

THE EFFECTS OF CO-VIEWING CHILDREN'S EDUCATIONAL PROGRAMMING
ON PARENTAL COMMUNICATION PATTERNS

By

Chris M. Willis

Lloyd D. Davis
Professor
(Co-Chair)

Betsy B. Alderman
Professor
(Committee Member)

Elizabeth K. Crawford
Assistant Professor
(Co-Chair)

Deborah A. McAllister
Professor
(Committee Member)

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ABSTRACT

The purpose of this study was to examine the potential impact that children's educational television programs can have on parents' communications with their children when they co-view such programming together. The literature review provided a rich foundation of research on education television. Studies showed many positive effects can be observed when children view appropriate amounts of curriculum-based programs, such as *Sesame Street* (Gentzkow & Shapiro, 2006), and these effects were amplified when a parent or caregiver co-views the programs with them (Fujioka & Austin, 2002). This study added to the existing body of research by focusing on how parents were impacted by this activity. Parents of children in kindergarten through second grade at two downtown public elementary schools in Chattanooga, Tennessee, were asked to participate in the study. Parents were randomly assigned to experimental and control groups. First, a pre-test was taken before any viewing took place. The intervention consisted of instructions that asked parents in the experimental group to co-view educational materials provided on DVD with their children, while parents in the control group were asked only to allow their children to view the materials (no instruction given on co-viewing). Then the same survey was given as a post-test along with additional open-ended questions about the experience. The data collected were analyzed to determine what difference might exist between these two groups, along with differences between parents of higher and lower socioeconomic status, and parents who co-view more or less frequently. The findings from this study revealed some statistically

significant results for differences in parental perceptions of co-viewing. These differences may indicate that parents who participated in the co-viewing experience may have experienced an increase in perceived benefits of co-viewing with their children. Qualitative data gathered also revealed an overall high regard for co-viewing, but many noted the time constraints associated. This study provided a deeper insight into parental attitudes toward co-viewing and may be useful for educators and producers of educational content.

DEDICATION

I dedicate this dissertation to my wife who wouldn't let me quit, who sacrificed time and energy helping me, and has always motivated me to be a better man.

ACKNOWLEDGEMENTS

I am grateful to all of my committee members who've helped and encouraged me to complete this study. From my first chair, Dr. M.D. Roblyer who helped get me started when I was in a rut, to Dr. Lloyd Davis who has helped me re-learn methodology, to Dr. Beth Crawford who has guided me home on this journey; and Dr. Betsy Alderman and Dr. Deborah McAllister—Thank you all!

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LIST OF ABBREVIATIONS

PBS, Public Broadcasting System

FCC, Federal Communications Commission

CTW, Children's Television Workshop

CHAPTER I

INTRODUCTION

Children's educational television programs and their impact on young learners have long been subjects of study for researchers (Fujioka & Austin, 2002). Researchers examining this topic have adopted models that explain the effects that various types of media have on the child viewer. These media effects studies have explored how educational programming might have affected aspects of learning, behavior, and growth in children's early years (Wartella & Reeves, 1985). In recent years similar studies have looked into the effects of viewing children's programming on computers and mobile devices, but the basic model of research—the study of how this media can affect children, is largely unchanged. Investigation into additional factors surrounding children's consumption of educational programming has grown. Recent research has shed greater light on how co-viewing children's programming between parents and children can impact the learning patterns of the children (Fujioka & Austin, 2002; Scott-Jones, 1995). Co-viewing occurs when an adult caregiver is present and engaged in viewing the content along with the child, actively mediating by asking questions and providing feedback (Nathanson, 2001a). This study investigated the impact that co-viewing children's television programs had on the parents.

Overview of the Study

The purpose of this study was to determine whether the variable of co-viewing educational programs with children impacted the communication patterns between children and their parents. The researcher hypothesized that increased communication between parents and children about educational programming could significantly increase the potential learning impact for the children. The methods used employed an experimental design with two groups of randomly selected children and parents. Each group was given a pre-test to control for differences between the two groups. The experimental group of parents and children were given a DVD of several episodes of popular, curriculum-based, educational children's programs, and parents were instructed to co-view the episodes with their child. The control group parents and children were given the same DVD with no instructions about co-viewing. All of the viewing took place at home over a period of three weeks. Parents in both groups were given a post-test. Comparisons of post-tests were made between the results for the two groups. Additionally, a subsample of parents was interviewed about the co-viewing experience. Chapter I includes an overview of the research into children's educational programming, a statement of the problem and its theoretical framework, the purpose of the study, and definitions of terms.

Background on the Problem

There has been much debate about harms and benefits of children viewing television (Gaddy, 1986; Hancox, Milne, & Poulton, 2005). While many have believed the medium to be positive for children simply because of its description as "educational," there was actually a large divide on this issue among researchers. For many years researchers believed that children's programs, even educational one such as *Sesame Street*, were nothing but a "sensory

bombardment” and could not be used as a learning tool (Kirkorian, Wartella, & Anderson, 2008, p. 40). In more current research, greater attention was paid to the age of the child and their cognitive and developmental readiness for the learning concepts within the program (Huston, Wright, Rice, Kerkman, & St Peters, 1990). In spite of some researchers citing negative impacts, television producers have promoted the benefits of children viewing educational television and as a result, many parents believed the medium to be beneficial (Kondo & Steemers, 2007). However, researchers have not had consensus for many years with studies citing both positive and negative impacts on children from viewing television (Gaddy, 1986; Hancox et al., 2005).

Since the beginning of television broadcasting in the 1940s, much of the public perception of the effects of television viewing on children has been negative (Hancox et al., 2005; Özmert, Toyran, & Yurdakök, 2002). Watching too much television has been shown to lower cognitive test scores (Timmer, Eccles, & O'Brien, 1985). Other studies pointed out a displacement effect where television viewing was associated with less time spent on educational activities (Koolstra & Van der Voort, 1996). Further, increased time spent viewing television has been shown to correlate positively with childhood obesity (Hersey & Jordan, 2007). Additionally, it has been shown that violent behaviors modeled on television programs were often repeated by child viewers (Wilson et al., 2002). These studies and others implied many negative effects of viewing television.

There have been many studies that point out some potential negative effects of children viewing inappropriate amounts television or viewing at too young of an age. In recent years, the American Academy of Pediatrics has made recommendations suggesting restricting television viewing by children to no more than 1 to 2 hours per day for children over 2 years old and that children under two years old should not view any television (Gentile et al., 2004). It has been

found that this recommendation is going largely unheeded by most families; instead, many parents believed that there were educational benefits to watching television at an early age (Hersey & Jordan, 2007). Even more often parents described the television as an “electronic babysitter” for children (Zimmerman, Christakis, & Meltzoff, 2007, p. 476). Researchers cited several reasons for restricting viewing such as studies that have shown negative effects on children such as increased violent behavior and decreased physical activity, even though some of the same studies have also noted positive effects on social behavior (Gentile et al., 2004). However, other research showed that moderation was the key to obtaining benefits from viewing educational programming (Kirkorian et al., 2008).

Researchers have suggested that television viewing should be restricted to a reasonable amount of time because excessive viewing takes time away from important learning activities, such as reading books and learning from play (Christakis, Zimmerman, DiGiuseppe, & McCarty, 2004). It was estimated that by the time the average child graduates high school, he/she has spent 18,000 hours in front of a television but only 13,000 hours in a classroom (Chen, 1996). This caused some to shudder at the greater influence that media has over the child than did the schools (Christakis et al., 2004). Regardless of whether the time spent viewing media caused children educational harm, educational institutions must recognize the potential impact this could have on children if educational needs were to be met during the process. Educational programming that encouraged learning behaviors could certainly be of some benefit given the average amount of time children spend viewing media. Researchers have found that educational programming with specific learning objectives often have reached educators’ goals for increasing vocabulary, reasoning skills, and overall school readiness (Kirkorian et al., 2008).

