ABSTRACT

How Preschoolers Learn from Television

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This study investigates how preschool aged children learn through television throughout the creation of an original narrative, *The Topaz Troop.* Children are exposed to an assortment of media devices from an early age, and parents continue to seek out quality educational content to enhance their child's cognitive ability. Recognizing that television is a powerful educational source to deliver information, the study is based on the capacity model, a theory that states that children learn best from educational television when the educational topics are interlaced with the overall narrative of the story (Fisch, 2004). Preschool children are expected to rely on their rapidly developing social cognitive and linguistic systems to comprehend narratives (Skarakis-Doyle & Dempsey, 2008). However, Fisch's research (2000, 2004) also suggests that verbal ability will impact a child's ability to process narrative. This research seeks to highlight additional factors that contribute to a child's ability to comprehend narratives.

How Preschoolers Learn From Television

by

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CHAPTER ONE

How Preschoolers Learn from Television

Introduction

This paper investigates the foundations that educational preschool programming is built upon and examines whether narrative comprehension is linked to verbal ability. To complete this study, a content analysis has been completed on episodes of *Blue's Clues, Bear in the Big Blue House,* and *Sesame Street* to analyze how each episode introduced the theme of facing fears to the preschool audience. To investigate whether decisions made in the production process could influence narrative comprehension, a pilot episode for a preschool television show was created. *The Topaz Troop* was designed for children aged 4-6 and centers around troop leader and her dog teaching children how to work through their problems by offering creative solutions. In the pilot episode, one of the children in the Topaz Troop is afraid of the dark, while Coco the dog is afraid of thunderstorms. The study aims to seek whether children can comprehend newly created narratives. After watching the episode, children are asked comprehension questions to assess whether their verbal ability influences their ability to comprehend stories. By demonstrating how narrative can be used to carry an educational message, The Topaz Troop will be analyzed for its quality effectiveness through a variety of comprehension questions. Yet, to explore the effectiveness of an original narrative, one must conduct extensive research on producing television for children, gain an insight on how the mind

of a child develops, and analyze how different preschool television series effectively communicated their messages.

Creating Preschool Television

Educational television is a form of informal education, meaning the learning experience is taking place outside of a school without a physical instructor leading the lesson. Although the goal of educational television is not to replace formal education, it can be used alongside lessons being taught throughout the school day and allow for a greater understanding of a variety of different topics. Preschool Television can also provide context and offer solutions for children who may be struggling to understand political events around them. For example, *Sesame Street's* focus on diversity can be linked as a response to the Civil Rights Movement. *Dora the Explorer* aimed to bring attention to an underrepresented Latin population in the media. *Mr. Roger's Neighborhood* often provided children with answers and offered solutions to cope with world events such as the assassination of president John F. Kennedy or the Cold War.

A common practice for preschool television shows is for the program to undergo research throughout the development process. Collaborating with producers and child specialists, the production team works to assure that the content of the show, the language used in the show, and the artwork presented in the show is appropriate for the targeted preschool age group. Researchers will conduct formative research which aims to expose the most effective way to communicate the program's message to the viewer (Fisch, 2004). Popular methods of formative research include performing case studies which includes the creation of slideshows or storybooks known as animatics with specific scenes of an episode. By creating a scene in a format that children are already familiar

with (i.e., a storybook), researchers are able to determine whether or not the content needs to be modified for the targeted demographic (Akerman, Bryant, & Diaz-Wionczek, 2011). Educational media consultant, Laura Brown, advises researchers to make children feel involved in the story by adapting different voices per character and recreating a version of what they might see on television. During the process, she also suggests that researchers provide comprehension questions for children to respond to at the end of the presentation (Steemers, 2010). Using the research collected, content creators will adapt their programs and move on to creating an episode. Following the completion of the episode, researchers will then premiere it to a focus group and begin the process of summative research. Summative research occurs when a completed episode is tested for its effectiveness in reaching its audience (Fisch, 2004). The results gathered from summative research will be used for the development of the next episode of the program, as typically it is too late to change an episode that has already been finalized (Johnson, 2016).

It is important to note that every company treats the production process differently. An examination into different preschool shows can help one identify the differences producers take when developing their television programs. For instance, producer, Carol Greenwald, states that the PBS Kids process "depends if we start with the curriculum or the idea" and they will develop the show's content around the selected theme (Greenwald, 2016). *Sesame Street* producer, Benjamin Lehmann states that each season of *Sesame Street* is developed based on major findings that the Sesame Workshop's research department conducts over children's lifestyles and needs (Lehmann, 2016).

CHAPTER TWO

Literature Review

To understand how children learn from television, one must understand the production process and construct an understanding into the development of a child's mind.

The Production Process

In Jeanette Steemers's (2010) textbook, Creating Preschool Television: A Story of Commerce, Creativity, and Curriculum, the author dedicates several chapters to the development process of creating a preschool television show. She highlights the importance of defining the show's concept and utilizing formal features to guarantee maximum comprehension of the program. Determining whether a show will be animated, live-action, or a combination of both animation and life-action each comes with a different way of approaching the production process. For instance, while live action television shows are cheaper and quicker to produce, television ratings are typically higher for animated educational television shows. When budgeting for live action television shows, additional costs that need to be considered for tutors of children, chaperones of children, costuming fees, and the cost of any visual or special effects that may be used in the show. On the other hand, animated television programs take longer to produce as each scene needs to be designed, illustrated, animated, and then undergo the process of voice over recording.

After the concept of the show has been selected the project moves into development. It is crucial to remember that the concept you are developing must be able to be expanded into at least 26 episodes as broadcasters typically do not buy short runs. While in development, the creative team will decide the target audience of the program. Steemers (2010) states that the target audience of the program sometimes is determined by the needs of broadcasters and their current programming, but typically the production team has freedom of this decision. Next, the production team will talk about how they will be able to cost-efficiently produce a high-quality television show with fewer resources than adult television programs. Other factors to include is that the show must "feel like it's going to last more than a couple of years" by creating memorable storylines and distinctive characters. The television show then needs to be pitched to executives using a treatment or proposal. It is important for the proposal to be able to provide a general idea of what the story is going to be about. To create an effective proposal, the writeup needs to include information about where the story will take place, provide details about the characters in it, give an estimated length of the program, and provide illustrations that would help the reader get a feel for what the show would look like. Upon approval of a pitch, producers will be given funding for a pilot and writers can begin the development of the script for the pilot.

When writing a script for children, it is important that the writers of the production team have a good understanding of industrial self-theorizing, a basic knowledge of child development, or personal experience with children. Understanding how a child thinks and processes information provides a pathway for successful narrative comprehension. Steemers (2010) expresses that all scripts for children should be simple

and straightforward, using a 3-act structure with a clear beginning, middle, and end, as young children are not able to process complex themes and storylines. She also recommends the frequent use of repetition as repetition has been proven to help children remember key ideas and concepts. The use of repetition also makes the show predictable and familiar, which is enjoyable for children, and helpful for parents. It is also suggested that the language used in a script should be age appropriate, stories should encourage children to participate in the show, and shot selection should be sparingly used in relation of the mental development of a preschool child (Crawley et al., 2002a; Fisch, 2004; Piotrowski, 2014; Steemers, 2010). For example, using wide shots will help a child understand where the action on the screen is taking place and understand where the characters are in relation to each other. Close-ups on the other hand can be confusing for young children to comprehend, and it is recommended to avoid using them for artistic reasons. Instead, close-ups should be used to highlight important information happening in specific scenes. A final element of script writing that Steemers (2010) mentioned is that when encouraging audience participation, do not try to trick the children into purposely guessing the wrong answer. It will discredit your television show to parents, who are ultimately the most important factor when it comes to children's media, as they are the ones choosing to let their children watch specific shows.

Child Development Theories

An important element to consider when developing television for preschoolers is keying in to their ability to understand and process the world around them. A preschooler spends most of their day learning about the world around them and their minds are constantly adapting and evolving as they solve problems. Therefore, for media to

resonate with the preschool audience it was created for it is important to the content to be relevant and involve realistic problems a child that age may face. When developing a television show for children, producers will be consulting out to professionals in the fields of child development, child psychology, and early children's education, as most writers do not have prior knowledge about child development. These specialists will work as the research department for the television show and have, themselves, studied the work of several child psychologists. Looking to famous psychologists such as Jean Piaget and the cognitive development theory, Howard Garner and the multiple intelligence theory, Erik Erikson and the psychosocial developmental theory, and Vygotsky's social development theory, researchers can gain insight to the constantly developing mind of a child.

Jean Piaget

Jean Piaget's Cognitive Development Theory is centered on the idea that children develop by interacting with their environment. Piaget insists that children are determined to reach a state of equilibrium, or the ability to process and then maintain a balance when presented with new information The theory states that the mind is built upon schemas, "a cohesive, repeatable action sequences processing component actions that are tightly interconnected and governed by a core meaning" (Piaget, 1952). When developing a schema, a child is being equipped with a foundation that future knowledge will be built upon. Upon encountering a new situation, children will assimilate what is presented to them by attempting to place the situation into an existing schema. If the child cannot categorize the information into the preexisting schema, the child will then begin a process of accommodation, and will create a new category. The child exists in a state of

disequilibrium until he or she can accommodate the new information. Finally, after processing has fully taken place, the child will reach a state of equilibrium. This process happens rapidly during the developing years, with harder and more abstract concepts being presented as the child ages (Piaget, 1952). Upon reaching a new stage of development, Piaget states that each children's' thoughts will become more sophisticated as they are constantly building on their schemas. Between infancy and two years of age children are in the sensorimotor stage of development. During this time, children are highly dependent on their caregivers and are constantly interacting with the environment relying on their sensory input and muscular reactions (Brewer, 2004). Throughout this stage, children are working to develop object permeance, the understanding that objects still exist when they are no longer in direct sight. After children master object permeance, it is a signally transition into the pre-operational stage of development (Piaget, 2003). The pre-operational stage of development happens between the ages of two and seven. As preschoolers, children act as sponges soaking up experiences and knowledge that they encounter on a day to day basis. Typical characteristics of this stage include an emphasis on egocentrism, the importance of play, a centration of thoughts, and symbolism. In regards to egocentrism, children assume that other people see the world and feel the same way as they do at all times (Hughes, 1975). To determine when children grow out of the egocentric stage, Piaget conducted the Three Mountain Task (Piaget & Inhelder, 1967). During this study, he placed three different mountain models in front of a child. After observing the mountain, a doll was placed on the table and the child was asked to identify the dolls current position based on ten photographs. He concluded that if a child selected a photo with the doll's point of view the child would no longer be egocentric. The results

of the study proved that four-year-old children selected the photographs from their own point of view, not the dolls. By the time a child reached age seven they selected the correct photo from the doll's point of view, proving that they no longer have an egocentric mindset (Piaget & Inhelder, 1967). Children during this stage of development also believe that inanimate objects have feelings and will begin to engage in symbolic forms of playing such as pretending to be a mother while caring for a baby doll. Between the ages of seven to eleven, children will then enter the concrete operational stage. During this time, children begin to develop the concept of operational thought, meaning they are able to logically reason when it comes to physical objects (Saul McLeod, 2018). By the time a child turns twelve years old, they are in the formal operational stage, can think abstractly, and can hypothesize to answer questions (Piaget, 1971).

Lev Vygotsky

Lev Vygotsky also believed that learning depends on the development of the child. Although Vygotsky agreed with most of Piaget's findings, he believed learning was the result of a child being guided to achieve specific milestones. Vygotsky goes on to say that there is a zone of proximal development where children learn what they can do independently, what they can do with guidance, and the understanding of what they cannot do (Vygotskiĭ et al., 1981). During his research, Vygotsky developed the social development theory which highlighted the importance of social learning over environmental learning. Throughout the theory, he states that children "master [their] surroundings with the help of speech" using egocentric thoughts and statements as an "aid of tactic"(Cohen, 2017; Vygotskiĭ & Cole, 1978). Using the findings of an experiment conducted by R. E. Levina, Vygotsky observed that children typically think

out loud to solve their problems proving that "speech and action are one and the same complex psychological function" which largely contradicts Piaget's findings that children automatically shift into an egocentric state of mind (Smidt, 2009).

Albert Bandura

Stemming from Vygotsky's work, Albert Bandura theorized that children learn by observing the world around them and the behaviors of humans reacting the environment. He believed that children would mimic behaviors that were presented in front of them, whether that behavior was positive or negative. To test his theories, Bandura created the Bobo Doll Experiment to observe how children would react to behavior demonstrated in front of them. By collecting a sample of 72 preschool aged children (36 males and 36 females) and then dividing them into 3 groups of 24, Bandura set up three variable outcomes to see how children would react to adults modeling specific behavior. The first group witnessed an adult behaving aggressively towards the Bobo Doll- punching it, kicking it, and hitting it with a mallet. The model also stated verbal aggressions such as "sock him in the nose," "throw him in the air," and non-verbal aggressions "he keeps coming back for more," "he sure is a tough fella." In addition to his initial question of whether modeled aggressive behavior would impact a child, Bandura was also curious if gender would have an impact on the modeled behavior. Therefore, he subdivided the group and allowed 6 boys and 6 girls to witness a female aggressor, and the other 6 boys and 6 girls to watch a male aggressor. After entering the room with a child, the model adult began to physically assault the Bobo Doll. The next group witnessed a non-aggressive treatment towards the doll meaning the doll was ignored for the duration of the experiment and the model only played with toys in the surrounding areas. This group

was also subdivided with a male and female model leading the group. The last group, the control group, did not include a model for testing. After viewing the modeling, the children were then taken into a different room with a bobo doll and a variety of other toys to play alone for several minutes. Bandura's experiment found that the children that experienced the Bobo doll being treated violently reacted violent towards the doll. He noted that the girls that viewed the aggressive treatment of the bobo doll typically behaved more physically aggressive towards the doll if they viewed the male model whereas the girls who viewed the female model typically were more verbally aggressive to the doll. He also saw that typically boys were more physically aggressive than the girls, opting to add toy weapons into the destruction of the Bobo Doll. The group who witnessed the non-aggressive treatment often ignored the bobo doll and played with the other toys in the room (Bandura, Ross, & Ross, 1961). In an additional study, Bandura aimed to investigate whether punishments would prevent children from participating in the modeled behavior (Bandura, 1965). Again, he divided his test subjects into three groups. The first group witnessed aggressive behavior being rewarded, the next group witnessed the model being scolded, and the control group did not witness any treatment of the model. As a result, the children who witnessed the reward typically mimicked the aggressive behavior than the children who witnessed the punishment leading to the creation of the social learning theory (Bandura, 1965).

