kids, “what we do at GBH really takes a strong role in making sure that the content we are creating is heavily based in

curriculum.” Following curriculum when creating content is a main focus for these producers, yet what I wanted to know about was social-emotional learning and the curriculum surrounding that in particular.

Content

When digging deeper into how social-emotional development is incorporated into creating children’s television, a common answer was that even though areas regarding social-emotional development may not be the primary curriculum for a show, social-emotional learning is always present in a show just through the story-telling and general premise of the shows, particularly with the target age group of preschool children. One of the participants, who I will call Alison, stated that “for our particular programming, social-emotional learning is kind of at the core of all of our content. So even if it's not the primary curriculum goal, there's usually some layer of at least modeling social and emotional learning skills.” She said that this is done organically through storytelling. Many of the stories being told in preschool-aged television shows naturally speak to the world of a preschooler. Social-emotional learning is at the heart of telling narrative stories and building character development. Dorothea Gillim, a Creative Director at GBH Kids, goes as far as saying “it's really hard to even write a character-driven story for a preschooler that doesn't touch on social-emotional learning in some way.” Even for shows that don't have a social-emotional curriculum (or shows that don't follow any curriculum at all) there is going to be an organic intertwining of those concepts. When developing shows and writing scripts, creating relatable characters that are going through relatable experiences ensures that social-emotional subjects will be present.

One of the participants used to work at Disney Junior and another used to work at Nickelodeon. They both mentioned that these companies also follow curricula. Their curricula

varied in terms of concrete, academic learning, but there was still a lot of thought around making content educational. Companies like these are a whole different world compared to public broadcasting when it comes to things like budget. Even so, although it may not be at the forefront of these stories, social-emotional learning is present. Nicole Velez said:

Even the other networks...it may not be at the forefront, but I think when you're creating content for kids, even if you're not intentionally doing it, you have to think a little bit about what are the conflicts that kids are experiencing in that preschool age group. And I think... some groups and companies and divisions end up obviously highlighting those needs and those curriculums more so. I think social emotional learning goes so hand in hand, especially with the preschool audience, because there's so many stories that so naturally speak to the world of a preschooler.

This implies that public broadcasters are not the only ones who are considering children's social-emotional learning while they are creating content.

Because the storyline is so fundamental to the show, content creators are constantly thinking about how they can incorporate entertaining stories that children can relate to on a personal level. According to Nicole Velez, these shared experiences are part of social-emotional learning. She gives examples such as the fact that every kid knows what it's like to have their favorite toy go missing, to be fighting over the same toy at school, or to be missing your mom who's on a work trip. These are all common scenarios that could very likely be seen in an episode of any kind of children's television program.

Research

Content creators not only incorporate curriculum into television programs, but they also are commonly developing these curricula through research. Periodically, when they are researching a particular area or incorporating a specific curriculum, they work with third-party advisors who are specialists in certain areas. Generally, "storybook testing" is done, which is

testing done on content in the early writing stages. Oftentimes it is the third party researchers that are conducting these tests. Selena explained:

Before we get into scripting, we have something that's called the story premise, which is basically just a summary of what the story will be about...this is the theme, this is what's going to happen in the story. It's one or two pages, and it doesn't have dialogue. It's just explaining what will happen in a short form, and what learning goals will be addressed. So we take that, and then we make that into a storybook which...used to be a printed storybook that we would take to a preschool and sit on the ground and read for kids. And now it's a PowerPoint that we show over Zoom, because you know, the pandemic changed everything. Usually we don't have the money to do this for every single episode. So we choose the stories or the story premises that we consider will be most significant.

Storybook testing is a way to see if children are understanding and comprehending the material as well as a way to get insight into the appeal of the show. Not only do they use third party researchers, but they also do research with children and families on a variety of topics. Olubunmi (Mia) Olufemi, the supervising producer on *Alma's Way*, which is produced by Fred Rogers Productions in Association with Pipeline Studios, gives a great example of how they talked to children with cerebral palsy when developing the character Eddie Mambo for *Alma's Way*. She said:

We did some research with...children who have cerebral palsy because Eddie Mambo has cerebral palsy so we developed him with medical advisors. That was one advisor I forgot. Mary Louise Russell has been with us since the beginning and she specifically works with children with cerebral palsy at the University of Pittsburgh, I believe. And so we just talked to a handful of families and kids about Eddie's representation. Is it authentic? How does Eddie... Does this make sense? Can Eddie do these types of activities? We got a lot of really great feedback.

Talking to people who have experienced this first-hand can ensure that a character is being accurately represented.

Every one of the interviewees mentioned that formative assessment is part of their process of producing media. One participant, who I will call Sarah, plays a big role on the education team at one of these companies. She mentions that the correct term is probably

“formative research,” not assessment, because “assessment” usually has an educational, K-12 context. This was the only time I had heard that distinction be made. That being said, Sarah stated:

We know that we're only going to achieve our goals and our mission if children are actually engaged, and if they are liking what they're seeing and doing, and if they are actually getting something out of the media. So we try to do formative research on everything that we make. Everything.

This quote is just another example of how important it is to people in this field that they are producing top-quality content. The amount of formative research these companies are able to do oftentimes comes down to funding. Nicole Velez stated “but it also comes down to funding. And in order to do research and get any types of feedback on a more definitive level, you kind of need funding to conduct those, and we don't always have that.” Unfortunately, summative research is not as prevalent. In an ideal world, every episode of every show, and every additional form of media being developed would be backed by formative and summative research, but that is just not very realistic. GBH and PBS Kids, specifically, have a lot of their research funded by the Ready To Learn grant from the Department of Education.