Recent research in children's viewing of educational programming has focused on its effects on the attention of children. It was believed that children's activities that were more traditional, such as reading or playing with toys, required more focus and attention of them than did television viewing and were therefore more educational (Christakis et al., 2004). Later, the authors asserted that watching television at a younger age was linked to hyperactivity and attention deficit disorder at later ages; however, the types of programming viewed were not specified. In a review of studies from the last thirty years it was found that the entertainment-based programs, such as violent cartoons, tended to have a much faster pace in the presentation of content than many educational programs (Schmidt & Vandewater, 2008). However, some educational programs, including *Sesame Street*, also had a fast-paced presentation (Kirkorian et al., 2008). The Kirkorian study concluded that there was no link between the pacing of the presentations and changes noted in attentional skills of children studied and called for more comprehensive longitudinal studies on this topic. Studies on the effects of early exposure to television, at ages one and three, have shown later negative effects on attentional problems (Christakis et al., 2004).

In contrast to findings on the negative impact of television viewing, some research studies demonstrated benefits in the areas of literacy and school readiness for preschoolers who viewed educational shows. In one study (Gentzkow & Shapiro, 2006) researchers re-examined data from a 1966 study that surveyed 300,000 children. The Coleman study had examined their standardized test scores and demographics (Coleman et al., 1966). One attribute studied was time spent viewing television and the initial results appeared to indicate a negative correlation (Gentzkow & Shapiro, 2006). Since then, the Coleman study has been cited for decades as evidence of harmful effects of television viewing on children. However, through meta-analysis

conducted by Gentzkow & Shapiro, it was determined that the same data actually showed a marginal increase in test scores for preschool children who viewed television (2006). Further, when researchers distinguished between viewing educational versus purely entertainment-based programs, analyses indicated higher academic achievement for school-age children who viewed mostly educational content and lower achievement for children viewing entertainment programs (Wright et al., 2001). Thus, the type of programming being viewed must be considered when assessing the impact of television viewing for children (Huston et al., 1990).

Since 1969, the Children's Television Workshop and their children's program *Sesame Street* have been a dominant force in public television. The group brought together educators, producers, and child psychologists to create a research-guided program for increasing children's school-readiness by watching the program (Morrow, 2006). Very early on, research on children viewing *Sesame Street* indicated positive results for educational outcomes. The program has continually set the standard for research into children's television around the world (Schmidt & Vandewater, 2008). In recent years the Children's Television Workshop (CTW) has led the industry in providing an immersive online experience for children. Their approach is research-based and designed around the same findings CTW used when developing curriculum for the television programs. In addition, clips from the televised programs were also available for children to view online (Kirkorian et al., 2008).

It has been found that parents of three to five-year old children very often trusted the program to be educational for their children and encouraged viewing (St Peters, Fitch, Huston, Wright, & Eakins, 1991). In large part this was due to its foundation in educational research. Also, many of today's parents themselves grew up with programs such as *Sesame Street*. Name-brand recognition of the program has been an important part of building the faithful audience for

the program over the last 40 years (Kirkorian et al., 2008). Research on *Sesame Street* has had an important impact on the way we use media to enhance education and the public perception of educational programming (Morrow, 2006).

The public persona of educational programming in general has played an important role in its overall effectiveness. The Hersey and Jordan study (2007) on media use among children found a relationship between parental attitudes toward the media consumption of their children and their likelihood of limiting their children's viewing time to less than 2 hours per day. While some parents allowed the television to essentially babysit their child for many hours per day, others had eliminated viewing television entirely because of their belief that it negatively impacted their children. Some parents allowed their children to only view programming from trusted sources, such as public television. When parents believed the programming to be educational, they were more likely to permit the children to view the programs and feel positive about the amount of time children spent viewing television. Meanwhile, other parents have shunned viewing entirely believing that any amount of television viewing might be harmful (Clarke & Kurtz-Costes, 1997). However, the data have suggested that educational content by and large has significantly more positive effects than purely entertainment-based programming (Kirkorian et al., 2008).

In addition to the type of programming being viewed, the circumstances under which children view educational programming were also important (Crawley et al., 2002). There can be many different styles of media consumption and that can have an impact on the outcomes of viewing educational media. It is commonly believed that children tend to watch television in solitude, passively ingesting the content (Bickham, Wright, & Huston, 2001). Other researchers found that children were actively engaging in the program content, either by answering questions

posed by the characters, by repeating words, sounds, and behaviors observed, or by moving about the room rather than sitting still. In a study of preschoolers experience watching the program *Blue's Clues*, it was found that children could be taught to watch television more interactively by being given cues within the content of the program (Crawley, Anderson, Wilder, Williams, & Santomero, 1999). When the children were encouraged to “participate” they often later showed more eagerness toward learning (Crawley et al., 1999). When children learned to watch educational programming more interactively, their approach to future learning was likely to be more engaged (Crawley et al., 2002). Increased interactions often occurred when parents co-viewed the programming with the children (St Peters et al., 1991).

Co-viewing has been described as occurring when an adult caregiver is present and engaged in viewing the content along with the child (Nathanson, 2001b). Some researchers contended there was actually a high amount of parental co-viewing and mediation taking place as children watched programs (St Peters et al., 1991), while others were skeptical (Kirkorian et al., 2008). Mediation was described as occurring when co-viewing was combined with either actively discussing and interacting with the child about the content, or placing restrictions on what was viewed and for how long (Warren, Gerke, & Kelly, 2002). Active mediation helped to ground the content of the program with real-world examples from the child’s own life (Nathanson, 2001a). It has been suggested that a combination of these viewing styles created the most effective type of viewing for the child (Fujioka & Austin, 2002). This type of viewing was more interactive than passive, and was believed to engage the children in a way that had a positive educational impact.

Parents of young children can have the greatest impact on their early learning because parents usually spend the most amount of time with their children each day (Nathanson, 2001b).

When parents conversed with children they conveyed the first introduction to culture and society. The communication patterns that the parents had with children had a significant impact on the child. Communication patterns may have been affected by the parents' interactions with their children that were related to media consumption (Scott-Jones, 1995). How parents mediated the viewing experience for children, whether positively, negative, or at all, was indicative of the family socialization environment (Nathanson, 2001a). If parents were engaging children in critical discussion of material covered in the program, the children were more likely to develop critical viewing skills (Fujioka & Austin, 2002). Therefore, a better understanding of the impact that co-viewing has on parents is needed.

Problem Statement

There has been an abundance of research into children's educational programs and how co-viewing these programs among parents and children may positively impact children. There has also been extensive research into the impact of parental communication on children's learning. However, there were few if any studies into the effects of co-viewing on the parents or whether the co-viewing experience impacted the communication patterns parents had with their children. This study will address the gap in our understanding of how co-viewing might affect parents and their communication with their children.

Theoretical Framework

There are various lenses through which to examine the topic of children's television. Much of the existing research focused on negative effects of children viewing too much television, such as learning poor behavior from television and becoming passive or disengaged

while viewing TV programs (Gaddy, 1986; Hancox et al., 2005). However, for this study, the theoretical framework rested on three well-researched themes of potential positive outcomes: the many studies that indicated positive learning effects on children as they watched curriculum-based educational programs (Bickham et al., 2001; Crawley et al., 2002); the positive role that parent-child communications can have on language development (Fujioka & Austin, 2002; Scott-Jones, 1995); and the positive impact that parental co-viewing of children's educational programming can have on children (Warren et al., 2002). Theorists referenced in this study are Albert Bandura, Lev Vygotsky, and Jean Piaget. Each one focused on the external factors that influence human development.