Erik Erikson

Erik Erikson saw child development in terms of multiple psychosocial crises that occur throughout life**.** During the time of the crisis, Erikson believes a specific virtue will be learned depending on how an individual is nurtured through the situation. He came up

with eight different stages of Psychosocial Development: trust vs. mistrust, autonomy vs. shame, initiative vs. guilt, industry vs. inferiority, ego identity vs. role confusion, intimacy vs isolation, generativity vs. stagnation, ego integrity vs. despair. The first five stages occur from birth through age eighteen (Erikson, 1985). The first stage, Trust vs. Mistrust, occurs between birth and age one and a half. Like Piaget's Cognitive Development Theory, this stage highlights a baby's dependency on their caretaker. If the caretaker is reliable and consistent in their routine, the baby will develop trust. By trusting the caretaker, the baby will begin to be expectant that the caretaker will take care of any problem that arises developing the virtue of hope. If the caretaker is unpredictable or mean-natured, the baby will develop mistrust, and eventually develop fear. The second stage Erikson developed is called Autonomy vs. Shame and Doubt which happens between ages one and a half and three. Developmentally, children are maneuvering throughout their lives by crawling or walking. They are growing to be more independent and can make decisions about what they will and will not wear, play with, or eat, however these choices are guided by parents (Brewer, 2004). It is a parent's responsibility during this time to encourage a child to try things for themselves and to not do it for them. If properly guided, a child will develop a strong sense of self confidence and develops the virtue of will. If a child is constantly criticized, or if a parent does everything for the child, the child will lack self-esteem, and develop a sense of shame and doubt. The third stage is Initiative vs. Guilt it occurs between the ages of three and five. It is around this time the child will begin to develop leadership skills by engaging in dramatic play and interacting in activities with others their own age. Engaging in socialization with peers, the child will develop the virtue of purpose. If a child is not

given this opportunity or is constantly controlled by someone else telling the child how to interact with their peers, they will develop a sense of guilt and may feel like their presence is an annoyance to those around them. The fourth stage, Industry vs. Inferiority, occurs between the ages of five through twelve. Self-esteem is beginning to be shaped by peers, and a child begins to feel an urge to fit in. If a child is not properly encouraged, they will begin to doubt their own abilities and become inferior to the world around them. If they are encouraged, the child will develop confidence in their own ability to achieve the goals set for themselves and will eventually develop the virtue of competency. The fifth stage that children between the ages of twelve and eighteen go through is Identity vs. Role Confusion. During this stage, a child searches begins to search for their identity through both sexual and occupational stages (Mcleod, 2008). Throughout the process of puberty, Erikson states that once an adolescent feels comfortable with their body, they will earn the virtue of fidelity. If unable to establish their own identity, they might undergo an identity crisis (Erikson, 1985).

Howard Gardner

In 1983, psychologist Howard Gardner proposed that humans process information in eight different ways independent from each other. He stated that "an intelligence is a computational capacity-a capacity to process a certain kind of information- that originates in human biology and human psychology" (Gardner, 2006). He believes that each intelligence can be used during unique times to solve specific problems, or at the least, could be related to skill building. The first intelligence is the verbal-linguistic intelligence, which assists in communication by aiding the development of verbal skills. Next is the logical-mathematical intelligence, which is the ability to think conceptually

and of numerical patterns. Then there is the spatial-visual intelligence which highlights the ability to think in pictures and to visualize abstractly. The next is the bodily-kinesthetic intelligence, which is the ability to control body movements and handle specific items skillfully. There is also a musical intelligence, which is responsible for a person's musical capabilities. After this is the interpersonal intelligence, which is the ability to respond accurately to the emotions and moods of other people. Then there is the intrapersonal intelligence, which is the ability to be self-aware of yourself and spiritually aware that there is something bigger than yourself. The final intelligence Garner identified is the naturalist intelligence, which is the ability to be aware of the life found within nature (Gardner, 2006). As a child progresses through life, some of their intelligences will become more dominant than the others. For instance, children who play multiple musical instruments experience a great musical intelligence. A child's favorite subject in school could also relate to their verbal ability. More research has been done identifying other intelligences to add onto Garner's eight theories, nevertheless, understanding the different intelligences and how they function in an individual's life will help a person understand more about themselves. In relation to the multiple intelligences, research has suggested that there are three learning styles: Visual, Auditory, or Kinesthetic (Newton & Miah, 2017). Those who prefer visual learning will comprehend information at a higher rate when visual aids compliment the lessons. Auditory learners often repeat information out loud or retell it in their words own to fully understand it. Kinesthetic learners typically require some sort of movement when processing information. Although people have personal preferences, a study conducted in 2009

concluded that no particular learning style is superior to the others in terms of successfully acquiring knowledge (Reese, 2009).

How Children Learn from Television

Content creators hold a responsibility when producing effective content for children as television has the potential to influence a child's cognitive development. Several studies (Anderson et al., 2001; Bandura et al., 1961; Lesser, 1975; Santomero, 2018a) have suggested that viewing educational programming at a young age can influence academic readiness, ignite an interest in themes and activities, and model acceptable behavior. The Early Window Project determined that preschoolers who viewed informative programming were not only more interactive within their home environments, but also better equipped to start school by having superior verbal and numerical processing ability than those who did not view educational television (Wright et al., 2001). However, it has been concluded that children do not watch television with the intention to learn; as television is primarily considered a source of entertainment. Most of the learning that happens within television is incidental to the storyline, meaning children are not using their full cognitive ability to process what they are seeing (Bryant & Anderson, 1983). More recently, 57% of parents stated their children had learned "a lot" by watching educational content resulting in their children engaging in new activities such as imaginative play, creating a new project inspired by the media, or asking more questions (Rideout, 2014). As reported by Common Sense Media (2017), children spend close to 2 hours a day watching media with most of that time being spent on educational content, a consistent statistic within the last few decades (Kirkorian, Wartella, & Anderson, 2008; Rideout, Vandewater, & Wartella, 2003).

For educational television to be understood by the child viewer, children must have developed an understanding, or as Piaget would suggest, a schema, for narrative storytelling. Occurring throughout the preoperational stage of development, the ability to understand stories suggests that a child is able to "construct a mental representation of the material that they hear" (Skarakis-Doyle & Dempsey, 2008). In addition to storytelling schemas, children also need to have a basic understanding of television formal features. "When children can process and comprehend visual and verbal TV symbols, they will be able to organize, store, and relate…information to prior knowledge" (Linebarger & Piotrowski, 2010). Being able to tie a connection with what they are seeing on television and what a child has already experienced connects with Vygotsky's theories related to social learning. In addition to prior knowledge, the use of formal features, or visual and auditory cues typically assist in a program's appeal level. Animation, female or childlike voices, music, and camera movements are said to maintain a child's interest throughout the entirety of a program while male voices, narration, and adult dialogue typically detract from a child's interest (Gabrelian, Blumberg, & Hogan, 2009). However, the inclusion of formal features in a program can lead to confusion on the viewer's behalf. For instance, cut ins might be used to show what a character is viewing while dissolves could be used to signify that a significant amount of time has passed. Music choice can also influence the story by suggesting danger is near or offering the viewer insights to a character's mood. These examples are sometimes difficult for younger children to grasp (Beentjes, de Koning, & Huysmans, 2001). To encourage learning from educational television, is it recommended that the program skillfully uses formal features that are developmentally appropriate for the preschool mindset to gage attention.

Ultimately, what a child finds engaging will be the determining factor as to whether the children are learning from television. Content creators suggest adding age appropriate humor to maintain the attention of young viewers (Aviram & Valier, 2010). Other producers suggest that the key to understanding lies in repetition of key themes and phrases (Akerman et al., 2011; Fisch & Truglio, 2001; Steemers, 2010). An emphasis of co-viewing with caregivers also is also recommended to aid the comprehension of preschoolers ("American Academy of Pediatrics Announces New Recommendations for Children's Media Use," 2016; Kirkorian et al., 2008; Santomero, 2018a). Other studies have suggested that children will pay attention to programs if they enjoy the content and if it is appealing to the viewer (Fisch, 2004). As a result of a variety of variables relating to a child's experience watching television, several models and theories have been developed in an attempt to explain a child's cognitive process while learning from television.

The Passive and Active Model

The passive model proposes that the ability to maintain attention of children to learn material will rely solely on the program's production value. The more that a program relies on the formal features to guide storytelling such as changing camera angles, including flashy animation sequences, and using engaging auditory features, the model trusts that viewers will learn from television due to their eyes constantly being on the screen (Singer & Singer, 2004). Research has suggested that poor use of formal features can cause a child to lose interest in the events occurring on screen and the message of the program could be lost if presented at the wrong time (Bryant & Anderson, 1983). Yet, the passive model does not rely on a specific stage of a child's development

and does not acknowledge that a child brings in prior knowledge regarding television and information that they already know about a topic. Therefore, the passive model is often rejected referencing back to Piaget's theories that suggest children will comprehend information if the information presented to them is within their cognitive development (Wright, 1978).

The active model uses formal features to guide a child's expectation of a program. Children actively select the media they want to watch to satisfy their needs and moods (Clifford, Gunter, & McAleer, 1995). The model suggests that a child will determine what is appealing and what they want to continue to invest in by decoding the frequent use of formal features. Television requires "complex time-sharing and decision making" to be able to process the information being constantly updated on screen, and if a child was not able to actively keep up with the demands on television, they would not watch it (Wright, 1978). In addition to processing, maintaining attention and attraction to a program may be based on a variety of different features from the characters involved in the program, or the story's settings (Singer & Singer, 2004).

Transfer Learning

Noting that children are spending more of their time watching television than participating in other activities, it's important to recognize television as an educational medium. Although all television might not have the intention to teach, children can absorb social cues and other social behaviors by watching television. Most of this unintentional learning occurs through Transfer Learning. Transfer occurs when past information positively influences the reaction to new information learned (Mestre, 2005). For instance, a viewer watching a television program about waiting for the walk signal at

a busy crosswalk will experience a positive transfer when they wait for the "walk" icon to appear on the crosswalk sign as opposed to running directly into the street. Research done has shown that Transfer can occur in a variety of different ways such as vertical transfer or lateral transfer, specific transfer or nonspecific transfer, literal transfer or figural transfer, or near versus far transfer. In the situation of vertical transfer against lateral transfer, vertical transfer explains that situations will arise where the ability to learn a skill is explained by prior experiences or knowledge a person has had. On the other hand, lateral transfer is explained as the ability to understand that certain situations or items might have parallel meanings. For example, a child understanding that numerical decimals have fractional equivalents would show that a child is exhibiting lateral transfer (Mestre, 2005). Transfer learning depends on: the characteristics of a program, meaning the ability to maintain interest, the viewer's ability to comprehend the messages on screen, and the central problem that is at the center of the transfer (Mestre, 2005). When the three characteristics are met, it is likely for transfer to occur.

The Capacity Model

After the child has been placed into a position for transfer to occur, a television program's content can aid the transfer of knowledge to the viewer. The Capacity Model states that in order for a child to process the show's meaning, the demands of the show cannot exceed the resources available in a child's working memory (Fisch, 2004). To ensure maximum comprehension, the distance between the processing of the narrative and the processing of the educational content must be short. Therefore, the educational content, or the overall message that a program wants to get across must simultaneously exist within the narrative of the show.

Figure 2.1: The Capacity Model (Fisch, 2004)

Fisch explains the model by using a child's working memory and measuring the distance between the processing of narrative and the processing of educational content. Regarding the model, prior knowledge also plays a role when it comes to processing narrative and educational content. When looking at the narrative, if a viewer is a frequent viewer of a program, it is to be assumed that the viewer is accustomed to the show's pacing, characters, and story schemas. The familiarity reduces the demands on narrative processing and leaves room for the viewer to process the educational content. Fisch also agreed with findings that stated children comprehend programs more if their socioeconomic background matches the characters being portrayed on television (Fisch, 2000). If a child has experienced the lesson being taught in the program, and if that child is able to recognize the problem in a newly presented environment, the demands of processing of educational content is also reduced, allowing the child to process the

narrative being told. If a child is not able to comprehend the educational themes presented in a program, it is competing with that child's working memory, and the program will not be understood by the viewer (Fisch, 2004). Additional factors that might prevent a child from understanding a program include rapid use of formal features. It is recommended for content creators that formal features should reflect the child's developmental capabilities (Steemers, 2010). In fact, *Blue's Clues co*-creator, Angela Santomero states that "we never cut to a place we've never been before in that episode, and if we are going to make a cut we always have dialogue transitions" in order to prevent confusion with the young target audience (Hendershot, 2004). Regarding preschool television, it is ideal to keep transitions to a minimum as preschool aged children are still developing their cognitive abilities. Fisch's research suggests that to maximize comprehension of educational content for preschoolers, it is best for information to be presented in a visually concrete way as opposed to being abstract (Fisch, 2004).