Challenges

Besides the fact that a lot of the research comes down to funding, there are also other challenges when it comes to conducting research. Commonly, the format of children’s television consists of two 11-minute episodes with an interstitial in between. Eleven minutes is not very much time at all. It can be hard to fit all of these frameworks and learning goals in while also creating a captivating story. When discussing these challenges, Nicole Velez mentioned the series called *Molly of Denali*, which has a curriculum about Native Alaskan culture and language, as well as in informational text. Incorporating educational content about informational texts while also being accurate to Native Alaskan culture and history, while also filling the

social-emotional piece is incredibly ambitious. Being able to fit all of these pieces in while also coming up with storylines that work is definitely a challenge.

Content creators and producers for preschool-aged children's television are constantly thinking about social-emotional development. Nicole Velez said "[we] have to start with that social emotional learning, because that's key, and that's the way that you're going to get that kid's attention in order [for them] to actually learn...".

Holding Their Attention

Prior research has shown that both visual and auditory features in television can be used to hold children's attention (Fuenzalida, 2017). This was also demonstrated in the interviews I conducted with content creators. They were very articulate about some of the specific things that they use to hold children's attention with a recognition that today, children are media-multitasking and distracted by multiple things going on in their life. Alison stated "kids are often doing a lot of other things particularly while they're watching TV now, or shows or videos. And so that's a consideration like, how do we include certain features, auditory features in particular, that might help draw their attention back but not be distracting and not be overwhelming." This idea of finding a balance between making visually appealing and entertaining television while also not being too overwhelming led to a conversation about foreground and background television. Alison told me that she actually worked at a lab with Anderson and Pempek analyzing and coding their work on foreground and background television.

There are a multitude of different formal features that are incorporated into children's television. In terms of visual features, color palettes and logos (specifically used for advertising) were brought up. Preschool television tends to have bright, warm colors that are welcoming and convey happiness. Visual advertising is what is going to draw children into the show. Content

creators are very intentional with brand awareness. The thumbnails and logos for the shows and interactive features are ones that will stand out and be recognizable. For television that is meant for the preschool audience, a common statement from the participants was that music is a key component. Dorothea Gillim stated, “music is huge with this age, and so that is something that we think a lot about, and more and more build in musical moments in our shows because we know that that's just one way to, when it's done right, ensure great engagement.” Music can convey certain feelings, which is what gives it its sentimental value. When asked about what formal features can be used to best capture children’s attention, Nicole Velez said:

For preschool shows, I think music is a really great thing. Songs are something for a preschool audience that really helps them learn. I mean, there's a lot of studies about music being something that helps little kids learn. And so I think how you're sound-designing something is hugely important.

A great example of how music is used to help children learn can be seen in the show *Daniel Tiger’s Neighborhood*. Many of the participants brought up this show when talking about music. In every episode of *Daniel Tiger’s Neighborhood*, Daniel sings what are referred to as “strategy songs.” When a problem arises, Daniel sings these strategy songs to help kids remember a message and be able to work through these problems on their own. These songs cover a variety of social-emotional topics, such as dealing with big emotions, navigating friendships, and dealing with new experiences. One participant, who I will call Naomi, works in research and curriculum and she explained the whole process. She explains:

Another example with the strategy songs... he sings the little jingle in each episode, and that is done very intentionally as well as a formal feature, to help with comprehension and understanding the social-emotional messaging because he does repeat it multiple times. And if you look at an episode of Daniel Tiger almost all the time... in the 11 min episode there will be the first instance of needing to use the strategy. In the first few minutes, something will happen, some sort of conflict, some situation, and Daniel will learn that strategy song from usually a grown up, and then he'll repeat it back. So we've heard it now two or three times and then the episode will continue. And then usually what happens is... [Daniel] gives the strategy to the friend that he had gotten from the grown

up in the first situation. Or, [a] second example is Daniel himself experiencing another similar conflict, he remembers [the song] himself. He draws on it himself... and now we've heard it a third or fourth time. And so it's like all the way through the episode. And so you've seen it across multiple contexts. So that's kind of how an episode is structured. So hopefully, the idea is, you walk away from that, and you know that song. You know all the situations where it might be relevant, and you can then draw on that if it happens to you.

It is this repetition that is getting the point across. Children see multiple situations where they can use this problem-solving strategy song, which gives them the opportunity to be able to use it in real life situations. This kind of repetition is used in other ways as well. In a few of the shows that were brought up in the interviews, there is a similar process that happens when problems occur in the episode. Mia Olufemi talked about Alma's "think throughs." She said:

In every episode Alma has what we call a 'think through' and when that happens the world pauses, everything fades away, and you get to see into what we call a memory, a vortex. You get to see Alma's thoughts, and she'll kind of reflect back on what has happened, or she'll imagine what will happen if she takes one course of action versus another and then at the end the world comes back into focus, and she says, 'I know what to do', and she solves whatever dilemma has come up in the course of the episode.