Benefits of Educational Media for Children

Building on the success of *Sesame Street*, many educational programs have recently been built on the idea that children can develop important skills and learn about educational topics from the medium. For example, by watching *Mister Rogers' Neighborhood* and *Sesame Street* children have learned about letters and numbers and developed skills for imaginative play (Kirkorian et al., 2008). Other programs, such as *Dora the Explorer* and *Blue's Clues* were seen by some researchers to be positively linked to the development of emergent literacy (Blanchard & Moore, 2010; Kirkorian et al., 2008). Viewing programs such as *Arthur* and *Blue's Clues* has been linked with increased expressive language from young children (Kirkorian et al., 2008). Additionally, shows like *Curious George* and *Sid the Science Kid* demonstrated math and science skills which has been linked to improvement in children's readiness for Science, Technology, Engineering and Math (STEM) concepts (Kondo & Steemers, 2007). All of these positive effects

combine to impact a child's school-readiness, a key factor in later educational success (Scott-Jones, 1995).

Impact of Parent-child Communications on Language Development

Consuming educational media is not the only factor affecting children's school-readiness. Studies showed that parental-child communications that were supportive of children's emotions could positively impact children's educational outcomes (Connell & Prinz, 2002; Kirkorian et al., 2008). It was noted by Connell and Prinz that positive communication from mothers was particularly indicative of positive educational outcomes for lower-income, minority children (Connell & Prinz, 2002). Some have noted that parents should have engaged their children in conversation even during reading aloud and story-telling at home, and even more so when discussing viewing television (Zimmerman et al., 2009). Others have noted that parent-child interactions were often enhanced and partially replicated by children's educational programming (Fisch & Truglio, 2001). Other studies showed that excessive viewing of television and background television, when the TV was constantly on in the home, tended to reduce the quantity and quality of parent-child interaction (Kirkorian et al., 2008). This poses a serious problem for proponents of educational programming who are advocating for children viewing even more of it at home.

Impact of Co-viewing on Children

Studies showed that when parents co-viewed educational programming with the children, the educational impact of the experience on the children's cognitive development was positively impacted (St Peters et al., 1991). When the parent was present and engaged with the child,

actively mediating by asking questions and providing feedback, the children had a much different experience than when viewing the material alone (Nathanson, 2001b). Discussion can have a magnifying effect on the cognitive processes used by the child when viewing educational programming. Children were encouraged to make connections from the content to their own environment, which further grounded the concepts covered in the program (Fujioka & Austin, 2002).

Together, these studies provided substantial support for the hypothesis that is the focus of this study: that co-viewing would provide an engaging, fertile environment which might children's learning abilities through enhanced parental communication skills.

Assumptions

Within this research, the researcher must assume that the participants will give accurate responses to the survey questions. Although all responses will be kept confidential, it is possible that some participants will be tempted to give answers that they believe will reflect on them more favorably as parents. Therefore, the researcher will attempt to reassure participants that all responses will remain confidential in order to maximize participation and response accuracy. Also, the researcher will stress upon the parents and teachers of students of parents involved in the study the possible benefits of the study's outcomes and the importance of honest feedback from participants.

Another assumption is that the groups formed are very similar in composition. Traits such as socio-economic status, education-level, and standard demographics will be examined in order to attempt to ensure that the results found after the treatment is applied can be attributed to that treatment.

Purpose of the Study

The purpose of this study was to determine whether the activity of parents and children co-viewing children's television programs together would impact the communication patterns between the co-viewers--the children and their parents. The study sought to gather evidence of the impact from this shared activity and whether it is worth promoting as a valuable pedagogical technique. The abundance of children's educational programming has been shown to have a net positive effect on children's development. This has had a positive impact on their school readiness, which has consequently enhanced our school learning systems. The study attempted to shed light on whether encouraging the activity of parental co-viewing of educational programming with their children could significantly increase the positive impact already proven possible through children viewing educational programming alone.

Significance of the Study

The focus of this study was on parents rather than children, but the overall hypothesis was that children stand to gain more positive impact when co-viewing occurs and parental communication increases. The largest population who could benefit from this study was children of low-income parents who may not have access to other learning opportunities such as pre-school programs. Several studies have shown that children in low-income families benefited from viewing educational programming (Blanchard & Moore, 2010; Kondo & Steemers, 2007). Eligibility for free/reduced lunches has been proven to be a proxy for lower socioeconomic status (Connell & Prinz, 2002). This study attempted to compare the impact of co-viewing on parents of children who did and did not receive free/reduced lunch.

By enhancing the content of children's educational programs that are co-viewed with parents and by promoting the practice of co-viewing, a greater number of lower socioeconomic status children may be more ready to learn upon entering the school system.

Research Questions

The focus of this research was on whether or not the experience of co-viewing children's educational programming could have an impact on how parents communicate with their children. Because parental communication was a key component of a child's development (L. S. Clark, 2011), it was hypothesized that parental co-viewing of children's education programming can increase the amount of overall communications and enhance the pedagogical quality of communications between parents and child, both during and after the program.

Though the primary focus of this study was the impact of co-viewing on parents, an eventual, indirect benefit is also hypothesized for children. It was believed that parent-child interaction is one of the key components influencing children's emerging communication skills and, thus, can have a critical effect on children's school-readiness (Scott-Jones, 1995). The study also sought to ascertain if co-viewing children's educational television could help parents learn strategies for teaching their children. Did the co-viewing experience result in the parent and child talking together more about educational program content, and did the teaching strategies modeled in the program change the way parents teach their children through everyday experiences? The study provides data for the researcher to attempt to answer six different questions in order to capture the nature and extent of any impact. A rationale and background for each of these research questions is given below, including an informal statement of each research

question. A formal statement follows as to how the research question was addressed with data collection.

Research Question 1: Perceptions of Co-viewing

Parent's perceived value of co-viewing may affect their decision to use children's television as an educational experience or whether they merely use it to "look after" their child while they are accomplishing other tasks. Because of the widely-held and research-supported belief that reasonable amounts of viewing children's educational television was generally beneficial to children (Bickham et al., 2001; Blanchard & Moore, 2010; Crawley et al., 1999; Kirkorian et al., 2008), many parents might have allowed their children to watch it in solitude, allowing it to displace other developmental activities (Koolstra & Van der Voort, 1996). While co-viewing, parents were more likely to engage their children in conversations about the program content, either relating it to personal experiences, asking questions of the child, or checking their understanding and asking them what they thought about the content (Nathanson, 2001a; St Peters et al., 1991). It seems likely that this dialog can greatly increase the value of children viewing the programs. But, do parents perceive this value? Anecdotal evidence indicated that even parents who valued educational programming did not usually consider spending time co-viewing children's educational programs with their children. This may have been caused by a lack of instruction or encouragement to co-view, or it may have been due to a lack of knowledge about the value of the co-viewing experience.

Based on the positive implications for co-viewing derived from the review of literature, the researcher wanted to further understand the parent's perception of the co-viewing experience, which has not been previously studied. Thus, the first question addressed by this study was:

Did parents in the experimental group (who have had a co-viewing experience with their child) reflect more positive perceptions of the value of co-viewing than did parents in the control group (who have not had a co-viewing experience)?

Research Question 2: Impact of Co-viewing on Communication Topics

Another focus of this study was whether or not the process of co-viewing could increase the overall amount of communication between parents and children, both before and after the co-viewing experience. Because it was believed that parent-child interaction was one of the key components influencing school-readiness (Scott-Jones, 1995), could co-viewing educational programs provide a significant learning tool for children by increasing and improving these interactions?