The Traveling Lens Model

Another attempt to understand how children comprehend television was demonstrated with The Traveling Lens Model (Wright & et al, 1984). The model views comprehension as a wave that continues to reflect the child's interest and comprehension while watching television. For instance, if the material being presented on the screen is familiar to the viewer or too simple for the development of the child, it will not be challenging, and the viewer will maintain a low attention and interest level. The chart (Figure 2) designates this on the left side of the wave with the "boredom" marker. However, if the information on the screen is

Figure 2.2: The Traveling Lens Model

something new and captivating it is more likely that the program will hold the viewer's attention. As the child continues to watch television, their positioning on the model will vary depending on the complexity of the program. If the program becomes too difficult for the child to understand, the child will be expected to use a greater amount of mental effort. During this time, there is a risk that the child will fall onto the right side of the chart, "incomprehensibility," and will not be able to fully comprehend the material. By maintaining engagement and comprehension, a child will fall on the peak of the wave. The lens continues to move as the child maintains or loses interest in the content that they are watching. Although capturing the attention of the viewer is important, it is possible to still get the message of the program across as long as the viewer stays somewhat engaged with the program. Overall, the model suggests that "Children direct maximal attention to

stimuli perceived to be moderately novel and of intermediate complexity. Declining attention occurs when the material is overly familiar and easy to process, or, conversely, too novel and complex" (Linebarger & Piotrowski, 2010). The use of formal features to highlight important events will ultimately guide a child to comprehension of the message.

Sesame Street

Throughout the 1960's, it was argued that Americans had not looked for alternative options for education. Studies reported only "20% of 3-4 year olds attend any form of preschool and less than 75% of 5 year olds go to kindergarten" (Lesser, 1975). Nevertheless, increasing poverty rates often left children in disadvantaged neighborhoods behind academically. A study conducted by Benjamin Bloom concluded that "more than one half of a child's lifetime intellectual capacity is formed by 5 years of age," yet many children were not given the opportunity to reach cognitive success (Fisch & Truglio, 2001). As a result, President Lyndon B. Johnson announced his Great Society plan, which provided an increase to educational funding. By 1964, the Head Start program was launched to help children in lower income neighborhoods develop the skills they would need to enter public school (Morrow, 2006). Yet, many families in lower income neighborhoods hesitated or neglected to put their children into these educational programs because they did not have the means or time to do so (Lesser, 1975). This led Joan Canz Cooney to come up with a solution. Working with Lloyd Morrisett, the two set out to create an educational environment on television that would prepare three to five-year-old children for kindergarten (Morrow, 2006). Receiving $8 million dollars in grant funding, the duo launched the Children's Television Network in 1968 to achieve their goal of creating quality preschool television for lower income families (Polsky, 1974).

Following the development of the Children's Television Network, Cooney and Morrisett created the CTW Model which was responsible for keeping *Sesame Street* on track with its production goals. The model was a way of keeping track of the development of television series to assure constant communication amongst the production team (Fisch, 2004). It included four parts: an interaction between TV producers and child science specialists, the process of creating specific and age appropriate curriculum, a research department to help shape the program directly, and an independent measurement of viewers' learning. (Morrow, 2006). This model helped producers identify the educational goals of *Sesame Street,* without losing sight of the idea that the show's foundation was based on preparing their audience for kindergarten. Besides preparing the children for kindergarten, it was important to Cooney that the show highlighted the importance of multiculturalism and eliminated any racial prejudices that children may have been exposed to (Polsky, 1974).

On November 10th, 1969 *Sesame Street* premiered on PBS. The goal of *Sesame Street* was never to exclude middle- or upper-class families, but to provide lower income children a fair chance of academic success. Afterall, "inner-city families feel strongly about educational achievement, even if they are not sure how to motivate their children, help them set realistic goals, or show them how to succeed" (Lesser, 1975). In addition to the desire to help children succeed, it was also recorded that by the 1960s at least 87% of Americans owned a television within their homes (Morrow, 2006). Using television to educate children appeared to be a reasonable goal. Prior towards the development of *Sesame Street,* curriculum was not included in television shows designed for children. Most children's themed programs focused on entertaining children with the use of

puppetry and comedy (Fischer, 1983). However, Cooney believed that television could "help enrich the disadvantaged child's background" and spent time developing a curriculum that would be able to fill a missing void (Polsky, 1974). Cooney's team wrote the first season of *Sesame Street* based on the following curriculum goals: symbolic representation, cognitive processing, physical environment, social environment (Fisch & Truglio, 2001). A list of subtasks was also developed that indicated what it would take for a child to obtain mastery of that goal. For example, within the symbolic representation goal, a child would be able to identify and understand letters, numbers, and geometric forms. Mastery of the cognitive processing goal would indicate a child would be able to classify and understand the concepts of ordering objects.

The show contained a magazine format which included four segments that focused on a cognitive development curriculum: an animated cartoon, a short film, a puppet skit, and a studio skit. The use of puppets had been a common feature on broadcast television, but the Muppets of *Sesame Street* were unique in their own nature. Using the puppetry work of Jim Henson, Cooney wanted to "teach children about letters, numbers, and getting along" (Mandel, 2006). Psychologist, Gerald Lesser stated that by using puppets, children can understand more "exaggerated" situations that humans could not portray, demonstrating a better understanding for lessons taught on the show (Lesser, 1975). However, the producers still wanted the Muppets to be relatable to children. For example, Big Bird was created with the vision of a three-year-old still learning through asking questions. Cooney's team wanted Big Bird to show that making mistakes and asking questions was an essential part of learning (Morrow, 2006). Oscar the Grouch came about with the intention of helping children understand people have differentiating

opinions and the color of someone's skin does not matter when interacting with them. As a green monster, Oscar lived up to his name by being the neighborhood grouch, using words such as "leave me alone," or "get out of here." However, producers wanted to teach children how handle their emotions while dealing with difficult people, and ultimately teach children how to respect someone who behaved differently from them. However, there was a lot of controversy surrounding Oscar the Grouch. The show received several angry letters from parents who were expressing their displeasure with their children modeling Oscar's unfriendly behavior (Morrow, 2006). Nevertheless, Oscar is still a main cast Muppet on *Sesame Street* as when the characters interact with him, they understand his upsetting behavior and acknowledge that they can forgive him. More recently, parents began to blame Cookie Monster for contributing to America's childhood obesity problem (Hartman, 2011). As a response, *Sesame Street* premiered an episode starring Cookie Monster of the importance of maintaining a healthy diet without excluding his love for cookies ("Me Am What Me Am," 2012). The Muppets of *Sesame Street* play a crucial role for the show's development. As stated in a report that highlighted *Sesame Street's* impact on the preschool community, the role of the Muppets were " central to the teaching of cognitive processes, social relations, and emotions, and their use was expanded, both in amount of time and in their coverage of goal areas, over the first year" (Bogatz & Ball, 1971).

By season 34, *Sesame Street* shifted its program formatting to a tell "exceptional, uninterrupted, narrative stories" which meant all segments of the show were related by a central theme (Akerman et al., 2011). Today, *Sesame Street* maintains that formatting and continues to be one of the top competitors in the educational preschool television field.

Each season of *Sesame Street* continues to use the CTW model, but the curriculum of the season is selected based on research relating to the needs of current preschoolers. Establishing memorable characters along the way, *Sesame Street* has maintained their brand by establishing trust with parents for being a dependable source of education for preschoolers.

Blue's Clues

It is reported that children about two hours watching television each day ("The Common Sense Census…" 2017). Due to children spending so much time both in front of the television and using other electronic devices to watch a variety of content, it is important for educational content to reach the child in a quality way. During the 1990s, the Children's Television Act was passed in an attempt to increase the number of educational programs easily available to children throughout the day (Kroon, 2014). The act required broadcasters to air 3 hours of educational programming a week, however failed to clearly define what constitutes as educational or informational programming. Therefore, many cable networks were able to place an "E/I" logo at the beginning of their programs simply if the program included one prosocial or educational theme. (Fisch, 2004). As a result, there was an opportunity for a children's network to gain the trust of parents by broadcasting superior educational content.

In 1994, Nickelodeon announced it would be investing $30 million dollars to launch its Nick Jr. block (Brown, 1994). Up to this point, *Sesame Street* was acknowledged to be the most influential television program for the preschool audience. However, the Children's Television Workshop never prioritized audience participation as a primary goal of Sesame Street, though the research was there to suggest it made an

impact on a child's viewing experience. Brown Johnson, the vice president of Nick. Jr at the time**,** devoted hours researching the importance of audience participation when it came to children comprehending narratives. She stated that the ability to help children problem solve by interacting with the characters on screen "makes [children] feel smart, and it makes them feel strong, and it makes them feel powerful…no one had ever asked for that degree of audience participation before" (Ralli, 2005). Johnson's research, and the desire to create a program that "would be innovative and educational**"** to modern day television lead co-creators Angela Santomero, Traci Paige Johnson, and Todd Kessler with a challenging task (Hendershot, 2004). After being asked to create a game show for the youngest viewers of Nickelodeon by executives, the team created *Blue's Clues.* Upon its release in 1996, *Blue's Clues* became a phenomenal success with preschoolers across America with almost 14 million viewers tuning in weekly (B. Carter, 2000).

Although a minor goal of the program was to prove that children did not have short attention spans, "the creators…were less focused on a message that would entertain, and more focused on one that children would comprehend" (Akerman et al., 2011). Each episode of *Blue's Clues* begins with the viewer being greeted by Steve (or Joe in later episodes), and the spotted dog, Blue. The viewer is then asked to participate in a game of Blue's clues to figure out the mystery behind what Blue wanted to do for the day. Blue then sends Steve and the viewer on an adventure throughout their home to find pawprints located on three items throughout the home. After finding all three clues, the viewer participates in a celebratory song with Steve and Blue. For 22 minutes, the viewers are immersed into a curriculum that includes shapes, colors, numbers, letters, and music, designed to help children develop their cognitive thinking skills (*Blue's Clues*, 1996).

From the beginning, *Blue's Clues* creators wanted to make a show like *Sesame Street* centered around a "play to learn" philosophy (Anderson et al., 2000). Special attention needed to be placed on the development of the program so that the preschool audience felt inclined to partake in Blue's game alongside Steve. The creators "hoped that the opportunity to 'participate' would increase the mental effort the viewers [invested] in the program" (Crawley et al., 2002b). In order to encourage participation, the show needed to flow in a way that allowed for child response times. Co-creator Traci P. Johnson states that "pacing is really important…being slow and not being too fast so [the child] can digest the information," (Johnson, 2016). As a result, Steve's responsive role became critical for a child's experience watching *Blue's Clues.* Contradicting claims that children do not enjoy programming with male dominated voices, Steve became a friend to many preschoolers (Gabrelian et al., 2009). Children felt connected to Steve because unlike news anchors that address the viewer, Steve behaved like a child, inquisitive and eager to solve Blue's problem. Throughout each episode, viewers are able to establish a parasocial relationship with Steve and felt connected to the televised world (Anderson, 2004).

The show also needed to make sure that it encouraged adequate thinking and problem-solving skills for an audience between the ages of two and six. Nickelodeon consulted Dr. Daniel Anderson, a psychologist that spent years analyzing the impact of *Sesame Street* with children. He developed five main principles that sought to enhance children's attention: the show must be age appropriate for the target audience, auditory cues should be used to key children into learning moments, transitions should be limited to prevent confusion, the narrative must be engaging to maintain attention, and audience participation is crucial to (Steemers, 2010). To test the effectiveness of Anderson's

principles, *Blue's Clues* conducted formative research for every episode aired, just as *Sesame Street* did. Researchers wanted to assure that the children watching the program were fully understanding the themes presented in the episode, and they wanted to clarify that the children understood what was being asked of them (Crawley et al., 2002b). Each episode of *Blue's Clues* went through three stages of testing: formative storybook research, animatic research, and then episode testing. (Santomero, 2018b). After seeing the results of successful educational preschool television, Nickelodeon began conducting formative research for all its preschool television shows.

Dora the Explorer

After *Blue's Clues* success, Nickelodeon wanted to take educational preschool television to the next level. With the intention to continue to empower preschoolers by teaching them Spanish, Chis Gifford, Valerie Walsh, and Eric Weiner created *Dora the Explorer.* Gifford explained that "preschoolers are our least powerful citizens" and having a character acting as a symbol for them, they feel that they are actively engaged in Dora's journeys (Ryan, 2010). Releasing in August of 2000, the show follows Dora, a seven-year-old Latina who goes on adventures with the help of the viewers and her best friend Boots.

The show was designed to familiarize children with computers in what was becoming a technological driven society. Throughout her journey, Dora will use a variety of Spanish words, and translate them into English for understanding. Dora's name even stems from the Spanish word for computer, "computadora." The first season of the show opened with the theme song and a simple Dora animation on a computer screen. A mouse then appears and clicks on Dora as if it was a start button to begin the episode. Dora then

greets the viewer, introducing herself and her friends around her in English and in Spanish. A friend approaches her with a problem, and Dora invites the viewer to help her solve it. Throughout the show's progression, Dora becomes increasingly dependent on the audience's participation, inviting the viewer to help her solve riddles, play along with her, or even sing songs with her. It is important to note that Dora has the power to empower preschoolers by both including them on her journey, but also being established as the expert among her friends (Keys, 2016). For example, when talking to the audience, Dora always turns her body to the screen and directly addresses the audience. Dora's friends within the show always ask Dora for help with their problems, and then Dora asks the audience for help. Erin Ryan (2010) notes that it's this type of inclusiveness that "has the potential to positively affect the self-esteem and confidence of audience members," specifically the girls watching. However, there may be a few bumps in the road. For example, along the way, she may be stopped by Swiper, the sneaky fox, who will steal items from Dora or Boots. However, by encouraging viewers to yell "Swiper no swiping," Dora not only shows that it is important to stand up to bullies, but, above all, she shows that girls can stand up for themselves as well without aggression (Keys, 2016).

Dora the Explorer was developed using Howard Garner's Multiple Intelligences Theory (Popp, 2006). Therefore, writers develop each episode highlighting one of Garner's eight multiple intelligences. For example, most episodes of *Dora the Explorer* encourage movement. Writers have called for children to move their arms in a climbing motion, clapping their hands, stomping their feet, which all relates to the bodily-kinesthetic subdivision of the multiple intelligences theory (Gardner, 2011). Other

episodes have asked children to participate in shaking their arms or pat the ground to help a character on the screen play their musical instrument which encourages the musical intelligence of the theory.