Alma's process for problem solving is very similar to Daniel's strategy songs. These are both recurring features that are seen in all of the episodes. Naomi also mentioned a similar process in a different show called *Get Rolling with Otis* that has a curriculum in empathy and compassionate action. She described what Otis does in situations where someone may be in need of help:

He's feeling something. He's noticing something, and he has little catchphrases that he'll say that repeat each time. So when he sees it he goes 'hit the brakes', he stops, he notices, his heart glows, and then he labels the emotion, he asks the friend: 'What are you feeling? What's wrong?' And 'Do you want help? How can I help?' And then he'll say 'let's get rolling into action' [which he] repeats in every episode. So it's formal features that we do over and over again every time he's in a situation like this, so it becomes really memorable, and it becomes language that kids themselves could potentially then go model if...they see a friend, they see someone who looks upset, looks worried, frustrated whatever. They might recall: Okay, Otis, he stops. He hits the breaks.

These repeated formal features can be used as tools that help children work through dilemmas. The repetition of these processes makes it so that it is ingrained in a child's head. When a friend is in need, or a child doesn't know how to deal with their anger, they can replay these scenes in their head and follow the same steps that the characters did in order for them to solve the problem. They know that every time they watch the show, these characters are going to go through the same things. Children form relationships with the characters they see on their screens. They become their friends, they trust them, and even look up to them. When speaking about how these formal features are routinely used in every episode Naomi said:

Yeah so definitely formal features are a big part of what helps kids. [It is] sort of like holding a kid's hand throughout an episode so that [it is] predictable enough that they can feel comfortable and know what to expect from the episode, and so they know every time [they] tune into a *Blue's Clues* episode, or every time [they] tune into a *Daniel Tiger*, there's certain things [they] know will happen, and that's comforting to [them]. And so that's part of it, but also it is used to engage and educate the kids at the same time.

Content creators are making sure to include these captivating formal features because they help children engage with the content, and therefore learn from it.

Although the goal of using formal features is to grab and keep children's attention, that is not their sole purpose. They are used not only to obtain children's attention, but also to teach. These attention grabbers get them to focus, which can make them more likely to learn. Nicole Velez said, "Certainly, when it comes to educational television, we're not creating to grab attention, we're creating to build trust and creating to teach, and entertain, but teach."

Elements of Production That Are Important

There are a number of elements within preschool shows that speak to issues relating to social-emotional development. Representation is becoming more and more prevalent in television. Many children's shows have characters from a variety of different backgrounds. When creating these characters, consultants are often called to accurately develop them. Mia

Olufemi talked about *Alma's Way*, which was created by a former *Sesame Street* actress, Sonia Manzano, and is about a Puerto Rican family living in the Bronx. *Alma's Way* has many diverse characters, including Rafia Huda, Alma's Bangladeshi friend. When explaining how Rafia was developed, Olufemi said:

So in addition to them, we also work with cultural advisors. So we have one, Natasha Crandall, who helped us develop Rafia Huda and her family. She also weighs in across the project just on bias or image or kind of anything that we may have missed on the cultural end or DEI end, and then we work with specialized advisors.

These specialized advisors ensure that there are accurate portrayals of different people and cultures through diversity consultation. They find the balance between implicitly and explicitly introducing DEIJ concepts. There can be a fine line between addressing hard topics and drawing negative attention to them. Alison emphasized the importance of these advisors. When I asked her about the advisors that help work on frameworks for their shows, she said:

We're also looking for advisors that can provide diverse perspectives on the particular subject. So because we have started to incorporate a lot about equity in the particular curriculum areas, and we look at culturally relevant and responsive approaches to something like social-emotional learning and things like that. So we would have advisors who can speak to those things, but they're often in academia or connected to policy organizations sometimes.

They are searching for the lead thinkers in these particular areas, who can help them really understand certain subjects and provide guidance to the producers. Because these academic researchers support the frameworks being developed for the shows, they also support the series as a whole. Something else to consider is whether the writers and creators of children's television are diverse themselves. The participants brushed upon this briefly, mostly naming specific advisors and their expertise, but they didn't get into too much detail about their cultural backgrounds. Mia Olufemi did say this, though:

Fred Rogers Productions did a writer's neighborhood apprenticeship program or fellowship program where we had six diverse writers [who] pretty much learned the

business of becoming a freelance scriptwriter. They had tons of seminars and Zoom groups and activities that they had to do. They were also able to pitch to write scripts. So we have two of those fellows writing *Alma's Way* scripts this season, and we hired Natasha Crandall who, I said, was our cultural advisor to do some summative evaluation after that.

This was the only interview where the backgrounds of the writers were brought up.

The participants mentioned examples of curriculum and framework development from multiple incredible children's shows, but one in particular that stuck out to me was *Molly of Denali*. The entire show, along with the podcast, games, and activities that accompany it, was developed with the help of Alaska Natives. GBH brought in a whole crew from Alaska and trained them on how to write children's television (Dobrow, personal conversation). For a population that has been misrepresented and appropriated in media, collaborating with actual Native Alaskans was essential. At each stage of development, Alaska Native advisors would provide feedback about how to make sure that everything is aligning with Alaska Native values. Nicole Velez commented on this process, she said "I mean that's huge for that show...making sure that they're being historically accurate and having the right advisors who are Alaska Natives helping inform... the types of stories that they're telling." Molly is portrayed as a strong and capable character who is proud of her Indigenous heritage. Molly's character development is so important in terms of children's social-emotional development. When children see Molly on their screens they are seeing a Native Alaskan shown in a positive light. They may not have known anything about Indigenous culture before, but after watching the show, they have a better idea of what life as an Alaskan can be like.