This research question was derived from a review of the research on parental communication and its effects on children's learning. In addition, informal observations of parent-child communications both during and after co-viewing experiences indicated that many subsequent conversations were related to real-world experiences. For instance while watching the program *Arthur*, which features a character named Buster, a parent may say, "Buster doesn't have any brothers or sisters, but he has lots of friends at school. Just like you. Do you wish you had a brother or sister?" Could co-viewing children's educational television be beneficial to parents in teaching their children? Did they talk more after viewing the program together? The second research question to be addressed in this study was:

Did parents in the experimental group (who have had a co-viewing experience with their child) report greater agreement that co-viewing increases their communications than did parents in the control group (who have not had a co-viewing experience)?

Research Question 3: Impact of Co-viewing on Pedagogical Communication Patterns

Though research indicated support for the hypothesis that increased parental communication may have been a natural outcome from co-viewing (Fujioka & Austin, 2002; Nathanson, 2001b; St Peters et al., 1991), little research has been performed on the nature of that communication. Specifically, when the children's programs model an instructional or communication strategy, did viewing have subsequent impact on how the parents taught their children or how they communicated basic ideas? Did parents and children's everyday communication patterns become more learning-oriented as a result of co-viewing educational programming? In this study, the research question that focuses on this type of impact was:

Did parents in the experimental group (who have had a co-viewing experience with their child) report greater agreement that co-viewing has an impact on their pedagogical communication patterns than did parents in the control group (who have not had a co-viewing experience)?

Research Question 4: Perceptions of Benefits and Issues of Co-viewing

Qualitative responses from parents and children about this experience were considered necessary and instructive, because they could shed light on parents' perceptions of the co-viewing experience and how it may have impacted them and their children. Research indicated that many parents were likely to use television viewing as an acceptable means of occupying the child while they went about other tasks at home (Hersey & Jordan, 2007). However, parents may never have noticed the value that can be derived for co-viewing educational programs with their children. Also, no research was found that discussed parents' perceptions of the unanticipated outcomes of co-viewing. Academia needs to know more about the nature of these outcomes in

order to anticipate ways of improving the experience in the future. This study addressed this important gap in findings.

What unanticipated outcomes were evident to parents when they co-viewed a program with their children? What did they believe to be the strengths and weaknesses of this approach? Was co-viewing realistic and logistically practical? This question addressed the practicality of parents co-viewing programs with their children when, for many, the time children spend watching television was the only time the parents had to complete household or even work-related tasks. However, were the parents in the experimental group who co-viewed the programming with their children developing a positive perception of co-viewing, and did that perception compel them to spend more time co-viewing children's programming with their child in the future? The formal research question that addresses this qualitative focus of the proposed study was:

What common themes on benefits and issues of co-viewing were reflected in the responses to open-ended survey questions by parents in the study?

Research Question 5: Frequency of Co-viewing and Perception of Benefits

It was hypothesized that the more that parents participate in co-viewing, the more likely it was that they would perceive benefits of co-viewing. Therefore, the researcher also gathered data to explore whether the frequency of co-viewing predicts parents' degree of agreement to positive statements about co-viewing. The research question to address this issue was:

Was there an increase in the perception of benefits from parents who reported a higher level of co-viewing compared to those who reported less time co-viewing?

Research Question 6: Differences Between Parents Whose Children Qualify for Free/Reduced Lunches and Parents Whose Children Do Not

Because it is believed that families from a lower socioeconomic status have the most to gain from children learning from educational programming (Blanchard & Moore, 2010; Kondo & Steemers, 2007), the researcher investigated differences between responses from these groups. The answers to the questions in the survey demonstrated differences based on the socioeconomic status of the family responding. The research question to address this issue was:

Are there differences in the responses of parents of children who qualified for free/reduced lunch as compared to the results of parents of children who did not qualify for free/reduced lunch?

Definition of Terms

The researcher developed the following basic definitions for the purposes of this study:

Children's television. Any television program with a targeted audience of children

Children's educational television. Any television program with a targeted audience of children, whose content is designed to be educational and informative.

Children's entertainment television. Any television program with a targeted audience of children; program content is designed foremost to be entertaining.

Co-viewing. When an adult is present and engaged in viewing the program with a child.

Curriculum-based. A children's educational program whose content is grounded in current research on teaching children to read.

Educational/Informational Programs. Defined by the FCC as "programming that furthers the positive development of children 16 years of age and under in any respect, including

the child's intellectual/cognitive or social/emotional needs” (Federal Communications Commission, 1991, p. 3, 2114).

Emergent Literacy. When children experience and interact with texts and stories that develop into formal reading and writing

Pro-social programs. Any television program designed to educate children about character and ethics.

Chapter Summary

Co-viewing children’s television is believed to enhance the learning experience for children. This may occur because parents are more likely to discuss program content with their children both before and after the co-viewing experience. Parents may also model the pedagogical communication strategies that are presented in the curriculum-based programs. If co-viewing truly enhanced the educational experience of viewing children’s educational programming, then it would be wise to encourage more parents to co-view, particularly with children in lower-income homes who might be at greater risk of low academic achievement.

CHAPTER II

REVIEW OF LITERATURE

Because much of the production of children’s educational television programming began with a research focus, the history of research into the topic is expansive—“the application of educational television research—as technology creates unforeseen new media forms—is both exciting and limitless.” (Cohen, 2011, p. 587). This statement was certainly predictive of the multi-faceted media landscape that has arisen today, which continues to evolve. Yet the basic research model, how does watching content through various media affect consumers, has been consistent for well over 50 years (Fisch & Truglio, 2001). There have been debates over the effectiveness of this research; most notably was the Clark versus Kozma debate over media effects on learning (Kozma, 1991). Richard Clark made the claim that through meta-analysis of previous research he could show that there was no significant difference between various media and their effect on subjects (R. E. Clark, 1983). Robert Kozma and others pointed out that various media can impact the audience differently based on the structure and formation of the material (Kozma, 1991). Even with this great debate, research has continued on in earnest, more recently focusing on the activities of co-viewing and active mediation of viewing by parents or caregivers.

While many believed that children spending too much time in front of a television or computer screen was harmful (Özmert et al., 2002), others have shown that limited amounts of appropriate programming has had a positive impact on children (Gaddy, 1986; Hancox et al.,

2005; Kirkorian et al., 2008). Research showed that educational content has more positive effects than entertainment-based programming (Kirkorian et al., 2008). There were also many indicators that co-viewing children's educational programming with parents and children together was more beneficial for children than when parents allowed children to watch it alone (Crawley et al., 2002; St Peters et al., 1991). When parents mediated the experience by asking open-ended questions and helping the child relate the content to their surrounding, the child was more likely to benefit from the experience (Nathanson, 2001a). Parents may also have been affected by the content viewed in the children's educational programs (St Peters et al., 1991). Their pedagogical communications with the child may have been of more benefit after the viewing experience.

Overview of Literature

There has been a tremendous amount of research conducted on the effects of media exposure on children. However, research into the effects of co-viewing and how this experience affected parents has been limited. This study will attempt to bridge this gap in our understanding of co-viewing and the potential effects this experience may have on parents and on parents' communications with their children.