The creation of *Dora the Explorer* was historically significant from a diversity standpoint as Dora became the first leading female Latina character on broadcast television (Keys, 2016). Developmentally, when children do not see people that look like them in the media they are consuming, they subconsciously begin to develop insecurities. Children who are not represented on television may develop "low self-concepts, [feelings of alienation], and become uninterested in participating in activities outside of their communities" (Ryan, 2010). These feelings are more apparent in girls than boys, as girls are often faced with stereotypes of how they fit into a male dominated society. During a time where racial diversity barely existed on television, and with the media portrayal of a few females with leading roles, Nickelodeon's president, Herb Scannell, expressed that "we really should figure out ways to find talent and find characters that resonate with all audiences" (Sigler, 2003). To reach more families, the show's developers decided against making Dora Mexican American. Instead, the show created a Latina that communicated in a universally spoken Spanish (Ryan, 2010). Therefore, *Dora the Explorer* looked to expand Nickelodeon's audience reach to the children and families of the Latin community. Upon its initial debut, outside of America, *Dora the Explorer* was shown in 22 Latin American countries becoming Nickelodeon's first series to "debut simultaneously in multiple regions of the world" (Artze, 2000).

Overall, the show encourages a play to learn environment, similar to *Blue's Clues,* and "most importantly…it gives Hispanic kids a sense of connection" (Sigler, 2003). The

show concluded after an 8-season run in 2014 and the creation of *Dora the Explorer* has proven to producers of children's media that there is power in an educational children's television show.

Content Analysis

Preschool television shows often maintain their relevancy and popularity by offering solutions to realistic problems. A common reoccurring theme in a preschool child's life is acknowledging and facing fears. Preschool aged children often have active imaginations and cannot distinguish fantasy from reality (Richert, Robb, & Smith, 2011). It is common for young children to be afraid of the unknown due to their limited life experience, and parents can provide comfort by talking through these fears with their children (Miller, Church, & Poole, n.d.). However, preschool television can also be used as a coping tool as young children are equipped with techniques to face their fears. Each television series approaches facing fears differently, therefore this content analysis will investigate an episode of *Blue's Clues, Bear in the Big Blue House,* and *Sesame Street* to determine the similarities and differences in solutions offered to preschoolers regarding how to face their fears.

Blue's Clues

During the *What is Blue Afraid of* episode of *Blue's Clues,* Steve invites the viewer to play a game of Blue's Clues to identify what Blue is afraid of (Sheridan, 1997). The episode begins with Steve greeting the viewer and recognizing that Blue is acting a bit strange and wants to know if the viewer might know why. Steve then guides the viewer to Blue who is shaking inside a blanket on a floor. Steve asks the viewer if Blue is

shaking because she is cold. To encourage active participation, children's voices reply to Steve, "no." Steve then asks the viewer if Blue is scared, to which the children voices respond, "yes." Blue places a pawprint on the screen inviting Steve and the viewer to figure out what she is afraid of. Steve gives a quick explanation to the viewer on how to participate in Blue's Clues, and immediately the pawprint on the screen begins to vanish away in a ghost like state. Spooky music compliments the visual causing Steve to question if the viewer caused the pawprint to vanish. After the children's voices respond negatively, Steve acknowledges the interaction was scary, establishing that fear makes people feel uncomfortable. Following the pattern of previous episodes of the show, Steve relies on the viewer's interaction and participation to help him find all three of Blue's clues by singing the song, *Play Blue's Clues*. Following the song, Steve begins to explore his house looking for paw prints and the camera follows Steve every move to prevent confusion to the preschool viewer. As Steve approaches the kitchen a bird's feather with a pawprint begins to fall from the ceiling onto the kitchen counter. The children's voices yell out "a clue, a clue" signaling Steve to stop and analyze the room around him. After identifying the clue, Steve asks the viewer what he should do. The children's voices reply "notebook," which makes Steve pull out his handy dandy notebook to sketch the feather and question what Blue might be afraid of. Understanding that he needs to find more clues, Steve closes the notebook and moves on the next room of the house.

The next scene involves Shovel, Pail, and Blue looking at their shadows, introducing the episode's secondary theme. As Steve, who is off screen, approaches the group, his shadow grows larger, and diminished organ chords begin to play, terrifying the group. Steve appears on screen letting his friends know not to be afraid because it is just

him and he isn't scary. The scene transitions into a game where Shovel, Pail, and Steve begin to identify which items are casting shadows onto the ground. Upon the discovery of each new shadow, another creepy chord plays until the camera pans up revealing the item the shadow is attached to. Steve acknowledges that each item they are discovering is not scary and has a purpose. The last shadow Steve discovers, a mysterious bird, has one of Blue's pawprints on it. Again, the children's voices prompt Steve to write the clue down in his notebook. After writing down the clue, Steve asks the viewer "what could Blue be afraid of with feathers and this shadow?" Not expecting a response, Steve stops as he hears clanging of pots and pans coming from the kitchen. He enters the kitchen once again, Blue banging on pots and pans seeing Mr. Salt and Mrs. Pepper holding polaroid photos. Mrs. Pepper is excited to show Steve her photos, however she reacts with a mortified scream, realizing each of the photos Mr. Salt took were extreme close ups. She asks Steve to help her identify the items in the photos. Steve then asks the viewer for help participating in the game. Mrs. Pepper shows the audience a close-up photo of a graham cracker, a raisin, and a piece of celery. Throughout the game the children's voices guide the viewers to the correct "yes" or "no" response to what the photo was. After correctly identifying the item, the polaroid zoomed out and then back in, establishing close verses far. At the end of the game, Steve suggests that the pictures were spooky because they were too close, and almost unidentifiable.

The show then transitions into the mail time segment, where Steve and Blue read a letter from their fans. In this episode, the children who sent Steve and Blue a letter were teaching them how to make shadow puppets, another signal towards the show's secondary theme. After agreeing with Steve that the shadows were a bit scary, the duo

hear spooky music playing near them. Upon zooming out, Steve notices a painting on the wall with a ghost inside. He suggests they should Skidoo into the painting to investigate the cause of the creepy music. Blue does not want to go because she is afraid to go, but after Steve suggests that they could go together, they both skidoo into the painting. Upon arriving inside the painting, they were greeted with a ghost named Boo. Boo asked Steve and Blue for help identifying different sounds in her mansion. They agree to help Boo find the noise in her home which begins the next Game section. The first noise, footsteps stomping, were identified to be her kitten coming down the stairs. The next sound they hear is thunder. Steve reminds the viewers and Blue and Boo "it's just a notice…there's nothing to be spooked about Boo" The game concludes and Blue and Steve Skidoo out of the panting back into the living room where the telephone is ringing. Upon answering the phone, sound waves are visible with Blue's pawprint on them. The sound waves are calling out "hoot" "hoot" leading Steve to wonder what his puppy is afraid of. He sits in his thinking chair, and realizes Blue is afraid of a shadow of an owl in the bedroom. To face her fear, Steve goes to the bedroom to introduce the Owl to Blue. The friends from the episode all gather back into the bedroom and greets Blue's new friend. Due to Steve solving the puzzle and making Blue face her fear head on, Blue is now confident, and no longer afraid of the shadow in her room.

By relying on the diminished organ chords, supernatural sound effects, Blue's flopping ears, and Steve's anxious body language, the episode creates tension around things that might invoke fear. The episode uses formal features to key the audience in that fears are supposed to make them feel uncomfortable and nervous. By using Steve, the show's authority figure, to guide and troubleshoot the source of Blue's fears, children

recognize that the ability to face a fear depends on in being able to understand the source of the fear and confront the fear directly.

Bear in the Big Blue House

Playhouse Disney took a more direct approach to facing fears in the *Nothing to Fear* episode of *Bear in the Big Blue House* (Kriegman, 1999). Staying in trend with previous episodes, Bear welcomes the viewer inside his home after checking his mailbox and noticing he has a package. He then makes a more direct interaction with the viewer, smelling the screen, and commenting that the viewer smells like soap and questions if they had just washed their hands. He proceeds to walk into the kitchen to open his package. Like *Blue's Clues* following Steve's motions, the camera follows Bear in a wide shot as he moves into the next room. Bear stops at the kitchen counter, unboxes his package, and realizes he has made a mistake. Instead of ordering a bear clock, he has ordered a bizarre skunk clock with big, wide eyes. Making the most of the moment, bear decides he wants to hang the clock up in the kitchen anyways but is distracted by noise coming from outside. He peeks out the window to see his friends, Treelo and Ojo playing on the swing set. Bear invites the viewer to follow him outside to greet his friends.

The scene cuts to the backyard where Treelo is swinging very high on the swing set. She jumps off, and pushes Ojo to the swing, suggesting it was Ojo's turn to swing and Treelo's turn to push. Ojo, timidly declines Treelo's idea. Treelo directly asks Ojo, "are you afraid?" Ojo, embarrassed at the accusation, says no. Bear interjects and assures Ojo that she does not have to swing if she is not comfortable swinging, to which Ojo responds that she is afraid but wishes she wasn't. Bear begins to provide Ojo with memories of her facing her fears and reminding her that they talked about why her

previous fears were scary, and why she is no longer afraid of them. They begin to talk through Ojo's fear and she admits that she's afraid because the swing "it goes so high." Offering a solution, Bear suggests that she does not have to swing as high as Treelo, and she can modify it for her ability. Agreeing to Bear's idea, Ojo hops onto the swing and expresses her joy about facing her fear.

Bear walks back inside the house and the word "afraid" appears on screen. He repeats the world three times, asks the viewer if they know what the word starts with, celebrates the viewer for correctly guessing the letter "a" and proceeds to tell the viewer that everyone is afraid of something. He then states that "the thing to remember is you shouldn't be afraid to talk about what you're afraid of. Just as a grown up about what you're afraid of," suggesting that talking about fears will lead to not being afraid anymore. Bear backs his statement by singing a song and providing examples about talking to an adult or a friend about fears. Throughout the song, Bear is seen dancing throughout the house and the camera follows his every transition into a new room. After the song concludes, Bear reinforces the idea by asking the viewer "what do you do when you're afraid and who do you talk to about it? What do you think?" A few seconds later, a video segment begins playing with children describing their fear, and who they talked to about it. All the children in the video admitted that after talking about their fears, they were no longer afraid. The video segment ends, and the camera establishes a medium close up on Bear where he states, "It helps to talk to people when you are afraid."

The episode continues to provide more examples of Bear's friends being afraid and Bear talking them through their problems. After Bear hangs up the skunk clock in the kitchen, Tutter the Mouse appears afraid of the loud noise the ticking skunk clock is

making. Thinking it is another animal, Tutter tries to talk to the clock about being quieter. After realizing the clock is unresponsive, Tutter grows wary of the skunk on the wall, fearing the physical features of the clock. He begins to get flustered and quickly expresses his concern to the clock. Upon hearing Tutter, Bear enters the room and tells him to breathe in and out, and calmly explain what the issue is. After telling Bear he was afraid of the skunk because it is too loud, Bear pulls the skunk clock off the wall and shows Tutter that it's just a clock made up of mechanical pieces. Tutter investigates the clock, taking it apart to view all its pieces, as Bear leaves the house to visit Pip and Pop outside. Upon visiting Pip and Pop, Bear notices that Pop is nervously expressing to Pip that he is afraid to do a trick into the water. Bear suggests that sometimes there may be a reason why others are afraid of something and that the fear might result in a dangerous outcome. This leads Bear to sing another song with Pip and Pop suggesting that if one is afraid of something it might mean that the task is too dangerous to complete. As a result, Pop finds an alternative way to jump into the water and Bear returns home.

Upon entering his home again, Tutter has disassembled the skunk clock beyond repair. Not realizing he has broken the clock, Tutter tells Bear that he felt silly being afraid of a clock and that he is no longer afraid. He thanks Bear for talking him through the problem and returns to his room to sleep for the night. Bear, happy Tutter faced his fear, but disappointed he will have to fix, the clock states that he's happy that Tutter is no longer afraid. He then sets off to his room for the night. As the show concludes, Bear goes to greet Luna, the moon in the sky, and recaps the day. Luna offers one last piece of wisdom to Bear and the viewer, "once you find out what you're afraid of, you often find

out there isn't much to be afraid of" to which Bear agrees. The duo performs the *Goodbye* song and the show ends.

Taking a more direct approach, *Bear in the Big Blue House* highlighted the importance of clear and direct communication when it comes to facing a fear. Unlike *Blue's Clues,* this series does not rely on children's voices to establish a relationship between the viewer and Bear. There is also less response time for children to respond to Bear. However, repetition is a key element used as Bear reminds his friends and the viewers that the one way to face a fear is to talk about the fear with someone else. The characters in the series also rely on Bear as the authority figure of the episode by never speaking directly to the viewer. Due to this, children can see Bear as a knowledgeable, respectable figure and take his advice.

Sesame Street

Unlike the previous examples, *Sesame Street* greets the viewer once at the beginning of the episode but does not expect audience participation throughout the series to continue the story. *Sesame Street's* street stories are also tied into the episodes overall theme, which in this case happens to be animals and the role of a veterinarian. During the *Afraid of the Bark* street story of *Sesame Street,* Elmo learns Zoe is afraid of dogs and attempts to offer her suggestions on how to help her face her fears (Clash & Diego, 2012). The episode begins with Bob greets the viewer while taking his large dog, Barkley for a walk. On the other side of the street, Elmo and Zoe are seen rolling Zoe's pet rock, Rocko down the street to see how far he can roll. After rolling the rock far away from her, Barkley enters the frame growling, and fetches the rock. Bob retrieves the drool covered Rock and returns it to Zoe. Upset, Zoe takes her rock and moves to another area

on the street asking Rocko, “Do you see any dogs here? No? Ok, we can play here.” Elmo, concerned with Zoe’s speedy exit, follows her to assure she is alright.