Character design is an element of production that was repeatedly mentioned in these interviews. Michael Robb, Team Policy Lead at YouTube and former Senior Director of

Research at Common Sense Media, explained that children become attached to television characters:

I think visually interesting characters are appealing to kids. Characters who they can relate to. [In a] parasocial relationship [there are] characters who you feel like you have some kind of connection to. What about that character makes it so that you think a kid would have a bond with it? Is it because they had a similar interest, or they are of a similar background? There's planned research that shows that kids attend more to characters that look like them. Diverse representations are important. You want to have representation from people of different races, different sexes, different genders, different physical environments because kids can see those things in themselves, and then that makes them maybe more attuned to watch.

When creating characters, there is a lot that goes into how children will perceive that character.

Content creators want them to be characters that kids in their audience can relate to and could see themselves in. So there's a lot of thought around presenting relatable contexts and experiences for those characters to be in. For animated television shows, animators are given notes on the visual aspects. Dorothea Gillim also mentioned character design when I asked about how developmental theories find expression in the way a television show is drawn or animated. She said:

But I would say that one thing that we look for when we're working on the visual development of a new show idea and we're working on a character design, it's so important that characters' faces are expressive. So simple things like eyebrows seriously go so far in animation to be able to convey expression. There's so much that the human face does through eyes and eyebrows. We work really hard with our animation studios to make sure that we can get that range of expression through the face, whether it's the face of an animal, a car, a girl or boy, whatever. I would say that... expression is so key to social-emotional learning.

When thinking about social-emotional development, being able to identify and regulate emotions is a skill that we try to help children acquire. Things like facial expressions act as visual cues for the audience to pick up on. The goal is to get kids to understand these visual cues and to be able to tune into how the characters are feeling.

Lights, Camera, Animation!

There is a multitude of children's content out there available for children to access. From what I have seen, the majority of this content is animated. I wanted to know whether this had anything to do with children's preferences, or if it is more on the technical, production side. In order to investigate this question, I asked my participants whether they thought children process or engage with animated content differently than they do with live-action television. An answer that came up time and time again was that (1) the research on this subject is underdeveloped, so they could not give a conclusive answer and (2) just based on speculation, they don't think children necessarily prefer one over the other, it depends on a number of factors. One of the common speculations was that young children tend to prefer animated content and older children tend to prefer live-action content. Alison put it like this:

The older kids really, we feel, tend to find it really appealing to see real kids on screen. Not that younger kids don't, but that compared to animation it's sort of that general shift out of the cartoon world to something that feels more... older. So I think in some ways, in our area it could be a signal to kids that this is for an older kid, and not for a younger kid, because cartoons are often for younger kids.

Some of the participants struggled to put into words exactly how to describe the "feel" of a show because it is hard to describe. We all sort of know what kind of shows "feel" young and what kind of shows are aimed more towards older audiences. In summary, it is really hard to tell whether kids prefer one over the other. The majority of the participants agreed that generally, younger children tend to prefer animated content, but that doesn't mean that they don't also enjoy live-action. Some participants brought up the fact that live-action can be more appealing because the characters are real people and it's easier to see themselves in a real-life character. Others think that with real people you run the risk of not connecting because live action is such a personal thing, and with animation there's almost a magic to it that may disconnect us in a way

where we can still relate to the character, but not so much to where you're going to be making any judgments, because it's an animated character versus a real person (Velez). Mia Olufemi discusses the decision of whether to use human characters or animal and inanimate characters. When thinking about how to make media inclusive, it is important to consider if it's better to send forward messages of inclusivity through human characters versus animal characters or object characters. Her opinion was:

Personally, I see the value in both, but I think in terms of real equity and diversity, showing a human is the best thing. Kids will see themselves in anything. Arthur was huge when I was growing up. He's an aardvark, a humanoid aardvark and [kids] still identified with that show just because they were talking about things that all kids go through. But when you're looking for yourself, when you're looking for your media to reflect your reality back at you, the way that it will do that is through human characters. That's the best way to do it. By seeing a girl with hair like mine... skin as dark as mine, or my shape, [or] how I walk, or speaking the language that I speak- that can only be done through human characters.

In addition to my question about the way children process live-action versus animated content, it brings up the question of how they perceive human versus nonhuman characters. Kathy Waugh, Head Writer/Creative Producer at GBH, thinks it's easy for kids to form relationships with any kind of character. It's not about whether the character is animated or real, it's about who the characters are, their personalities.

As for why there may not be as much live-action content compared to animated content, some of the interviewees believed that things such as longevity and international production are easier to do with animation. With animated characters you don't have to worry about actors growing up and aging out of the role. Additionally, animation is easier to produce internationally. Marisa Wolsky, Executive Producer at GBH, said "sometimes [animation] is easier to sell overseas...because they just have to dub the animation rather than live action, which can look kind of funny. And also culturally, it's a little harder sometimes with the

translation.” Because of these complications, animation tends to be the easier route to take. On the other hand, live-action is a lot faster and less expensive to produce. Even so, animation seems to be the more common method of production.