There were several important bodies of literature on co-viewing and parental communication that laid the groundwork for this study and demonstrate the importance of its focus. The first topic was research on the positive impact of children's educational programming. Some studies have demonstrated benefits of viewing children's educational television, though it is still considered an isolating and individual learning experience. The review includes literature about the types of programming children viewed, which demonstrates how critical it was to have curriculum-driven educational content to have a positive impact. Studies were presented on how

different types of viewing devices each impact the educational impact of the viewing experience. Another type of literature was related to co-viewing or parental mediation of viewing, which showed that there were many benefits derived from parents and children watching programming together. Finally, the review summarizes studies on parent-child communication patterns and their importance in the children's development of critical thinking skills.

Positive Impact of Educational Programming

Despite research indicating negative results from children watching television or using computers, there were also many studies that demonstrated positive aspects of children's educational programming. Gentzkow and Shapiro (2006) found that there was "strong evidence" that children's television did not harm the cognitive development of preschoolers (p. 281). In fact, their study showed that test scores of adolescents who viewed television as preschoolers were actually higher than those who did not. Other research indicated that viewing children's programming helped children develop the ability to pay selective attention, to chunk information, and to make judgments that go beyond just physical appearances (Tabibi & Pfeffer, 2007). These important skills built the foundation for formal education.

Some researchers believed that television in the home was as influential on children as the family environment, socioeconomic factors, or parenting attitudes (Bryant & Bryant, 2001). Bandura believed that learning took place both directly and indirectly when modeled in one's immediate surrounding (Blanchard & Moore, 2010). Television has been ubiquitous in the home for many decades, while computers and mobile devices have become so in the last ten years. These all have had tremendous impact on home environments and their presence has influenced

children. Some researchers reached back to the cognitive development theories of Bandura and Vygotsky to understand this impact.

Bandura's social learning theory reinforced the concept that learning occurs all the time, not just in formal learning environments; thus, learning was taking place when viewing television (Blanchard & Moore, 2010). Applying this theory to children's consumption of media led media researchers to parental mediation theory, which emphasized the role that parental communication played in how children interacted with television and internet content (L. S. Clark, 2011). Children were likely to model the behavior demonstrated by parents. Parental mediation occurred when parents co-viewed the programming along with the children and interacted with them using the content as the basis for conversation. This activity could greatly improve the learning possibilities derived from viewing educational programming.

Piaget's four stages of cognitive development were applied to children's experience with television (Lemish, 2007). As they developed their pre-operational skills in stage two of Piaget's model (Piaget, 1953), children were observed to be talking about television and relating it to their own lives (Valkenburg, Krcmar, Peeters, & Marseille, 1999). They developed "televisual" literacy, which enabled them to better understand the components of a television show and how the storylines flowed (Lemish, 2007, p. 3). Not only were children being entertained and maybe informed about the world as they watched television, but they were learning to decipher the content of the program similar to reading text (Blanchard & Moore, 2010). During this stage, children who were being exposed to television programs were better at developing skills for retaining and processing stories than those who were not being exposed to television (Valkenburg et al., 1999).

Vygotsky's concept of a "zone of proximal development" and situated learning theory were also applied to the sociology of childhood, such that adult guidance and peer collaboration were viewed as being critical to a child's development. The zone of proximal development suggested that the "processing capabilities" of various media can have an effect on the learner's mental abilities (Kozma, 1991, p. 181). In contrast to Bandura's focus on modeling behaviors presented by others, Vygotsky believed that the child's development depended upon access to more advanced parents or peers (L. S. Clark, 2011). This type of interaction caused the child to stretch in order to grasp a new concept. Viewing television with a parent or caregiver could also encourage the children to stretch intellectually.

Situated learning theory focused primarily on the child and how he or she interacted with other adults in person; however, adults or other knowledgeable peers they viewed on television also could have a tremendous impact on a child. This type of social collaboration was critical as a child developed emergent literacy skills (Vygotsky, 1978). Media was seen as a tool that facilitated social collaboration. Vygotsky predicted that society would continually develop tools that enhanced higher mental functions, and the digital media we have today may very well be the culmination of this prophecy (L. S. Clark, 2011). Digital media were seen to be more educational often because they were more participatory than traditional media (Schmidt & Vandewater, 2008).

Participatory learning emphasized the child's active role in learning from television, as opposed to passively "zoning out" (L. S. Clark, 2011). Common themes were inquiry, experimentation, and play. Vygotsky believed that playing was an important part of the development of new sets of skills (Vygotsky, 1978). Play was described as the active corollary to imagination, which was passive. Increasing the creativity and desire to play was seen as a

positive step to encourage learning behaviors. While the screen can mesmerize children, as many parents feared and observed, they also could have been actively engaged in the story and led to interact mentally and physically. Programs that were based on a curriculum that encouraged participatory learning were more likely to have a positive impact on emergent literacy and school readiness (L. S. Clark, 2011). Programming that encouraged feedback and interaction with the child viewer was more likely to move children to the development of new skills as described by Vygotsky.

An important area in which children's programming could have a positive impact was the development of reading skills. Exposure to children's television in three to five year olds was found to correlate with improved reading recognition (Pagani, Fitzpatrick, Barnett, & Dubow, 2010). Another study found that viewing children's programming at an early age was linked positively to reading books as a teenager (Schmidt & Vandewater, 2008). Most children's educational programs that were developed after *Sesame Street* have had literacy as the fundamental curriculum for the shows. More recently, there has been an emphasis in children's programming on science and technology, which will be explored in the next section.

Social skills are another area that were believed to be important to a child's development, skills which may have been positively affected by viewing children's programming. Fukioka and Austin (2002) developed the family communication patterns model to better understand how media influenced children's socialization. It has been found that children who viewed educational programming were less ethnocentric later in life and generally more globally aware than those who did not view educational programming (Pagani et al., 2010). "If we believe that children can learn negative lessons from television, then it stands to reason that they can learn

positive lessons, too” (Fisch, 2004, p. 3). The potential for positive impact for children resided in the type of programming being viewed and the conditions of the viewing.

Types of Programming

Many studies that have indicated negative effects of children’s television viewing have not focused on programming developed specifically for children, or whether the programs were educational or entertainment-based. Much of the current research indicates that curriculum-based educational television had more positive effects on literacy and school readiness than entertainment-based programming (Bickham et al., 2001; Crawley et al., 2002). Curriculum-based content for children met standards set by state and federal agencies, such as the departments of education; followed a central theme; and usually had a tiered learning curriculum. These types of programs were designed with the advancement of children as a primary objective. The programs contained components to help the child become familiar with concepts such as language development, problem-solving skills, or math and science concepts. However, other studies have shown that entertainment-based programming can be just as effective as curriculum-based programming when co-viewed with a parent or caregiver (Bickham et al., 2001).

Perhaps the best-known children’s program around the world was *Sesame Street*. *Sesame Street* blended the real world with the imagination. The program featured beloved human and Muppet characters learning about each other and the world in which they lived. Recent episodes generally had one short story segment of about 15 minutes, which was then followed by short 3 to 5 minutes clips about various topics for the remainder of the episode. Everyday a new episode was broadcast. Repeat broadcasts were infrequent. Parents over the last thirty years have recommended *Sesame Street* over other programs due to its educational content (Bryant &

Bryant, 2001). However, learning gains derived from the program, as well as other types of educational programming, were difficult to demonstrate; particularly the transference of problem-solving skills (Schmidt & Vandewater, 2008). However, other longitudinal studies have found that young viewers of *Sesame Street* went on to earn higher grades in math, English, and science courses throughout high school and college (Gentzkow & Shapiro, 2006).