Shortly after arriving, Grover enters the scene walking several dogs. Zoe, shaken from seeing the dogs, claims that Rocko is afraid of dogs and must leave. After now seeing two instances of Zoe running from dogs, Elmo is now cluing in that there may be something bigger going on with Zoe and he follows her to the next location. Zoe is now nervously cradling Rocko while checking her surroundings for more dogs. She continues to run away at each sight of a new dog. Before following Zoe once again, Elmo then turns to the viewer and states, “Every time Zoe sees a dog she leaves. Zoe is afraid of dogs!” After confronting Zoe with her problem, Zoe exclaims that it is not her that is afraid of dogs but instead it must be Rocko who is afraid of dogs as he shakes every time he sees one. Elmo reminds Zoe that Rocko is just a rock and cannot shake. However, noticing that Zoe is deeply consumed in her role playing, Elmo offers to show Rocko how to face his fears.

In the first attempt, Elmo finds another family living on Sesame Street that has a dog dressed in a tutu comparable to Zoe’s tutu she was wearing. Delighted, Zoe says that Rocko likes the dog in the tutu because it is “really cute.” However, the dog begins to grow agitated and starts barking, leaving Zoe to run away and hide under a nearby table. At this point in the episode, Gina, the street’s veterinarian, enters. Elmo explains to Gina that Zoe is afraid of dogs and he has been trying to help her face her fear. Acknowledging that Gina is an expert on dogs, Elmo asks if Gina would be able to show Zoe how to get over her fear. Gina agrees, and asks Elmo to pretend to be her dog while she teaches Zoe how to properly greet a dog. Gina explains that there are three steps to get Zoe to face her

fear. First, Zoe must ask the owner's permission to meet the dog. Second, and after obtaining permission, Zoe must make a fist and place it in front of the dog, so the dog can familiarize itself with Zoe's scent. Third, Zoe may pet the dog. After successfully trying out her new strategy on Elmo, Zoe gains courage to try Gina's advice with Barkley. Zoe, not escaping from her role-play, admits that Rocko is no longer afraid of dogs and he has faced his fear. The episode concludes with the cast singing a song about walking dogs. Although this episode of *Sesame Street* had several underlying themes around it, it is most important to note that Elmo passed off the role of authority to an adult, Gina, who then helped Zoe face her fear. Elmo successfully problem solved at the beginning of the episode after drawing conclusions that Zoe kept running away from the dogs due to a developing fear of them. However, Elmo is only three and a half years old, therefore he must model good behavior by looking to older members around him for advice and resolutions to conflicts. Both Elmo and Zoe are in the preoperational stage of thinking, which explains Zoe's use of talking her problems out using Rocko as a guide. One can expect that both Zoe and Elmo solve a lot of their problems through make-believe play because of their age, which makes them identifiable with *Sesame Street's* target audience. With this being the 4360th episode of *Sesame Street,* it is expected that viewers are familiar with the fast pace of the show, therefore little explanation needs to happen to comprehend the narrative. Unlike the two previous examples, *Sesame Street* relies on brand familiarity and story development with a clear three act structure to get its message across. Only transitional formal features are used, and music to maintain interest during significant parts of the story. Identical with *Bear in the Big Blue House,* Zoe facing her fear was a result of speaking to an adult about her problem, although she was speaking on

behalf of Rocko. Overall, Gina's lesson to Zoe directly approached the fear while illustrating safe methods to meet unfamiliar dogs.

Conclusion

Each episode of these preschool television shows intended to explain how a child could realistically address their fears. Although each show took a slightly different approach, the shows each ended with a character directly confronting their established fear. The adult, or authority figure in each episode listened and identified the fear that the other characters in the show were facing. In each show, the authority figure offered suggestions or support to help the anxious character combat their fear.

While the episodes of *Blue's Clues* and *Sesame Street* centered around a fear of one character, *Bear in the Big Blue House* presented each secondary character with a different fear. Due to this, the pacing of the *Bear in the Big Blue House* episode was significantly quicker than the other two shows. Each conflict surrounding a character's fear resolved itself within two to three minutes of screen time, and as a result, the episode's premise was unintentionally unrealistic as it suggested that serious fears could be overcome in a matter of minutes. In addition to the pacing, the song that Bear sings to the audience to explain how to face a fear appeared to be poorly executed and was not consistent with the entirety of the episode. Bear sung the song as he danced between different rooms of his home. Throughout the song he suggested that children should tell an adult or a friend about what they are afraid of, but the scene did not provide a visual aid on screen. If the scene was executed in a way where it provided visual examples of the fears being listed, or if it was sung with a character who was actively facing a fear, it's purpose within the episode would have been more coherent.

Taking the narratives of each show into consideration, *The Topaz Troop* will place an emphasis on the adult figure to demonstrated to children how to confront their fear. However, unlike the other episodes, *The Topaz Troop* will reinforce the idea of overcoming a fear by having the children in the episode actively demonstrate the technique the authority figure illustrates.

CHAPTER THREE

The Creation of *The Topaz Troop*

After developing an understanding of how television can be used to teach children, and analyzing three notable preschool television series, the next step was to apply the knowledge by creating *The Topaz Troop.* Although no official formative research was collected for the creation of the pilot episode, the research developed in the prior chapters was taken into consideration. In addition to the research, Steemers's (2010) was used as a guide throughout the development process. The television show was designed to meet the needs of children between the ages of four to six years old. The primary goal of the pilot episode of *The Topaz Troop* was to provide preschool aged children self-regulating tools to face a fear. Additional goals of the program included providing children scientific knowledge about stargazing, developing prosocial awareness regarding the responsibilities of friendship, and introducing children to camping vocabulary and activities. Following the development of the show's goals, the show's concept was created. It was decided that the story would follow a scout troop working together to earn badges for their scout uniform.

The Screenplay

It was important that the content included within the screenplay be relevant to young children while aspiring to achieve the program's goals. The scout theme was created due to the target audience being at age where they might join Girl Scouts as a Daisy or Brownie or join Boy Scouts as a Cub Scout. To introduce a child to activities a

scout might engage in, the first episode centers around the Topaz Troop setting out to achieve their camping badge. As recommended by the capacity model (2000, 2004), the central message of how to face fears is interwoven with the storyline.

Following the lead of shows such as *Blue's Clues, Dora the Explorer, Bear in the Big Blue House,* and noting how audience participation empowers the viewer (E. J. Carter, Hyde, & Hodgins, 2017), it was decided to establish a connection between Troop Leader Jane, Coco, and the viewer immediately. Within the first few minutes of the episode, Troop Leader Jane introduces herself to the viewer, explains that she is preparing to take her troop members camping, and asks if the viewer would like to come along (see Appendix D for the completed screenplay). Shortly after, the viewer is introduced to Coco who asks if the viewer understands how they can be a member of the troop. To establish Jane as the primary authority figure, she explains the rules of being a Topaz Troop member. Although Coco often speaks to the viewer, Jane is the character who provides the wisdom and knowledge that the other members of the group applies within their interactions with each other.

To meet the first goal of the program, characters on the show would need to establish their fears early on and receive information on how to face their fears. Therefore, Claire enters the story nervous about embarking on the camping trip. She verbally admits that she does not want to go camping as she fears she will encounter monsters and wolves, which is an example of a young child's overactive imagination (Kudryavtsev, 2017). As a response, Jane tells Claire to "stop, take a deep breath, and relax" and calmly explain what she is truly nervous about. Claire admits, shyly, that she is afraid of the dark. To normalize the situation, Jane reminds Claire that fears are natural,

and everyone is afraid of something. To add to Jane's point, Coco and the rest of the troop members enter the room and begin sharing their fears. To establish the point once more, Jane turns to the viewer and asks them to tell her what she is afraid of.

Figure 3.1: Troop Leader Jane reacting to the viewer's fear in The Topaz Troop

She then reacts to their fear, establishing empathy between her and the viewer, and tells the viewer that to face a fear, it is important to "stop, take a deep breath, and relax." The phrase reoccurs multiple times throughout the episode as an attempt to remind viewers that they have the power to face any fears they may have.

Although the rain causes the group to have to camp indoors, in order to provide the children with an example of camping in the wilderness, Jane introduces the children to a star projector. Throughout the Topaz Troop's experience with using the star projector, the viewer is provided with a basic introduction to astronomy through stargazing by exploring constellations. To introduce the constellations in suitable way for preschoolers, Jane defines that "constellations are a group of stars that make shapes in the

sky," and the troop members are shown several examples which include Ursa Major, Canis Major, The Big Dipper, and The Little Dipper. After introducing children to actual constellations, the audience is then encouraged to help identify different shapes in the sky with Jane and Coco leading a short game.

Figure 3.2: The Shape Game within *The Topaz Troop*

Upon each shape's identification, the viewer is congratulated and then asked to identify the next one. The inclusion of the shape identifying game is to instill confidence within a preschooler who may just be learning to correctly identify shapes, and to reinforce the idea that constellations are a group of stars that, undeniably, make shapes in the sky.

Throughout the episode, the Topaz Troop members are often seen encouraging and calming each other as a way of modeling prosocial behavior. For example, after learning that Coco is afraid of thunderstorms and seeing he is visibly shaken by the storm that ruined the original plans of their camping trip, Claire and the rest of the Topaz Troop members try to remind him of Jane's advice, to "stop, take a deep breath, and relax."

Taking the effort to calm Coco's nerves one step further, Mia reminds Coco that thunderstorms are "only temporary," and "won't last forever" which introduces and defines a possible new vocabulary word. Kevin then provides Coco with an additional method to face his fear: think of something silly that corresponds to the fear and it may not be as scary anymore. Overall, Coco and Claire are successful facing their fears, and Jane recaps the episode by repeating one last time that anytime the viewer is afraid, they should "stop, take a deep breath, and relax and think about how to conquer [their] fear."

Set and Wardrobe Design

Designed for the children in the story, the Topaz Troop's clubhouse is filled with pops of color from the variation of toys, art supplies, and dress up costumes found around the room. The set was constructed within a studio to avoid having to work around a predetermined home style. As a result, the clubhouse is lined with a warm wooden paneling.

Figure 3.3: The use of color in The Topaz Troop

The use of colors on the set would be used to appeal to the young preschool audience. Research has shown that the use of warm colors increases attention and stimulate active participation, therefore the entire film is colored with a warm gradient (Chang, Xu, & Watt, 2018). Items for the set specifically were painted to contrast against the wooden panels. The audience within *The Topaz Troop* demographic are in the early stages of developing their literacy skills. To prevent their attention being used to decode phrases on screen, special consideration was taken to avoid displaying words within the clubhouse.

In regards to the troop's uniforms, blue was as an accent at it is scientifically proven to establish a sense of well-being (Schiller, 2012). To establish Troop Leader Jane as the central authority figure, she is the only member of the troop wearing a sash, while the rest of the troop are seen in vests.

Character Design

It is important to create relatable characters who face realistic situations for children to identify and connect with (Steemers, 2010). A better connection a child feels with a character leads to greater entertainment and encourages learning to happen. Steemers also encourages that children should deal with realistic problems that are easy for a child to conceptualize into how it may be relevant in their own lives. It was important as the show's creator to include a blend of characters on camera encouraging diversity and cultural awareness. A recent content analysis revealed that out of over 1500 characters currently on television, only 5.6% of the characters were black and 11.6% of characters were of Asian descent (Gidney, Burton, & Dobrow, 2018). It has been statistically concluded that children who fail to see themselves represented in the media

often lack self-confidence and very rarely are encouraged to participate in activities outside of their communities (Ryan, 2010). Although not noted on the screenplay, *The Topaz Troop* prioritized casting minorities in the lead roles.

In an analysis of television programs, it was found that children typically retain information from programs that are child-oriented (Singer & Singer, 2004). For instance, the research suggested that receive information better from female voices rather than male voices as men are typically associated with informational news programs targeted towards adults. The analysis also concluded that attention would be increased if the program included "child dialogue, non-human voices, animation, and music" (Singer & Singer, 2004) As a result, it was decided to make the troop leader character a female. Throughout the story, Jane is seen as the expert amongst her troop members, guiding them to conquer their fears, keeping them safe, and leading the troop's activities. Jane's character traits intentionally similar to those of a preschool teacher. She is musical, friendly, cheerful, energetic, but also observant to the emotions and feelings of those around her.

Puppets are a common tool used within preschool classrooms. Teachers often include puppets within their curriculum to promote emotional development, encourage participation in group events, and developing problem solving abilities. Puppets can connect with children on a deeper level as puppets do not have the same physical limitations as humans. Ahlcrona (2012) suggests that children relate to puppets due to their ability to "evoke and arouse the spectators' emotions, thoughts, and associations." Therefore, Coco was used to expand the idea that everyone has a fear and it is possible to

conquer them. In response to diversity on camera, puppets generally do not have nationalities or ethnic backgrounds allowing for greater relatability among all viewers. To build confidence within the audience, and encourage STEM abilities within young girls, it was decided that Mia should show some expertise identifying constellations while the group stargazes. This choice directly stems from reports that suggested that "82.7% of girls and women said that it is important to see women STEM characters on television" (The Lyda Hill Foundation & The Geena Davis Institute on Gender in Media, 2018).

Formal Features

As Steemers (2010) recommends, "shot selection, editing, and pace should reflect children's developmental capabilities." Therefore, with the target audience being young preschool children, shots typically ranged from wide shots, medium wide shots, and occasionally medium close ups. Shot selection was also determined by working around the puppet's physical limitations. Fisch predicts that "comprehension of educational content is likely to be greater if the content is visually concrete, rather than abstract among preschoolers" (Fisch, 2004). Therefore, emphasis was placed on the viewer having the ability to watch the action of the scene unfold as preschoolers may not have the cognitive ability to imply actions have taken place.

Figure 3.4: Shot Composition: Wide Shot of the Topaz Troop during the song, *Camping List.*

Relating to the shot composition, transitions were kept as cuts or fades into new areas and the show purposely took place in two areas of the Topaz Troop's clubhouse to prevent clouding a child's ability to keep up with the storyline. Very simple animation was also included in the show to draw attention to significant learning moments of the episode. Typically, these animations were cartoony, brightly colored, and were included to highlight significant narrative points of the show.