The Term That Shall Not Be Named

Although elements such as websites, games, and other interactive features used to be known as “peripherals” in the industry, a number of my respondents were miffed when I referred to them that way. Dorothea Gillim’s reaction was:

I guess it's interesting that you call it a peripheral, because I just see it as all part of the universe...so it's not over here on the periphery. It's more like...kids have all these different ways to engage with their favorite characters.

This is an illustration of how central interactive features have become in preschool children’s television programming. The consensus was that when developing these other interactive features, they are creating a whole world or universe where everything is building off of each other. Alison explained that because everything is digital now, it is hard to say that video is the primary and games, apps, and so on are the periphery. Nicole Velez also supported this idea by saying:

All brands recognize the importance of building a whole world and understanding all the different ways that people and kids gauge with your show is hugely important, so having that close knit collaboration with all of those teams from the get-go is really important.

Historically, we are experiencing a time where media is more accessible than ever. Children are consuming content in all sorts of ways and can jump back and forth between platforms. Having access to different avenues and outlets gives children the opportunity to explore different series’ worlds and further develop their parasocial relationships. As Marisa Wolsky put it, children now have an expectation that they’re going to be able to engage with the characters that you’ve

created in different media. When I asked her about how “peripherals” can add to the viewing experience for children, Kathy Waugh stated:

I mean, I think kids love to see characters they love on all these different platforms. It just creates a universe that then just feels deeper, richer, more believable somehow. So I think it absolutely enhances the experience for kids of moving into a particularly magical imaginary world.

Something I knew less about was how teaching resources intended for educators are developed.

Mia Olufemi emphasizes the importance of reaching children and families/guardians in as many ways as possible. She pointed out that teachers are teaching in multimedia classrooms and therefore need different ways to engage their students. Nicole Velez told me about how PBS has their LearningMedia Group. Sarah talked about how using these materials in an educational setting is what really solidifies and amplifies the impact.

Chapter 5: Discussion

More often than not, our society associates media with negative outcomes for children. We've all heard someone say that letting children watch television will “rot their brain,” or something similar. Even with these negative viewpoints, the reality is that children are consuming more media than ever before. Opportunities for having screen time are in the palms of their hands, quite literally. We can try to limit screen time but it is often easier said than done. Either way, children are going to consume media, and because of this, what we put in front of them really matters. From a review of the literature on this topic, we know that children can and do learn from media. We want to make sure that children are getting something out of the media they interact with, and from the results of this thesis, it is clear that the people behind the creation of children's media are doing everything they can to ensure that they are.

The main research question in this thesis is to explore how what we know about preschool-aged children's social-emotional development is translated into television programs.

What I was not expecting was how answerable this question ended up being. The interviewees all were incredibly enthusiastic about how social-emotional learning is involved in (nearly) everything that they do. Considering the lack of research on social-emotional learning in children's television, I was surprised to hear this. One of the main model's explaining how children learn from television separates narrative and educational content. From what my participants said, I can gather that this separation maybe be narrower than we think. When creating content for preschoolers, brushing upon social-emotional topics is inevitable purely because of the nature of storytelling for this age group. When asked about specific prosocial themes that come up within storytelling, my participants mentioned things like learning how to deal with big feelings, understanding friendships, and navigating the world around you. These are all areas that are mentioned as major social-emotional development goals in the Rhode Island Early Learning and Development Standards, which is what I was trained on as a preschool teacher. Simply put, what this all means is that children can get a lot out of the interactions they have with media produced at companies like PBS Kids and its affiliates.

Particularly for shows that are done for these companies, curriculum development is an essential part of how they obtain funding. Public broadcasting is a non-commercial, publicly funded nonprofit network. Getting funding to produce television is understandably incredibly important. When receiving grants from places like the Department of Education, developing educational television and digital media is the top priority. There is so much potential to learn from shows with these kinds of curriculums. How much children are actually getting from them is reliant upon a number of things. Curriculum research is more likely to be at the forefront of companies like PBS Kids and its affiliates, but that's not to say that bigger companies like Disney and Nickelodeon are not incorporating it. It is more probable to see social-emotional

learning being highlighted by companies like PBS Kids, but because of the nature of stories for the preschool audience, thinking about children's social-emotional learning is inevitable for any children's television company.

In a world full of platforms for interacting with media, it is common for children (and adults) to be media multitasking. They are distracted by all kinds of things that may be going on in their lives. There are a multitude of different avenues to use to engage with media. A major interactive feature mentioned by the participants was children's apps. For example, media giants like Sesame Workshop and PBS have developed copious amount of apps for children to use (Chiong & Shuler, 2010). From Anderson and Pempek's work (2005), we know that television isn't always watched in the foreground. Content creators are aware of this and take it into consideration when developing a show. Yes, formal features are used to make television attractive and to capture children's attention, but that's not their only purpose. Through gaining children's focused attention, formal features ensure engagement and help kids learn. What I learned from these interviews is that there is a lot of thought that goes into what kinds of formal features are being used in a show. Each sound effect, song, audience engagement, and so on has an intended purpose. Songs are used as strategy tools, sound effects emphasize lessons, and repetition makes kids know what to expect every time they watch a show. From work by Aladé and Nathanson (2016), we know that familiarity and repetition allow children to have an easier time processing and understanding content. These formal features can give children the tools they need to work through problems. We know that this idea is supported from previous research on formal features by Fuenzalida (2017) that states that they are key determinants for children's attention to the screen and they prompt kids to investigate the subject matter. Because of the nature of children's content, these problems are often related to social-emotional development.