Some programs in recent years have been developed as an antithesis in style to *Sesame Street*. *Blue's Clues* and *Dora the Explorer* were good examples. Rather than following the tradition set by *Sesame Street* of short segments placed together, these programs followed one storyline for the entire 30-minute program, in many cases repeating key facts at regular intervals. Also, each program tended to be rerun very often throughout the year. In a study of preschoolers experience watching *Blue's Clues*, it was found that children learned to watch television more interactively from such programs and their approach to learning was more engaged after viewing them (Crawley et al., 2002). Viewing *Dora the Explorer* was found to lead to rapid development of vocabulary and language skills (Kirkorian et al., 2008). These programs were excellent examples of what can be accomplished by creating a research-based curriculum for these programs.

Parents could greatly increase the positive impact of children's television by selecting "age-appropriate, educational programs and co-viewing with their children" (Kirkorian et al., 2008, p. 53). Viewing education television that was developed with a literacy, math, or science curriculum was linked positively with educational achievement, while viewing entertainment television was linked negatively (Schmidt & Vandewater, 2008). Parents could greatly increase their children's educational outcomes by encouraging educational viewing over entertainment viewing.

Types of Devices

Many types of devices have become available for viewing educational programming. Programs for many years only were available by traditional means such as television broadcasts and later on VHS tape or DVD for purchase or rental (Gutnick et al., 2011). Now many homes have access to streaming services such as Netflix, Amazon Instant Streaming, or even accessing legal or illegally uploaded content on YouTube and other video sharing sites (Gutnick et al., 2011). An increased presence of screens in our daily lives that can display educational content may be having an effect. Televisions, computers, tablets, phones, and even refrigerators with LCD screens are used by families to view programming (Blanchard & Moore, 2010). “It has become necessary to rethink the role of media in family life” (L. S. Clark, 2011, p. 324).

In many cases, programming presented on mobile devices and in interactive formats provided new opportunities for parents to learn with their children (Gutnick et al., 2011). Parents were more likely to “cuddle up” with the child to view the content than sitting in the same room to watch television (Blanchard & Moore, 2010). This type of viewing was seen as more participatory than television viewing. Some researchers were referring to this type of co-viewing as “joint media engagement” (Gutnick et al., 2011). The opportunity of interaction was greatly increased. This style of co-viewing created more incentives for the parents to co-view educational programming with their children (Blanchard & Moore, 2010). However, research into co-viewing content on mobile devices was only in its early stages and so far had not distinguished significant differences on the effects of co-viewing on televisions versus mobile devices (Gutnick et al., 2011).

Benefits of Co-viewing

Because of the impact that co-viewing with parents and viewing programs based on situated learning has been shown to have on children, it would appear that studies were needed to look at what kind of impact co-viewing such programs might have on parents. Parental impact has not typically been the subject of these studies, even though it was widely accepted that parental communication was one of the key determinants in a child's emergent literacy skills development (L. S. Clark, 2011). Nathanson (2001a) focused several studies on the effects of parental mediation of content and the effect on attention, interest, and school readiness. Her primary subject, active mediation, went beyond simply co-viewing of content between parents and children. Nathanson's study isolated behaviors parents engaged in to direct the attention of the child to particular aspects of the content being viewed, to engage the child in specific topics of conversation related to the program material during and after the co-viewing experience, and to help the child understand concepts presented by making connections to their immediate surroundings (Nathanson, 2001b). The present study will limit the focus to merely investigate how the parent is impacted by the experience of co-viewing, if at all, and how the experience affects their communication patterns. This study is related to Nathanson's definition of active mediation (2001a), but does not delve as deeply into the parents as active mediators during the viewing experience and how that might affect the children.

The benefits of co-viewing and mediation of content by parents on children have been looked at in-depth for the benefits on the child. It has been shown that when parents co-view educational programming with the children, the potential benefit of the content was magnified (St Peters et al., 1991). This took place as the adult caregiver was present and engaged in viewing the content along with the child, actively mediating by asking questions and providing

feedback (Nathanson, 2001a). Mediation involved question and answer discussion before, during, and after the co-viewing experience (Warren et al., 2002). This discussion greatly increased the cognitive processes applied to the educational programming. By combining the viewing experience with a seminar-type discussion, the learning experience became more immersive and the child could make more connections from the programming content to his/her immediate surroundings (Fujioka & Austin, 2002). This type of viewing was believed to engage the children more directly and has increased educational impact. The purpose of this study is to look more closely at the impact of co-viewing a children's educational program has on the communication patterns between parents and children.

Parental Communication Patterns

Research dealing with the effects of parental communication and its role in human development is exhaustive. Communication patterns between parents and their young children played a significant role in language development. While speaking to children through telling stories, reading books, and narrating daily events were all important, it was also critical that parents elicit responses from their children (Zimmerman et al., 2009). Question and answer, discussions, and continued storytelling were all seen as essential components of a child's language development (Mendelsohn et al., 2010). Many of these types of communications have been mirrored in the content of educational programming. The question that arises is if these on-screen communications supplant or augment communication that is taking place within the home.

Since parental communication with children was shown to be significantly associated with school readiness (Connell & Prinz, 2002), it may be useful to know how it is impacted, if at

all, by co-viewing programming with children. Conversations were seen by Clark (2011) as the basis for participatory learning. Many conversations in daily lives arise from discussion of media that has been consumed. For children, these conversations could have arisen from any daily activity, but after reading books and viewing educational programming were particularly important times (Zimmerman et al., 2009). While many viewed unmediated television viewing by children as having a negative impact on language development, (Hancox et al., 2005), regression analysis of parental communication and television viewing suggested that negative effects were mitigated by adults discussing programming with their children (Zimmerman et al., 2009). In fact, verbal interactions during co-viewing of educational content were found to be predictive earlier development of language skills (Mendelsohn et al., 2010).

Summary of Findings from Literature

The studies reviewed here were important in that they demonstrated the need for additional study in the area of parental communications and how these were impacted by co-viewing children's educational programming. The research demonstrated that there could have been positive effects from viewing children's educational programming when it was not an isolating experience. The type of programming viewed was critical in that it must have had curriculum-driven educational content to have a positive impact. The widespread use of tablets and mobile phones is creating a new way of consuming educational programming; consumption could often be more interactive than traditional means, along with creating more opportunities for parent-child interaction. Children from lower-income homes may have the most to gain from co-viewing since studies show that they have similar access to devices that can deliver educational content, but often do not have access to books (Gutnick et al., 2011).

CHAPTER III

METHODOLOGY

Overview of Study Methodology

The purpose of this study was to understand the effects, if any, that co-viewing children's educational programming could have on the parents of children in Kindergarten through second grades. Research indicated a number of effects that co-viewing can hold for the children (L. S. Clark, 2011; Nathanson, 2001a), but parents have rarely been the subjects of past research. This study employed a pretest-posttest design as well as qualitative responses. The experimental group was asked to co-view children's educational television programs distributed on DVDs by the researcher. The control group was given the DVDs but was not instructed to co-view the programs, only to have their children view them. The research questions of this study were related to: parent's perceptions of the co-viewing experience; how the frequency of co-viewing affected their perceptions; how co-viewing affected parents' everyday pedagogical communication patterns with their children; and what were the benefits and issues associated with co-viewing children's programming. The data gathered from the two groups were compared to gain insight on the research questions:

1. Did parents in the experimental group (who had a co-viewing experience with their child) reflect more positive perceptions of the value of co-viewing than parents in the control group (who did not have a co-viewing experience)?

2. Did parents in the experimental group (who had a co-viewing experience with their child) report greater agreement that co-viewing increased their communications than did parents in the control group (who did not have a co-viewing experience)?
3. Did parents in the experimental group (who had a co-viewing experience with their child) report greater agreement that co-viewing had an impact on their pedagogical communication patterns than did parents in the control group (who did not have a co-viewing experience)?
4. What common themes on benefits and issues of co-viewing were reflected in the responses to open-ended survey questions of parents in the study?
5. Was there an increase in the perception of benefit from parents who reported a higher level of co-viewing compared to those who reported less time co-viewing?
6. Were parents whose children qualified to receive free/reduced lunches more positive in their responses to questions about co-viewing than parents of children who did not qualify to receive free/reduced lunches?