The episode also contains frequent use music and sound effects to preserve attention of the viewer. It is implied that young children often use music to learn information or receive instruction. To connect with the audience, two original songs were created for the program. Although literacy was not a central goal of the program, the song, *Camping List,* exposed children to basic camping terms paired with visuals to accommodate the terms on the screen. *Make Believe Together* encourages children to use their imaginations to turn a rainy day into a positive solution. Each of these songs were

presented in such a way that they added to the overall storyline. For instance, during *Camping List,* the children are working with Jane to fill a bag of camping supplies that they will take with them. During *Make Believe Together,* the children have just found a new way to camp and throughout the song they are working to transform the clubhouse's living room into their campsite. Interlacing the music with the storyline is another way the narrative is working to achieve a significant amount of comprehension within the viewer.

The Production

Preproduction of *The Topaz Troop* began during the spring of 2018. To maintain a greater control over lighting and external sounds, a decision was made to film the project within Baylor University's Castellaw studio. The film was funded by both a crowd funding campaign and a project grant through Baylor University's department of Film and Digital Media (see Appendix C for budget specifics). The casting process took place over a course of three months and occurred by requesting auditions through Facebook groups and by using the websites Backstage and Kids Casting.

The project filmed August 6th through August 8th. Three cameras were used throughout the shoot: an Arri Amira, a Canon C100 Mark II, and a Canon 5D Mark II. Although the Arri Amira was used primarily throughout the entire production, the additional Canon cameras were used to obtain additional angles, and at specific times, the additional Canon cameras were used for a two-camera setup. Each actor received their own lavalier microphone to wear during the production, and an additional boom microphone was used to record an overall recording track.

Post production occurred throughout the fall and winter of 2018 using Adobe Premiere. Adobe Photoshop and Adobe After Effects were used to create the smore animation scenes, the title card graphics, and the stargazing scenes found within the project. Following the completion of the 15-minute film, a colorist was consulted to create a color grading over the project using Assimilate Scratch. A final HD export of the project was created to screen for the study's purposes.

CHAPTER FOUR

The Study

Following the creation of *The Topaz Troop*, two hypotheses were proposed in response to the show's objectives. Referencing Fisch's (2000) capacity model which suggests that children will comprehend material better if they have experience with the topic, the first hypothesis was drafted.

> H1: Having prior knowledge of a subject will increase a child's ability to comprehend lessons they are seeing on television.

To further a child's understanding television narratives, Aladé and Nathanson's (2016) research showed that there is a direct correlation between a child's verbal ability and their ability to comprehend narratives. Therefore, the second hypothesis was proposed:

> H2: Having a greater verbal ability will influence the understanding of the narrative.

Participants

Preschools and kindergarten classes with children aged 3-6 years old were contacted to participate in the study in the Waco, TX area. Parents of the participants (n = 33) were provided a link to view *The Topaz Troop,* asked to complete a survey about their child's media habits, their socioeconomic status, and their child's involvement of extracurricular activities outside the classroom. Parents were then provided with an IRB-approved parental consent which detailed the study procedures and the expectation of their children's participation.

The preschool and kindergarten classes were then shown the episode of *The Topaz Troop* in a group setting. The children who received parental consent were then interviewed regarding their comprehension over the program. All study procedures were controlled manually, and the participants had the ability to cease the study upon their request resulting in a sample of $n = 35$.

Stimulus Material

The Topaz Troop was created for this study by the primary investigator. *The Topaz Troop* attempts to demonstrate how children can cope with fears by creatively using their imaginations and relying on the importance of friendship to get through tough times. As Troop Leader Jane and her cheerful dog, Coco, prepare their three troop members for a weekend of camping, an unexpected thunderstorm causes the troop to turn their club house into a campsite. Shortly after, Jane discovers that the youngest troop member, Claire, is afraid of the dark, and Coco is afraid of thunderstorms. A repeated theme occurs throughout the show that reminds children to "stop, take a deep breath, and relax" when they're afraid, demonstrating that a child always can regain control of their emotions.

To assess verbal ability test, children were asked to identify as many flashcards as possible from the "First Word Flashcards" deck by Brighter Child within one minute. A high score indicated that a child has been given greater opportunities for literary advancement, which would suggest a better narrative comprehension score.

Measures

In order to assess comprehension and understanding, comprehension questions and story retelling methods as demonstrated by Skarakis-Doyle and Dempsey (2008) were implemented. Following the screening of *The Topaz Troop,* children were asked to retell the story. Following a child's retelling of the events that occurred in the video, the researcher followed up with more specific questions such as "why didn't Claire want to go camping," "what was Coco afraid of," and "tell me what you have to do to face a fear." Understanding was measured based on the strength of the child's answer on a 1 (low comprehension) to 3 (exceptional comprehension) scale.

To determine if salience and prior knowledge had an impact on a child's overall comprehension of the narrative, questions were sampled from Aladé and Nathanson (2016). To assess a child's prior knowledge, children were asked if they had any experience with either Boy Scouts or Girl Scouts and asked about their knowledge about camping. In response to salience, children were asked to rate their feelings on a 1 to 5 scale about camping, stargazing, and joining The Topaz Troop.

Lastly, verbal ability was assessed by the amount of flashcards a child was able to correctly identify within a minute as based on Missall and McConnell's research (2004). A list of questions asked can be found in Appendix B.

Results

As predicted in Hypothesis 1, prior knowledge was a determinant of comprehension $\beta = .67$, t (34) = 5.16, $p < .001$. The results of the study were able to explain that 43% showed improvement of answering comprehension questions when

having prior knowledge of the themes presented in the film: $R^2_{adj} = .43$, $F_{(1, 34)} = 26.58$, $p < .001$.

Hypothesis 2 predicted that having a greater verbal ability will influence the understanding of the narrative. A regression analysis showed that verbal ability positively corresponds to narrative comprehension $\beta = .40$, t (34) = 2.54, $p < .016$. The variable explained about 14% of the variance of comprehension, $R^2_{adj} = .14$, $F_{(1, 34)} = 6.43$, $p < .016$, indicating support for H1.

The results of the study show that narrative comprehension is related to a child's verbal ability and prior knowledge, corresponding with Fisch's research (Fisch, 2000, 2004). In response to hypothesis 1, children who had a prior knowledge with camping or scouting were able to comprehend the narrative better than those who did not have any background or knowledge of the activity. Regarding hypothesis 2, children who were able to identify a significant number of flashcards were able to answer the comprehension questions more coherently than those who did not identify as many flashcards. Based on the results, it is concluded that older children have a greater verbal range than younger children. Children who were between the ages of 5-6 responded to the comprehension questions using complete thoughts, while younger children in the study between the ages of 3-4 spoke in fragments typically only restated the main idea of the question being asked.

Limitations

Several limitations arose during the process of the study. Due to testing a vulnerable group of preschoolers, there was a struggle to obtain parental consent resulting in a small sample size. Each comprehension test occurred in the child's school to provide

an ease of access and group viewing of the episode. As a result, each experience of the presentation of *The Topaz Troop* varied as each school provided their own projector, display screen, and sound system to display the video on. In addition to the presentation, additional factors that that could have contributed to a child's comprehension score include the distraction of toys and games found nearby, a child's interest in any ongoing teacher lessons occurring, and a child's desire to want to play with other nearby children.

Discussion

Children who were shown *The Topaz Troop* actively participated throughout the episode and showed understanding of the topics presented on the screen. Throughout the screening process, younger children typically responded to the musical scenes by swaying and dancing, while older children often were focused on responding to the questions presented on the screen. When asked about their favorite characters, children within the study often selected a character within the show that shared similiaries to them. For example, out of the 8 children who identified Claire as their favorite character, 5 of the children shared Claire's fears by either being afraid of the dark, bears, or wolves. Out of the 15 children who identified Coco as their favorite character, 5 children admitted that they were also afraid of storms, and 3 children expressed they liked Coco because, like the child, Coco was also silly.

Throughout the episode, the troop members repeated that in order to face a fear, one should "stop, take a deep breath, and relax." When the children in the study were asked about the steps they needed to take to face a fear, several children were able to recall the phrase. It is important to note that the children who were able to comprehend this question fully were children that were between the ages of 4, 5, and 6. As mentioned

in an earlier section of the paper, these children are in the pre-operational stage of development according to Piaget, meaning they have developed a schema regarding fears and have assimilated the information into their schema. While other children were not able to recall the phrase, "stop, take a deep breath, and relax," they often offered information about what they do when they are scared such as holding onto their favorite stuffed animal or turning on a light if they're afraid of the dark. These responses demonstrate that they are producing egocentric thoughts, an idea that both Piaget and Vygotsky associate with children within the preschool age.

Since its completion, *The Topaz Troop* has gone on to receive several awards and recognition for being an effective children's series. The film received a Silver Award for "Best Children's Short" and a Bronze Award for "Best TV/Web Pilot" in the Independent Shorts Awards based in Los Angeles, California. It has also been selected for admission into the Kids First! Film and Video Festival based out of New Mexico and will screen in the Deep in the Heart Film Festival in Waco, Texas in March of 2019. Overall, responses to the program have been remarkably positive. One film critic has exclaimed that "the pace reminds me of Mr. Rogers as it takes its time to explore different themes. That's a good thing, especially in contrast to all the fast-paced shows commonly available on TV today" ("The Topaz Troop - Review," 2019). The success of the show correlates with the significant amount of research collected and analyzed prior to its creation. By understanding how preschoolers learn from television, identifying and recognizing what previous preschool television shows have done well, and understanding the production process, *The Topaz Troop* was set up to have a positive effect on preschool aged children.

For any future development on the series, the data collected during this study will be used as summative research to assure maximum comprehension and participation throughout the preschool audience. The pilot episode sets up an opportunity for the series to continue as it is understood that members of the troop will earn badges as they complete different tasks. An example of a future episode would be introducing basic mathematic and cooking science skills to viewers as the troop members could work to create and sell boxes of cookies. Another example would be introducing children to health and wellbeing skills by offering the troop members an opportunity to earn their first aid badges. As long as each episode centers around a preschooler's cognitive ability, comprehension of new themes has the ability to be well received. In addition to series continuation, there is also a possibility to further develop audience participation by providing an online source for activities that viewers could complete with their parents within their own homes through the show's website.

Currently, children's television is being filled with an assortment of animated programs because they are easier to mass produce and translate into different languages. However, if well researched and carefully produced, an opportunity presents itself for live action preschool programming to flourish. For instance, Nick Jr. recently announced a reboot of *Blue's Clues* will return to television in the near future (Petski, 2018). PBS Kids is seeing success with its live action show, *Odd Squad,* which is about a group of children solving simple mathematic problems. Finally, *Sesame Street,* which is now entering its 50th season, continues to maintain popularity among parents and their children by being consistent in its ability to provide children with lessons. Overall, *The Topaz Troop* can follow the lead of prevalent preschool live action television shows if it

is understood that achieving a child's comprehension is the show's primary goal, and attaining that goal needs to be approached tactfully.

APPENDICES

APPENDIX A

Comprehension Survey Questions

This appendix contains the survey questions used during the study of parents and children as mentioned during chapter three.

Child's Survey

Narrative Comprehension

1. Tell me about what you just watched.
2. Why didn't Claire want to go camping?
3. Why did the Topaz Troop members have to camp indoors?
4. What was Coco afraid of?
5. Tell me about Constellations.
6. What does thunder make Kevin think of?
7. Did the children earn their camping badges?
8. Tell me what do you have to do to face a fear?

Salience

1. How much would you like to be a member of the Topaz Troop?
2. How much would you like to go camping?
3. How much would you like to go stargazing?
4. Which character would you like to be your friend?

Prior Knowledge

1. What kind of things do girl scout or boy scout members do?

2. Tell me what you know about camping.

3. What do you bring to go on a camping trip?

4. What can you do on a camping trip?

5. What types of food do you eat on a camping trip

6. What are you afraid of?

7. Can you name any constellations?

Verbal Ability

Given 1 minute, children will be asked to identify as many items on the following flashcards:

1. First Word Flash Cards - Brighter Child

APPENDIX B

Producer Interview Questions

This Appendix includes a list of interview questions asked to producers Benjamin Lehmann, Carol Greenwald, and Traci P. Johnson. Depending on the length of the interview, questions were shortened or modified. Responses to the interview questions were kept in consideration when it came to developing *The Topaz Troop.*

All Interview Questions

1. How did you get your start producing children's TV shows?
2. What were your favorite shows growing up? Do you integrate those concepts and themes in (Insert Show Name Here)*?* (Lehmann) (Johnson)
3. Is having a background in child development or child psychology necessary for developing a children's show?
4. Could you walk me through the typical process you take when you're given a script to produce? (Greenwald)
5. Do you start off with a script and have childhood specialists review the content to assure it is age appropriate? (Lehmann)
6. Is there a specific curriculum that (Insert Show Name Here) follows? (Greenwald) (Lehmann)
7. What research methods and theoretical foundations do you use when planning an episode for (Insert Show Name Here)?
8. What is the process you take when choosing the stylistic elements of the program? For example: will you use animation? Live action? Puppets? Etc.
9. What is the process you take when choosing the: animation style to be included in the episode, the music to be included, and the length of the segment?

10. What methods do you use to keep children engaged in the program?

11. When a program allows for a child's participation, how long is too long of a pause when waiting for a response to a question? (Lehmann) (Johnson)

12. What are the web avenues you use to market towards children and their parents? For example, how effective is YouTube?

13. Are mobile apps that are associated with children's shows making it easier for children to interact with the program?

14. How do you differentiate your show with other competing children's shows? What is the formula to standardize the quality aspects of your show?

Interview with Benjamin Lehmann (Sesame Street) October 24, 2016

1. How did you get your start producing children's TV shows?

   I didn't start out wanting to produce children's TV shows. I started in commercials and music videos, and then went into independent film. I mainly looked at things that were marketed towards Adults and Young Adults. I eventually got an opportunity to come to Sesame Street through the international department, and worked my way up into producing for the show.