There are a number of different elements within preschool shows that speak to issues relating to social emotional development. From conducting these interviews, it became obvious to me that content creators care deeply about incorporating elements of Diversity, Equity, Inclusion, and Justice (DEIJ) into their programs. While I did not explicitly ask my respondents questions about how the properties they worked on dealt with issues of race and ethnicity, some people alluded to it. Some participants addressed it when talking about character design. Something to take into consideration is the background of the people who create characters for children's media. It is common for diverse characters to be designed and developed with the help of advisors who specialize in diversity and culture consultation. They are making sure that the characters and cultures they are highlighting are being represented accurately. Their knowledge on these kinds of topics is great, but we need to consider whether these people are diverse themselves. We want the people who are developing these diverse characters to have a personal understanding of diversity. Media are great ways for children to be introduced to people of different backgrounds. These characters are relatable and kids in the audience can see themselves in them. Part of a preschooler's social-emotional development is being able to form a sense of self. It is important for television characters to be presented in relatable contexts and to have relatable experiences. They want children to see a character on their screen and be able to say "she's just like me!"

I learned that distinguishing between the way children react or engage with animated content than they would with live-action content is a bit more complicated than I had expected. We just don't know enough about it. As for one being better than the other, the participants had some suggestions for both sides. Although there are patterns around young children preferring animation and live-action being targeted towards older children, the overall consensus is that it's

more about the characters themselves. If children can form relationships with characters, then they are happy, regardless of whether they are animated or live-action. Children are given opportunities to interact with characters in many ways across all sorts of platforms.

When I began this research, I was referring to all non-television program activities as “peripherals” because that is what I had been taught they were called. One of the things I learned through the interviews is that the interactive aspects are now considered so central that people no longer refer to them as peripheral. This is not surprising given the reality of the way media have evolved, even young children are constantly using devices. When content creators are developing programming, they have to be doing it while thinking about how it will get developed into something that is interactive, which shows us something about where this industry is at. We can't be certain whether there is something about the interactivity of these “peripherals” that can actually help children develop social-emotional skills, but we have opinions from these content creators who believe these interactivities are really central to their mission and they think that they will help learning stick more.

Limitations and Directions for Future Research

Considering that this is a master's thesis, and not a prolonged, more comprehensive study, there are limitations. First, the participants were gathered using convenience sampling. All the participants are either people who my professor was already connected to or people I was put in touch with by the participants themselves. With additional time and resources, it would be beneficial to have a larger sample size. Each one of my participants works, or at least worked at some point, for PBS Kids or its affiliates. I believe a sample with more diversity in the positions of the content creators and researchers would provide more information to consider. As we know, these companies have requirements when it comes to developing curriculum because of

some of their funding. I would be interested to know if I had interviewed people who work at some of the bigger companies, like Disney or Nickelodeon, whether there would be different answers when it comes to making educational content. It seems as though this data could be a bit biased because of the nature of the companies they work at. Lastly, it was just me conducting interviews and analyzing the results. With a larger research team, the analysis for a study like this could be completed more efficiently. It could also be nice to have other people's interpretations of the interviews. These limitations, however, point to the potential for research projects in the future.

What I would be most curious about for further research would be whether content creators at bigger networks are making the same efforts to incorporate social-emotional learning into their content. An additional step for future research could be looking into whether interactivity provides a component that really will enhance social emotional learning for young children. I am not sure whether one specific type of interactive feature would be better than another for providing opportunities for social-emotional learning. I believe that this would be an interesting topic to further discover.

Although this study shows us that there are incredible efforts made by the people working in children's television to incorporate social-emotional learning into their material, there needs to be more summative research assessing whether their efforts are working or not. Assessing social-emotional learning from television is not as easy as assessing academic learning, yet not impossible. This type of assessment would be a step in the right direction for future research. Along with this, I would be curious to know if social-emotional learning is also at the core of television programming for age groups other than preschool. We know that social-emotional

development is a lifelong process, so doing this type of research on content for kids of all ages would be interesting to explore.

Although the issue of social-emotional learning and the extent to which it's gendered is not something that came up in my interviews, I feel as though this is an important area for future researchers to address. We know that developmentally, preschool kids are starting to form pretty clear ideas about gender, so any sort of programming that is developed for them could make an important contribution to that. Additionally, it would have been interesting to talk about contemporary research about gender fluidity with my respondents, but future researchers could address this. Issues of identity are also something that relate very closely to social-emotional development. While this didn't come up explicitly in any of my interviews I think future researchers should do a deeper dive into this area.