This chapter continues with a description of the study design, the setting and participants, procedures, materials, the selection of the instrument, and the plan for data analysis. The data analysis section focused on each research question in regard to which statistical methods were used for the quantitative data gathered and how the qualitative data was analyzed.

Study Design

This study used a mixed-methods approach to study the impact on parents who co-viewed children's educational television programs with their children compared to parents who did not co-view the programs. A pretest posttest control group design, as described by Campbell

and Stanley (1966), was employed to address Research Questions one through three, five, and six. Responses to Research Question four were qualitative and open-ended and were used to better explain responses to other questions in addition to providing insight into the impact that co-viewing had on the participants.

In this study, parents of Kindergarten to second grade students in two local zoned magnet schools were invited to participate in the study. Participating parents were randomly assigned to experimental or control groups. Both groups were pre-tested on the effects of co-viewing children's television and then given a DVD containing five episodes of children's educational programs. Only the experimental group received the intervention of being asked to carry out a co-viewing activity, while the control group was only instructed to have their children view the programs. Then both sets of parents were post-tested on the effects of co-viewing. Variables to be measured, as noted by past research in parental communication patterns, included: methods parents used to engage children in solving problems; talking together; co-viewing of television vs. independent viewing; and the types of content viewed (Fisch & Truglio, 2001).

Research Questions one through three, five and six were investigated by asking parents to respond to Likert-scale questions about the nature of their viewing experience with their children and the communications that occurred as related to the viewing experience. The responses to these questions were analyzed with various statistics using the software known as SPSS. To address Research Question Four, open-ended questions were included that asked about benefits and issues with co-viewing. Because this was an exploratory study, one of few known to focus on parents rather than children, these qualitative data had potential to yield useful clues for future research (Patten, 2005) as well as explain the statistics gathered. The data collected for this question were responses to open-ended questions about the parent's perceptions of the co-

viewing experience and how it affected their communications with their child. Answers were coded and categorized for similarities and reported. In addition, observations were cited in the results if they were illuminating about the potential impact of co-viewing on communication patterns.

Setting and Participants

The participants chosen for this study were families from two downtown public elementary schools in Chattanooga, Tennessee—Battle Academy for Teaching and Learning and Brown Academy for Classical Studies. Both were zoned magnet schools of about 430 students each and had diverse student bodies. Zoned magnet schools target children of downtown working parents along with children who live downtown (Hamilton County Department of Education, 2012). Children zoned for these schools typically reflected families from a lower socioeconomic status based on the child's eligibility for free and reduced lunch assistance. Between the two schools an average of 75% of children were eligible for free and reduced lunch (HCDE, 2012). Parents chosen for the study must have had at least one child in Kindergarten through Second Grade to participate. Since participants were volunteers, this was a convenience sample. It was anticipated that there were about 20 parents in each group.

Procedures

After the researcher secured permission to conduct research from the administrators at each school, the researcher applied for permission to conduct this research with the Institutional Review Board at UTC. The researcher also discussed with the principals at each school the best methods to employ to reach out to the participants of the study. After IRB approval,

informational letters and consent forms were sent to the parents of children in the Grades K-2. Parent coordinators at each school were invaluable helpers in communicating with parents and teachers. Through the parent coordinators, teachers were informed of the study and assured that the results of surveys were kept confidential, and interview results were confidential. The researcher asked the teachers to encourage the parents to participate in the study. Parent coordinators were also able to further encourage the parents to follow through with completing the online surveys by follow-up emails and posts to online school message boards.

Each family in the experimental group was given a packet of materials to facilitate their co-viewing experience. The packet contained a DVD consisting of several episodes of popular, curriculum-based, educational children's programs and instructions to co-view the episodes. After viewing the materials the experimental group parents completed the post-test assessment. Each family in the control group was given a DVD with the exact same content, but they were not given instructions to co-view the materials. Control group parents also completed the post-test assessment.

The packet also contained instructions for the intervention. The experimental group was asked to first complete pre-test assessment. Then they were asked to co-view segments from five half-hour, pre-produced, situated learning-based programs with their children. Programs selected represented the best practices in curriculum-based, educational programming. Then they received the same assessment as a post-test with additional open-ended questions. The control group received the same pre-test and materials on DVD, but they were not instructed about co-viewing. They were also given the same post-test assessment at the end of the treatment period of the experimental group.

The parents in the experimental group were asked to complete the post-assessment only after co-viewing all five of the programs at least one time each. They were given three weeks to complete the co-viewing. The control group was not instructed to modify their viewing patterns in any way. There were five programs on the DVD, each about 30 minutes in length. Along with the survey packet parents were given a small incentive contributed by the local public television affiliate consisting of free codes to download learning apps related to the programs on the DVD. After returning the post-assessment, the parents in both groups received four volunteer hours for participating in the study.

Around forty parent volunteers were identified for participation in the study. Of this number half were randomly selected to be in the experimental group. Both groups were given a pre-assessment that was to be returned within one week. The experimental group was then to undergo co-viewing the programs on the DVD as the intervention. After this both groups had three weeks to complete the post-assessment.

Materials

The researcher provided a packet that contained the materials of the study. All participants received PBS learning app codes for iOS or Android devices as incentives for participation. Even though many students qualify for free or reduced lunch and their families may be considered low-income, the majority of these families do have such devices available to them (Blanchard & Moore, 2010). Both groups received a DVD that contains the children's educational programs in accordance with Section 107 of the US Copyright Act. The researcher prepared the DVDs for use in the study. The programs featured on the DVD exemplified the best practices in children's television as described in the review of literature.

Delimitations

This study was directed at understanding the impact of co-viewing children's educational programming on parents and parental communication with the child. While the study explored how increased interactions with children's programming might be beneficial to children, the subject of study was the parent, not the child. Also, a much longer longitudinal study would be needed to further understand the effects co-viewing may have on the parents, but this study was merely an initial exploration of this topic.

Limitations and Constraints

The success of this study depended entirely on the honesty of and cooperation from the parents. Parental self-reporting has had more potential for error than more intrusive models of study, but research has shown that it may be used as a reliable source of data (Fox, 1997). The researcher strove to make participants as comfortable as possible about sharing truthful information about their family, and assured complete confidentiality. Also, incentives were necessary to encourage participation. However, it was made clear that responses to the survey and interview questions did not affect the reward given for participating.

The availability of DVD players in lower socioeconomic homes was also a concern. For this constraint the researcher did an informal pre-survey of parents at the schools to ascertain the availability of DVD players. All of the parents responded that they had either a DVD player attached to a television or a computer with a DVD drive capable of playing back the materials. DVDs were found to be a reliable method of delivering interventions in similar studies in other

cities (Carpenter, Neal, Payne, Kimmick, & Storniolo, 2007). Nielsen data showed that 85% of homes nationwide had at least one DVD player (The Nielsen Company, 2011).

Instrument

This study measured parents' perceptions about changes in their parenting behaviors and in communication patterns between them and their children. Likert-scale questions about these topics were used to reveal parental perceptions. Parents were asked the frequency with which they observed certain behaviors, such as discussing program content after the viewing experience, use of problem-based learning approaches as a pattern of communication, and the types of programming that were most discussed or requested by their children. The researcher contacted co-viewing experts cited in the study to review the instrument used herein to verify whether or not it addresses the research questions of this study. No adjustments to the instrument were necessary. Also, field-testing was done with parents not included in the study to determine if the instrument was readable and the instructions were clear to the parents. Finally, after the field-testing, the researcher ran a Cronback alpha test to check for internal consistency within the recorded results.