2. What were your favorite shows growing up? Do you integrate those concepts and themes in *Sesame Street?*

   I grew up in France watching the Muppet Show and was a huge fan. I was also a fan of most of the Hanna Barbera Cartoons. So I spent a lot of time thinking about what could be considered fun for the Sesame Street audience. I think that all the experience you have making media productions will help you in any field, but Sesame Street is unique because you have to think about what's fun for our target audience, which is ages 2-4 years old.

3. Is having a background in child development or child psychology necessary for developing a children's show?

   While I don't have the background in child development or psychology, I wouldn't set out to develop a show without someone's knowledge of those pedigrees. We have a director of curriculum who has a masters of early childhood development. She sits down with me during every script review, every edit, comes to set when we shoot, and every time we go to develop a new format for the show she's there. For any season of Sesame Street, child experts are consulted to set the curriculum for the year. However, as a producer, you don't necessarily have to know the history behind child development.

4. Do you start off with a script and have the childhood specialists review the content to assure it is age appropriate?

   They set the curriculum at the beginning of the year; right now our curriculum is mutual respect and understanding which means the appreciation of people who may be different from yourself. So they set the curriculum and from here the writers will pitch an idea based on the curriculum, and then producers, writers, and researchers review it as a team.

5. So does that mean the curriculum topic will change per year?

   It does. Every year we convene a group of experts who advise us on what are the biggest needs for kids currently, so right now its mutual respect and understanding. You may have seen that we just did a study that showed that American families believe that there is a kindness deficit; so our previous season we just filmed that will premiere in January will be based around kindness. From my time here at Sesame

Street, we have done things such as “healthy habits” which deals with childhood obesity, to focusing on STEM because we found out that there was a deficit in science and math; so everything we do is based on a need that is happening in contemporary culture.

6. What is the process you take when choosing the stylistic elements of the program? For example: will you use animation? Live action? Puppets? Etc.

   You should always develop a show with your audience in mind otherwise your audience won’t watch it. Most of our decisions are made by being either curriculum driven or character driven. The show is now 30 minutes long and you need to make a predictable show so kids can know when they’ll be able to see their favorite characters. Therefore, we frequently develop new formats and stylistic elements based on the needs of our characters.

7. What is the process you take when choosing the: animation style to be included in the episode, the music to be included, and the length of the segment?

   The length of the segment is predicated on our show format. Our show went from being 1 hour long to now being 30 minutes. That includes a 30 second intro, 9 minute narrative, 1 minute letter segment; 5 minute cookie monster film, etc. The length of our segments are always chosen ahead of time. But in my opinion, shorter is always better. If it’s a narrative segment that has a beginning, middle, and end, you can be a bit longer with time distribution, but if it’s just a song or a funny skit, shorter is always better. For animation, we use a lot of different styles that are kid friendly and bright, and they’re abstract metrics that are hard to track, but we also like variety. So we try different animators to add variety to the show so you don’t get stuck doing the

same thing over and over. You want to be fresh and innovative, not repetitive because that gets boring. Music. Kids love music, but we try to have a breath of styles from pop, to show tunes and Broadway, and to different styles. I like for the story to drive the style, so if there's a reason for it to be rock, or reggae music, that's good too. You work it out with the composers based on what the content is.

8. Back to the music, Sesame Street uses a variety of different celebrities in their music segments. Is this more to keep parents engaged while watching the show with their kids? Or is it a way to keep up with more mainstream events and what can appeal to children?

   It's a bit of both. We want to draw in parents, but there is very little co-viewing going on in the real world. But it's still the best way for a kid to get the best educational experience from a show, so hopefully we draw in some parents with celebs. It's also great for PR and helps us tell a positive story. Gina Rodriguez (Jane the Virgin) is on the show this year, and that draws in a lot of press to the show itself.

9. What methods do you use to keep children engaged in the program?

   If you can answer that question, you'll be rich. You want to tell stories, try to keep it engaging, make it look great, you try to be funny, and you try to be emotional, there are no set methods but you with sesame street, it's a more narrative show. So while we do address the kids directly, that doesn't necessarily sustain engagement. You need solid scripts that are funny, solid, and kid friendly to their age level.

10. How difficult is it to determine what's going to be funny for a child versus what you think is going to be funny for a child?

We work with writers who have years of experience, but we take a lot of the scripts and test them in front of the kids. We read them in front of the kids, we use story-matics, which are simplified animations of pictures of the muppets which we take into schools and play them for classes, and our research team notes where the kids laugh, don't laugh, leaning in and engaged, losing attention/running around the room. We do a lot of script testing for our episodes.

11. When a program allows for a child's participation, how long is too long of a pause when waiting for a response to a question?

    It's contextual. But in my opinion I think anything that's about 2 seconds is too long.

12. What are the web avenues you use to market towards children and their parents? For example, how effective is YouTube?

    We don't necessarily use Youtube to market, but we use it as a secondary platform. We have the most active YouTube channel for kids, and we were the first educational channel on Youtube to reach a billion views. We use Youtube to broaden our educational goals and continue the show on other platforms, and to draw in our fan audience.

13. So what other social media apps do you use?

    Twitter, FB, Vine, Instagram, etc, but you name it we probably use it. We have a social media team in house that runs these pages.

14. Are mobile apps that are associated with children's shows making it easier for children to interact with the program?

    We make a lot of apps: Look up "Big Birds Words" which is an augmented reality app. One of our most popular ever is the App version of "There's a Monster at the

End of This Book" and it's an interactive version of that book. Kids consume media in different ways, you can't just survive if you're just a TV show. We call ourselves an Educational Media Company and we're trying to reach as many kids on as many platforms as possible.

15. How do you differentiate your show with other competing children's shows? What is the formula to standardize the quality aspects of your show?

    It's a dog eat dog world out there in preschool TV; there's a 24 hour channels and we're just the little guys. But we pride ourselves in being the most educational show on TV and the one who does it the best and sets a gold standard and everyone else is trying to copy us. But if you want to be in this field you need to watch everyone else and see what they're producing as well. There's a ton of great shows out there on Disney, Nick, Sprout, Netflix, and there's a lot of offerings. You have to be familiar with everything around you so you can stick around.

Interview with Carol Greenwald (PBS Kids)- October 28, 2016

1. How did you get your start producing children's TV shows?

   I have been working at GBH for over 30 years, and I always had an interest in kids stuff, and when I originally started, we didn't do children's stuff. So I did a lot of freelance production, creative tele-courses, and I was working as a budget/administrative for somebody here, when they decided they wanted to do kids stuff. And because I had been doing my homework and had some background in child development, I was able to say "I would really like to work on this," and that's the funny thing about careers. It's always about preparing yourself and being ready, but also being at the right place at the right time.

2. Is having a background in child development or child psychology necessary for developing a children's show?

   Absolutely. I think it's really important to have it. Another thing I had was children's literature, and most of the shows I have worked on have been book based, and so that was a really important foundation to have for me. It's all about storytelling.

3. Could you walk me through the typical process you take when you're given a script to produce?

   When we start thinking about a new project, we have a lot of big questions. One is to look at need, and when we talk about need we're talking about looking for opportunities around content areas, and what's a good platform to explore. So it's either subject or format. A while ago, we saw all the reality shows going, so we thought about doing a reality show for kids, which is where *Design Squad Global* came about, which is an engineering contest. *Where in the World is Carmen San Diego*, we thought we should do a game show for kids. So ultimately, there's a game but geography lessons involved. So we start there, and then we build out those things more specifically. We look at the curriculum and make sure it's appropriately targeted to the age group, we play with that format and adapt it to the content, and then we look at how we can produce it. How can we make the production values really high, and how we can make it work across multiple different platforms? We don't produce anything unless we can make it work across multiple different platforms. And then we look at how are we going to pay for it. Once we feel as if we have all those pieces in play, we start working on the creative

content in the bible. We start narrowing in on the best platforms for how the content is going to be delivered, we connect with advisors and content directors, and develop the curriculum with them. We produce a pilot or proof of concept, and then we create a business or funding plan. The entire process takes anywhere from 9 months to 5 years.

4. What research methods and theoretical foundations did the shows you produce use?
   It depends if we start with the curriculum or the idea. For *Curious George* for example, we started with Curious George. In that case, we spent a lot of time trying to figure out how we could take this show and make it make sense for PBS and their curriculum. After meeting with a lot of advisors, I bumped into someone who said, "you understand Carol, that Curious George is an engineer, right?" and I didn't think about that! But if you think about Curious George, he uses a lot of tools, he's always curious about how things works, so he's taking things apart and putting things together, not always well, but he's testing new ideas. So we went from there to working with experts to develop a STEM curriculum with engineering in it for preschoolers at its center. And engineering connects to math, science, and technology, and so it all fits together in the STEM curriculum. Sometimes the process will make you think about other ways the show can work. For example, another producer here has been working on computational thinking, and she's been working with a professor, and they created a project around computational thinking for preschoolers in a non-computer context. Based on that curriculum, we then worked with their creative team to think about what could be a fun concept that could do that. So now we have another show called, *Monkeying Around* that use

thinking skills. It's a mix of *Amelia Bedelia* and a few other things that get you thinking about using thinking skills in different ways. So sometimes in this process, it can go one way, but then it can go another way. It all depends on what the show asks for.

5. What is the process you take when choosing the: animation style to be included in the episode, the music to be included, and the length of the segment?
   Well, basically when we produce for PBS, the length of the show is dictated. They have a half hour block, and they aren't flexible. They like two 11-minute story formats. If we're producing for somebody else, we look at other things that are more flexible. For example, right now, we're working on *Ruff Ruffman* and we're bringing back the character of *Ruff Ruffman* by producing digital shorts, and he's going to be on PBS's video player. So in the digital video world, we're trying to think of the ideal length, which we think is between 3-5 minutes. So it depends on the platform in terms of length, and what's the ideal way to present the information. For the animation styles, we don't do any of the animation in house, we always look for partners. One of the things we love to do is to look around the world and see whose doing interesting animation that might be a great match. A series that we're doing right now is *Pinkilicious* and we just completed the pilot and we're just about to go into production with it for PBS. That has an arts curriculum, and if you're familiar with the stories, you may understand why. But one of the things that was fun about it was looking at the authors amazing visual styles that she uses in the books, the collage style. So we did a lot of research to see who could adapt that to the screen, so make it connect to the books and the television. So we found this

wonderful animation company in Northern Ireland called 16 South, and they do a show for the BBC called Lily's Driftwood Bay that also uses collage, so it's going to be really beautiful. We know there are many girls who are going to love it. When we did the focus testing, there were many girls that started dancing around as it went on!

6. What methods do you use to keep children engaged in the program?

   That's a great question, because I've talked a lot about curriculum, but all of that work is a waste of time unless you've made a really fun, entertaining show. I think we look at respecting kid's aesthetic sensibility, and help to create and build their ability to judge good quality stuff. You shouldn't give them anything that's second-tier quality just because they're kids. We work really hard to make our shows funny, to make them loko great, have high quality music, one of my personal goals with music is to expose kids to a wide range of styles. So for example with *Arthur* from the get-go, when we used the Ziggy Marley theme, we threw something in there that kids aren't necessary exposed to. They may not know reggae music, so let's expose them to it, and we've done that ever since then. We've had a show about the Blues, we've done Jazz, classical, Scottish, and try to bring real music in, that's not necessarily "kids music."

7. What are the web avenues you use to market towards children and their parents? For example, how effective is YouTube?

   We think we should be where kids are. We also think we should be wherever parents are. So that may be a range. We might try to reach kids in schools, we will try to reach kids over social media, even though we know theoretically, kids aren't

supposed to be on social media, but their parents are. So *Arthur* has a very active Facebook page, as well as Instagram and Twitter. We also recognize mom's follow mommy bloggers, so we have a very active network of mommy bloggers and we try to use them as a promotion avenue to parents.

8. How do you differentiate your show with other competing children's shows? What is the formula to standardize the quality aspects of your show?

   I think one of the things we try to do is to make every show really unique to itself. It should have a really strong look and feel to itself. I don't spend a lot of time differentiating myself from this show or that show, but I think about how can make each show the best it can be, and the rest will come together.

Interview with Traci Paige Johnson (Blue's Clues) November 11, 2016

1. How did you get your start producing children's TV shows?

   I loved TV as a kid, I was a TV baby. My parents, I actually can't believe this looking back but they had no restrictions regarding TV watching. So I came home from school and the TV was always on, and I was always drawn to cartoons and kid shows and I also loved babysitting. So I always liked kids in general and had a very playful attitude towards life. I actually thought I was going to be a teacher. And then in high school I got involved with this afterschool program for kids, it was great, it was called "Beyond our control" and it was sort of like a Saturday Night Live for high schoolers. So it was skit comedy where you wrote, and produced, and directed skits and edited them together. We made a half hour TV show with the NBC affiliate where I grew up. And I just completely got the television production bug. I loved being on a team, and seeing your credit go by. I

remember that trailer and seeing my name for the first time on the TV and I was like “ah! This is what I want to do.” So when it was time to graduate, I knew I wanted to do TV and I still always loved kids and animation, and I did a lot of cutout work, I hadn’t done any animation yet, but I loved cutting things out of paper, and I loved kids’ books and all things kids, and so when I went to Northwestern University in Chicago, I majored in Radio Television & Film and minored in child development. I did as much as I could, and make up my own thing, as there was no children’s television. Now NYU and Northwestern has children’s television classes and media classes, so that’s great, but I could’ve jumbled together what I wanted to do and was able to do it. So all my free projects, if it was for a production class for film, I was focused on having a kids feel to it, and that’s where I kind of created my cutout animation. And then after I graduated I came to New York and there was a kid’s show on CNBC at the time called KTV and I did my own segment there and did cutout animations, and freelanced in the city at *Reading Rainbow*, and it’s really easy when you know what you want to do and you can focus down, and it’s also so easy when you’re young because you can do internships and PA and just get your foot in the door and then people can see that you proved yourself, and that you’re talented and you just kind of move up the ranks, which is great. Then I landed *Blue’s Clues.* I had done some animated shorts with nickelodeon and they were looking for a game show for preschoolers, so they hired me to be on the team. It was myself, Angela S. and Todd Kessler to create the show Blue’s Clues! It was really nice, because I paid my dues, but I didn’t

have to pay for it very long because I was only 25 when that happened! So the stars were aligned.