References

- Aladé, F., & Nathanson, A. I. (2016). What Preschoolers Bring to the Show: The Relation Between Viewer Characteristics and Children's Learning from Educational Television. *Media Psychology, 19*(3), 406–430. <https://doi.org/10.1080/15213269.2015.1054945>
- Anderson, D. R. (2007). A NEUROSCIENCE OF CHILDREN AND MEDIA? *Journal of Children and Media, 1*(1), 77–85. <https://doi.org/10.1080/17482790601005215>
- Anderson, D. R., Bryant, J., Wilder, A., Santomero, A., Williams, M., & Crawley, A. M. (2000). Researching Blue's Clues: Viewing Behavior and Impact. *Media Psychology, 2*(2), 179–194. https://doi.org/10.1207/S1532785XMEP0202_4
- Anderson, D. R., & Pempek, T. A. (2005). Television and Very Young Children. *American Behavioral Scientist, 48*(5), 505–522. <https://doi.org/10.1177/0002764204271506>
- Chiong, C., & Shuler, C. (2010). Learning: Is there an app for that? Investigations of young children's usage and learning with mobile devices and apps. New York City: The Joan Ganz Cooney Center at Sesame Workshop.
- Cingel, D. P., & Krcmar, M. (2019). Prosocial Television, Preschool Children's Moral Judgments, and Moral Reasoning: The Role of Social Moral Intuitions and Perspective-Taking. *Communication Research, 46*(3), 355–374. <https://doi.org/10.1177/0093650217733846>
- Coyne, S. M., Padilla-Walker, L. M., Holmgren, H. G., Davis, E. J., Collier, K. M., Memmott-Elison, M. K., & Hawkins, A. J. (2018). A meta-analysis of prosocial media on prosocial behavior, aggression, and empathic concern: A multidimensional approach. *Developmental Psychology, 54*(2), 331–347. <https://doi.org/10.1037/dev0000412>
- Crawley, A. M., Anderson, D. R., Wilder, A., Williams, M., & Santomero, A. (1999). Effects of repeated exposures to a single episode of the television program Blue's Clues on the viewing behaviors and comprehension of preschool children. *Journal of Educational Psychology, 91*(4), 630–637. <https://doi.org/10.1037/0022-0663.91.4.630>
- Dobrow, J. (2022, November 9). *Class Lecture #9* [Lecture].
- Dobrow, J. (2022, September 14). *Class Lecture #2* [Lecture].
- Fisch, S. M. (n.d.). *EDUCATIONAL TELEVISION AND INTERACTIVE MEDIA FOR CHILDREN*. 37.
- Fisch, S. M. (2000). A Capacity Model of Children's Comprehension of Educational Content on Television. *Media Psychology, 2*(1), 63–91. https://doi.org/10.1207/S1532785XMEP0201_4
- Fisch, S. M., Truglio, R. T., & Cole, C. F. (1999). The Impact of Sesame Street on Preschool Children: A Review and Synthesis of 30 Years' Research. *Media Psychology, 1*(2), 165–190. https://doi.org/10.1207/s1532785xmep0102_5
- Fuenzalida, V. (2017). *Quality Criteria in Narrative and Script Writing for Children's Television (Ages 0-6)*. Vol.36(Iss. 2), 4–21.
- Goodwin, K., & Highfield, K. (2012). iTouch and iLearn-an examination of "educational" apps. *Early Education and Technology for Children Conference*, (pp. 1-3). Salt Lake City.
- Greitemeyer, T., & Osswald, S. (2010). Effects of prosocial video games on prosocial behavior. *Journal of Personality and Social Psychology, 98*(2), 211–221. <https://doi.org/10.1037/a0016997>
- Heintz, K. E., & Wartella, E. A. (n.d.). *Young Children's Learning from Screen Media*. 9.x
- Kids Listen. (2021). Kids Listen: Understanding The Kids & Family Audience. Kids Listen.

- Lesser, G. (1972). Learning, Teaching, and Television Production for Children: The Experience of Sesame Street. *Harvard Educational Review*, 42(2), 232–272. <https://doi.org/10.17763/haer.42.2.h13nq18915q61rw6>
- Mares, M.-L., & Pan, Z. (2013). Effects of Sesame Street: A meta-analysis of children's learning in 15 countries. *Journal of Applied Developmental Psychology*, 34(3), 140–151. <https://doi.org/10.1016/j.appdev.2013.01.001>
- Newcomb, A. F., & Collins, W. A. (1979). Children's comprehension of family role portrayals in televised dramas: Effects of socioeconomic status, ethnicity, and age. *Developmental Psychology*, 15(4), 417–423. <https://doi.org/10.1037/0012-1649.15.4.417>
- Rasmussen, E. E., Shafer, A., Colwell, M. J., White, S., Punyanunt-Carter, N., Densley, R. L., & Wright, H. (2016). Relation between active mediation, exposure to *Daniel Tiger's Neighborhood*, and US preschoolers' social and emotional development. *Journal of Children and Media*, 10(4), 443–461. <https://doi.org/10.1080/17482798.2016.1203806>
- Rideout, V., & Robb, M. B. (2020). The Common Sense census: Media use by kids age zero to eight, 2020. San Francisco, CA: Common Sense Media.
- Social and emotional development*. RIELDS. (n.d.). Retrieved March 28, 2023, from <https://rields.com/social-and-emotional-development/>
- Singer, J. L., & Singer, D. G. (2005). Preschoolers' Imaginative Play as Precursor of Narrative Consciousness. *Imagination, Cognition and Personality*, 25(2), 97–117. <https://doi.org/10.2190/0KQU-9A2V-YAM2-XD8J>
- Stucke, N. J., Stoet, G., & Doebel, S. (2022). What are the kids doing? Exploring young children's activities at home and relations with externally cued executive function and child temperament. *Developmental Science*, 25(5). <https://doi.org/10.1111/desc.13226>
- Transformative SEL*. CASEL. (2023, January 12). Retrieved April 25, 2023, from <https://casel.org/fundamentals-of-sel/how-does-sel-support-educational-equity-and-excellence/transformative-sel/>

Appendix

Among 0- to 8-year-olds, proportion of average daily screen time devoted to ...