2. What were your favorite shows growing up? Did you integrate those concepts and themes in *Blue's Clues?*

   Oh yes, for sure! I can tell you right now *Zoom* was a favorite and certainly Steve's stripped shirt had something to do with that. I don't know if you know the original Zoom. They had these stripped rugby shirts, so that was for sure that. It's so funny because when I was little it was before VCR and DVRs and you had to watch the show when it was on, and my favorites were always *Peanuts* and Snoopy, and what I took from there was one, loving the organic jazz music, and then two, the real kid voices. So when we did *Blue's Clues* we made sure to cast real kids, and not "too Broadway showy kids" so we loved to expose kids to, not necessarily heavily synthesized music, but more organic jazz and instruments and real music that wasn't dumbed down for kids.

3. Is having a background in child development or child psychology necessary for developing a children's show?

   Not necessarily. I think it always helps. Actually, I think just with life in general just to see how people learn things and from a psychologist point of view seeing how people digest and learn. Usually for a kids show there's a researcher who will work with writer and creators to help you make sure that your message is getting across, and that what is appropriate for the age, and how kids a specific age learn. So you don't necessarily need to know, but I think for all jobs of production it's always helpful to know. As a producer, it's always helpful to know how all the

jobs are done, so just even a little knowledge on how kids understand and how kids learn is a good thing. You don't have to major in it, or get a doctorate in it, but it's always a good thing to have a background with it.

4. What research methods and theoretical foundations did you use when planning an episode for *Blue's Clues*?

   We were very lucky with Angela, our co-creator, because her background was actually research. She went to teacher's college in Columbia university and got her masters in Children and media. So she would go research children's TV shows with kids. And it was that sort of seeing the behind the scenes that got her excited to want to create her own show and have kids engage with it, but since she didn't have a production background, she was looking for a producer and creative director, which was me, and we got to work together while creating *Blue's Clues*. Since she had the research background, we were always taking it in with kids in the formative research stage. So when we got the script, I remember drawing pictures that went along with the script, and we turned it into a storybook and we called it "storybook research," and we'd take that in so the kids could read and get an idea of the story and of Steve and Blue and see what was happening and get a sense of what was working and what was not. And since *Blue's Clues* was game oriented and we had to know if kids were getting the levels of the different games or understanding the games, we would do an animatic of the games and take that in with kids and research with kids on how they were responding: how much time they needed to answer back, if they were understanding the story, if they could figure out the clues. So once the show was done, we would take it in and research

it one more time to do post research to help us see what was working and what was not working for the next episode, not that we would change that episode, but moving forward, things we learned. So basically each episode of *Blue's Clues* was tested 3 times along the way.

5. What is the process you take when choosing the stylistic elements of the program? For example: will you use animation? Live action? Puppets? Etc.

   We knew that we wanted to talk to the audience and really engage the audience, and really the best way to do that is with a human. Even though if you have an animated character and they look at the kids, it's not the same as a real life person who looks at you. Like when Steve would look at us and blink, you just got that feeling that he was talking to me or he's looking at me. We knew that we wanted that to be live action, and we knew that we wanted the world to be fantastical and magical, so we put him in an animated environment. So we also knew that, for this young audience, we didn't want to clutter the background with a lot of business or details, so we wanted to make it very simple like a felt board or a storybook animation where it feels very simple and everything has breathing room, and it is like a felt board where you can lift something and move it to another part of the room. Things didn't overlap a lot, it was very simple in graphics. My love of "Very Hungry Caterpillar" and Leo Lionni, and those sort of graphic storybooks we incorporated into the world of *Blue's Clues.*

6. What is the process you take when choosing the: animation style to be included in the episode, the music to be included, and the length of the segment?

It's the stories you want to tell. For *Blue's Room*, the spinoff of *Blue's Clues* where Blue can talk, and we used puppets for that because Blue was going to talk. We also wanted to feel like you were there and actually having a playdate with her, so we wanted her to feel more real. So that's why in that one we decided to do puppets, and all the secondary characters are puppets because it's like they're all having a playdate, and it was one step closer to being real that you can reach out and touch her because she was more three dimensional than the animated two dimensional. This new show I'm developing for Amazon Kids, it's a storytelling series, and we have the idea of kids taking ordinary objects from their house, and putting them together and creating a story with it. So if you have little safety scissors, they become an alligator, and your sponge becomes the boat in the sea, so we're going to use cutout animation for that, or photo-real animation for that, so the real object is photo-real, so it still looks like scissors in their storybook world, but we'll add a lot of details so it'll look like a crocodile too, but it's important for us to make sure the kids still see that the scissors have become the crocodile. So the style really goes to how you're trying to get your message across. Music is so important for the preschool world in songs and stories, we call them formal features. Like in Blue's Clues, there's a formal feature of Mail Time, when you have the signal "mail time, mail time, mail time!" Or the closing song "we got just a letter" you know, all those musical bits really sink in and sing to preschoolers and it's important part of how they're learning and how they're digesting. But for me, I like music that is not synthesized and dumbed down, I like to expose kids to real music, real classical, real jazz, real rock and roll, and not having the

sugarcoated candy music. They're sophisticated enough, they can have the real thing.

It depends on the story you want to tell if you want to start with music from the beginning. Like in *Blue's Clues* and our theme song, we found in our research that kid's responded more with Steve popping out of the window of the house inviting us in, and he waves us in and we come inside, and we follow him inside, and we have a little moment, and our theme song doesn't start until we start Blue's clues. So it's kind of figuring out what is working with the show and what makes sense with the pacing and the stories that you're trying to tell.

7. What methods do you use to keep children engaged in the program?

   The pacing is really important, being slow and not being too fast so they can digest the information. What's always important is to have the visuals reinforce the audio of what they're seeing. So if we're talking about the inside of a volcano, or if Blue is talking about what she lost, "I lost my backpack," you need to see a picture of her backpack or show her thinking about the backpack, so that the kids register what the backpack is, and help them digest what is going on. So it's just important to keep things slow and remember the audience that you're trying to reach.

8. What are the web avenues you use to market towards children and their parents? For example, how effective is YouTube?

   Blue's Clues sort of ended before…well we had CDROMS, but there weren't a lot of websites. But now websites are awesome and offline learning, and extended learning, and having coloring pages and tips for parents, you can put all this great transmedia to extend the play and the learning. I know Nickelodeon (Nick Jr) now

has their website with a lot of video games and videos and tips for parents and activities you can do at home, so it's a great extension. Now when you create shows, you really have to create a brand and think of all the ways that it would work in an app, and how it would work on the website. A lot of things are short formed on YouTube. So I know *Sesame Street* is taking all their shorts and putting them all on YouTube now, so that's another way of looking at things. Publishing is another way as well; the books and the e-books, and everything you can do.

9. Are mobile apps that are associated with children's shows making it easier for children to interact with the program?

   Yeah! I mean what was cool is that we were doing that before the ipad, and they called them appisodes where kids could play along. We haven't done it with Blue's Clues but I would love the idea of sort of revamping and remaking it… just redoing it would be awesome! We were looking a lot at appisodes, but the thing with them is that they are very expensive to build and once the kids play them once or twice, the episode, you know they want more and it's not like repeated viewing where they're just watching the episode, they're actually playing along. So the appisodes didn't really take off as much as everybody thought it would

10. When a program allows for a child's participation, how long is too long of a pause when waiting for a response to a question?

    Usually our rule of thumb was "one one thousand, two one thousand, three one thousand," and then we would have Steve respond to it. That's where the testing comes in. We found that it was about a 2-3 second pause when you're asking them a question and wanting them to respond. And Steve and Joe would always do this

amazing thing of kind of tiling their head a bit and blinking, to show that they were listening in and letting them answer. But we also would have kid V.Os in the background to help prompt, so if you ask "where's the clue" we went "1,2,3" and the kids voices would come in "over there, under the table" to let kids know that they could scream it out at the TV.

11. How do you differentiate your show with other competing children's shows? What is the formula to standardize the quality aspects of your show?

    The important thing for us is to be original or break through. When creating Blue's Clues, we were the first game show for preschoolers, and we were the first ones to create the cutout animated show, and the first to have the music, and the real kid voices. We were the first to research the way that we researched. We were the first live action/animation environment. So you kind of want to pick things that help you stand out, especially in today's landscape of children's television. There's just so much stuff, that it's just important to be singular in your message, singular in the look of the show, in the music, or the curriculum, and have something very sticky that someone can hook onto.

APPENDIX C

Production Documents

This Appendix includes the production paperwork that went into the development of *The Topaz Troop.*

Creative Brief

Show Overview

The Topaz Troop will follow Troop Leader Jane and her puppet dog, Coco, as they work together to teach children creative lessons about the world around them as they all work together to fill their uniforms with as many badges as they can.

Audience Target

The show is designed for preschoolers between the ages of 3 and 6.

Format and Genre

Narrative - Children's

Concept Treatment

Troop leader Jane, and her ambitious pup, Coco, have planned an adventurous camping trip for The Topaz Troop. After the weather ruins their plan, Jane discovers that Coco is afraid of thunderstorms and Claire, one of the scout's youngest members, is afraid of the dark. The Topaz Troop must work together to help Claire and Coco think of unique ways to face their fears, while putting a positive spin on a rainy day. The goal of the program is to teach children that in order to face their fears, they must "stop, take a deep breath, and relax" to refocus their thoughts and move forward with facing their fear directly.
The episode will be about 15 minutes long and will include 2 songs to aid in delivering the story's message.

Talent

Jane – A whimsical and vibrant young woman has been serving as the troop leader of the Topaz Troop for several years.

Coco – A high spirited, friendly puppet that serves as a member of the Topaz Troop.

Mia – The he oldest member of the Topaz Troop. She very creative and loves science.

Kevin – A playful, and silly member of the Topaz Troop. He provides additional alternatives to problems that occur.

Claire – the youngest member of the Topaz Troop. She is afraid of the dark and the episode will center around her overcoming her fear.

Style and Design

- Video
  - Live action, working around a puppet's limitations
  - Potential slider use, potential dolly use
- Audio
  - 5 microphones; rig up a microphone for puppet
  - 2 original songs, calming and non-distracting background music
  - Natural sound effects need to be added in
- Graphics
  - Stargazing scene – after effects animation
  - Smore graphic

Locations

The episode will film in the studio within Castellaw. The script require a living room space and a kitchen.

Proposed Timeline and Budget

Preproduction will begin in the spring of 2018. Production will take place August 6-8th. Post production will be completed by Christmas of 2018.

Delivery Requirements

Widescreen television format (1920x1080p H.264)

The Topaz Troop

Cast/Crew List

PRODUCER / DIRECTOR: TORI EWING
FIRST ASSISTANT DIRECTOR: ASHLEY SHARP **DIRECTOR OF PHOTOGRAPHY:** JOSH OVERTON
WRITERS: TORI EWING, MAX-JEAN LOUIS

SUPERVISING PRODUCERS: COREY CARBONARA, DAN BEARD, DAN SHAFER
PRODUCERS: RACHEL JOBIN, MADELINE TODD, ASHLEY SHARP, ALEXA DOUGHERTY, ALLISON ARMSTRONG
PRODUCTION MANAGER: CHRISTINA GRAY

ART DIRECTOR: CASSADY SPRUIELL
SET DESIGNER: MARYSE BOMBITO
COSTUME DESIGNER: ASHYLN MCCOWAN-PEREZ
MAKEUP ARTIST: CORA HILL
SCRIPT SUPERVISOR: RACHEL JOBIN, MADDIE HOINKA

RESEARCH AND DEVELOPMENT: JOYCE NUNER, AMANDA HARRIS, KATILIN FEDRO

CAMERA OPERATOR: TYLER HARDIN, MADDIE HOINKA, TRE NELSON
CAMERA ASSISTANT: MEGAN SOULAKIS
2nd **CAMERA ASSISTANT**: HANNAH HERALD

KEY GRIP: KATIE WILLIAMS
GRIP: ANDY RACOTI
GRIP: BRAD MACCHIONI

CASTING DIRECTOR: MADELINE TODD
SET PA: KATIE STANDING

VIDEO ENGINEERS: RON GARRETT, BOBBY FRILLOU
AUDIO OPERATORS: JEREMY CULVER
BEHIND THE SCENES PHOTOGRAPHER: DAVID LANGIN

MUSIC COMPOSER: RYAN RICHARDSON

EDITOR: TORI EWING
COLORIST: LAURA CASADONTE

TALENT: ASHLEY TAMAR DAVIS, ALLEN WARE, REESE GORDON, ZANE SHIEH, SAVANNAH SOLSBERY,

VOICE OVER TALENT: SYLER RICHARDSON, ALDEN RICHARDSON

The Budget

CINEMATOGRAPHY NOTES

CAMERA: ARRI AMIRA

- EI: 800
- F-STOP: 4-5.6
- COLOR TEMP: 5600 K
- SHUTTER: 180
- LENS: 17-125mm
- FPS: 29.97
- RESOLUTION: 1080P
- COLOR LUT: NONE (ARRI C LOG)

CAMERA: CANON C100 Mk II

- EI: 800
- F-STOP: 4-5.6
- COLOR TEMP: 5600 K
- SHUTTER: 180
- LENS: 24-70 mm
- FPS: 29.97
- RESOLUTION: 1080P
- COLOR LUT: NONE

CAMERA: CANON 5D Mk III

- EI: 800
- F-STOP: f7.1
- COLOR TEMP: 4800 K
- SHUTTER: 1/30s
- LENS: EF 24-70mm
- FPS: 29.97
- RESOLUTION: 1080P
- COLOR LUT: NONE

Kitchen lighting plot

Living room lighting plot

APPENDIX D

The Screenplay

This appendix includes the completed script of *The Topaz Troop* The script will begin on the next page.

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