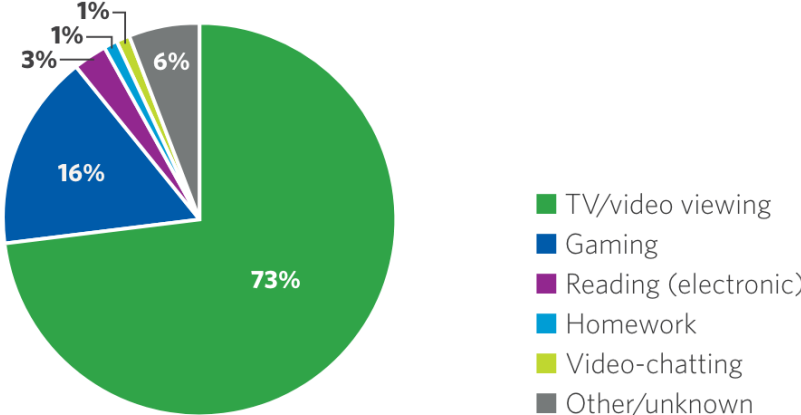


Figure A: The Common Sense Census, 2020

Current *Sesame Street* Goals

Affective

1. *Emotions:* The child can recognize, identify, and label the following emotions: love, anger, fear, surprise, happiness, sadness.

The child can express how she/he felt when experiencing one of these emotions.

The child can recognize one of the above emotions in others and express some understanding of how they feel.
2. *Pride and Self Esteem:* The child expresses feelings of pride, self-worth, and esteem for his/her own abilities and efforts.

Social Interactions

1. *Friendship:* The child can express that anyone can be a friend, and a friend is someone for whom you care.

The child can express that friends don't always have to agree in order to remain friends.
2. *Conflict Resolution:* When presented with a simple conflict situation, the child can recognize, identify, and/or propose a nonviolent resolution to the conflict.
3. *Cooperation:* The child can recognize that in certain situations it is beneficial, and sometimes fun, for two or more individuals to work together to accomplish a common goal.
4. *Sharing:* The child can recognize that in certain situations it is beneficial, and sometimes fun, for two or more individuals to share.
5. *Turn Taking:* The child will recognize that taking turns promotes fairness.

The child can carry out instructions that emphasize turn taking.
6. *Entering Social Groups:* The child recognizes and demonstrates various strategies for initiating interaction with other children and groups of children such as making friends with a member of a group, asking other children to let him or her play, and sharing a toy with a group member.

The child who is already a member of a group can recognize that a new child would like to join his or her group and displays tolerance toward that child's attempts to enter the group (i.e., acts friendly toward the new child; invites the new child to join the group).

Figure B: *Fisch et al. (1999)*

Human Relations

- 1. Diversity:* The child will know that people have many skin colors, hair textures, eye shapes, statures, dress, names, accents, and languages.
- The child will know that people who have different skin colors, hair textures, eye shapes, statures, dress, names, accents or languages can be good friends, can work and live together, and should be respected.
- 2. Differing Perspectives:* The child recognizes that individuals or groups may have different reactions to or perceptions about a particular situation.
- 3. African American Culture:* The child will be able to give positive descriptions of African American culture and people.
- 4. American Indian Culture:* The child will be able to give positive descriptions of American Indian culture and people.
- 5. Asian American Culture:* The child will be able to give positive descriptions of Asian American culture and people.
- 6. Latino Culture:* The child will be able to give positive descriptions of Latino cultures and people.
- 7. Spanish Language:* Functional phrases such as:
- Hola (Hi)
 Como está(s)? (How are you?)
 Bien, gracias (Fine, thank you)
 Quieres jugar? (Do you want to play?)
 Bienvenidos (Welcome)
 Adiós (Goodbye)
 Sí (yes), no (no)
- Spanish numbers from one to ten:
 Uno (one), dos (two), tres (three), cuatro (four), cinco (five), seis (six), siete (seven), ocho (eight), nueve (nine), diez (ten).
- 8. Children with disabilities:* The disabled child will demonstrate feelings of pride, self-worth, and esteem for his/her own abilities.
- The nondisabled child recognizes that there are numerous similarities between himself/herself and children with disabilities (e.g., interests, feelings, personalities, daily activities, needs, values, abilities, desires, and ways of communicating.)

Figure C: Fisch et al. (1999)

Interview Questions

1. In what ways is information about preschool-aged children's social-emotional development translated into TV programs? (Specifically script writing and curriculum development)
2. Do you use formative assessments in planning and evaluating shows?
 - a. How effective do you think they are?
3. Do you use summative assessments in planning and evaluating shows?
 - a. How effective do you think they are?
4. Do you think children process prosocial messages differently than they would process a STEM lesson?
 - a. In this realm of prosocial development, what are the kind of topics that come up?
5. In what ways do peripherals add to the viewing experience for children?
 - a. How can they help children learn?
6. What kind of formal features do you think work best to capture and keep children's attention?
7. Do you think there are ways in which formal features help children to comprehend material?
 - a. To retain material?
8. Are there any ways in which developmental theories find expression in the way a TV show is drawn or animated?
9. Are there any ways in which developmental theories find expression in the way a TV show gets edited?
 - a. Fast cuts, dissolves, etc.
10. In your research, have you observed that children react differently to/engage differently with live-action content and animated content?

Figure D