The survey consisted of the following scales:

Research Question 1: Do parents in the experimental group (who have had a co-viewing experience with their child) reflect more positive perceptions of the value of co-viewing than do parents in the control group (who have not had a co-viewing experience)? This was addressed in the survey by Survey Questions four through six which asked parents about their perceived value of co-viewing with their children. Comparisons were made between responses from parents in the experimental and control groups.

Research Question 2: Do parents in the experimental group (who have had a co-viewing experience with their child) report greater agreement that co-viewing increases their communications than do parents in the control group (who have not had a co-viewing experience)? This was addressed in the survey by Survey Questions seven through nine which asked parents the impact of co-viewing on their communications with their children. Comparisons were made between responses from parents in the experimental and control groups.

Research Question 3: Do parents in the experimental group (who have had a co-viewing experience with their child) report greater agreement that co-viewing has an impact on their pedagogical communication patterns than do parents in the control group (who have not had a co-viewing experience)? This was addressed in the survey by Survey Questions ten through twelve that asked parents the impact of co-viewing on their communications with their children. Comparisons were made between responses from parents in the experimental and control groups.

Research Question 4: What common themes on benefits and issues of co-viewing are reflected in the responses to open-ended survey questions of parents in the study? Measured by responses to open-ended questions thirteen, fourteen, fifteen, and sixteen on the survey conducted by the researcher. Comparisons were made between responses from parents in the experimental and control groups.

Research Question 5: Was there an increase in the perception of benefit from parents who reported a higher level of co-viewing compared to those who reported less time co-viewing? This was addressed in the survey by comparing responses from parents with higher self-reported frequency of co-viewing and lower self-reported frequency of co-viewing for Survey Questions four through six.

Research Question 6: Is there a difference in responses to Survey Questions four through six between parents whose children qualify to receive free/reduced lunches and the parents of children who do not? This was addressed by identifying the parents of children who qualified for free/reduced lunch and comparing their responses with parents of children who did not qualify for free/reduced lunch to survey questions four through six. Ordinal data from Likert-scale responses were collected.

Data Analysis Methods

Ordinal data from the Likert-scale questions administered to the four groups were compared using quantitative measures. Responses to the open-ended questions were analyzed using constant-comparison methods. Results for quantitative data were provided as tables with frequency distributions, medians, and Mann-Whitney and Cronbach alpha tests. Responses to the open-ended questions were coded and analyzed with qualitative measures.

Summary of Methodology

Even with the copious research into children's educational programming and findings on the positive impact of co-viewing and mediation, it was still important to better understand the impact co-viewing had on both parents and children. If it could be found that there was a statistical difference in the communication patterns and benefits perceived between parents who co-view programming with the children and those who didn't, there would be more reasons to encourage this activity. Future studies of greater scope may be needed to understand how co-viewing could impact educational institutions. This researcher believed the impact of co-viewing

children's educational programming could greatly increase school readiness and performance and provides a low-cost supplement to educational support to all children.

CHAPTER IV

ANALYSIS OF DATA

Introduction

The data analyses and results of the study discussed in the preceding chapters are presented here. The purpose of this study was to understand the effects, if any, that co-viewing children's educational programming might have on the parents of children in Kindergarten through second grade at two urban Chattanooga public elementary schools. This chapter includes the presentation of research data and findings through a discussion of overall results from the study and a discussion of the results within the context of the research questions underlying the study as measured by the pre- and post-test measures. In addition, a discussion of the experimental and control groups, review of procedures, review of independent and dependent variables, the strategy applied to analysis of the data, the results of the analysis, and a summary are included.

Through the study, the researcher sought to find any statistically significant differences in pre- and post-test responses from two groups. The experimental group was given instruction about co-viewing educational materials with their child, while the control group was not given any instruction on co-viewing. An online survey was given after a 3-week research study period. A test for normality in responses using the Shapiro-Wilk and Kolmogorov-Smirnov tests revealed that the data were not normally distributed; therefore the responses were analyzed with

non-parametric statistics, including Mann-Whitney U and Wilcoxon Signed Rank tests, which make no assumptions of normality.

Collection of Data

The data collection process involved collecting information from these parents using a survey instrument on perceptions about co-viewing children's programming. The data included quantitative and qualitative responses.

There were six research questions that guided the study:

Research Question 1: Do parents in the experimental group (who have had a co-viewing experience with their child) reflect more positive perceptions of the value of co-viewing than do parents in the control group (who have not had a co-viewing experience)? This was addressed in the survey by Survey Questions four through six asked parents about their perceived value of co-viewing with their children. Comparisons were made between responses from parents in the experimental and control groups.

Research Question 2: Do parents in the experimental group (who have had a co-viewing experience with their child) report greater agreement that co-viewing increases their communications than do parents in the control group (who have not had a co-viewing experience)? Survey Questions seven through nine, which asked parents the impact of co-viewing on their communications with their children, addressed this in the survey. Comparisons were made between responses from parents in the experimental and control groups.

Research Question 3: Do parents in the experimental group (who have had a co-viewing experience with their child) report greater agreement that co-viewing has an impact on their pedagogical communication patterns than do parents in the control group (who have not had a

co-viewing experience)? Survey Questions 10 through 12 addressed this in the survey, which asked parents the impact of co-viewing on their communications with their children.

Comparisons were made between responses from parents in the experimental and control groups.

Research Question 4: What common themes on benefits and issues of co-viewing are reflected in the responses to open-ended survey questions of parents in the study? Measured by responses to open-ended Survey Questions thirteen, fourteen, fifteen, and sixteen on the survey conducted by the researcher. Comparisons were made between responses from parents in the experimental and control groups.

Research Question 5: Was there an increase in the perception of benefit from parents who reported a higher level of co-viewing compared to those who reported less time co-viewing? This was addressed in the survey by three items, Survey Questions one through three, which asked parents about their perceived value of co-viewing with their children. Comparisons were made between responses from parents with self-reported higher and self-reported lower frequency of co-viewing for survey questions four through six.

Research Question 6: Is there a difference in responses to co-viewing questions between parents whose children qualify to receive free/reduced lunches and the parents of children who do not? This was addressed by comparing responses from the parents of children who qualified for free/reduced lunch with the responses from parents of children who did not qualify for free/reduced lunch for Survey Questions 4 through 6.

There were two iterations of data collection. The first attempt yielded a very low return. In April 2013 the survey was administered to 430 parents from whom only 10 were returned. Because this attempt to collect data was made late in the Spring semester at the two schools it was believed that parents were busy with other aspects of finishing the school year and they

neglected working with the researcher. The second attempt to collect data took place during September of 2013 and was much more successful, with 44 completed surveys returned from the population of 420 parents contacted. Data from the first iteration were used for practice analysis during the summer while the results from the second final iteration are reported below.

This chapter gives the results of both quantitative and qualitative data collected from the survey instrument.

Quantitative Data Analysis

The population for this study was made up of parents of about 430 students from two urban Chattanooga zoned magnet schools. An initial implementation of the survey at the end of the 2012-2013 school year met with very low response, thus the survey was re-administered at the beginning of the Fall 2013 semester. Out of 420 parents contacted about participating in the study, 95 returned the consent form indicating their desire to participate. Of this number there were 44 respondents to the pre-test survey, while only 34 of those respondents completed both the pre-test and post-test surveys. The 34 respondents to both surveys made up a response rate of 35.8% of those completing their consent forms.

Parents were assigned to experimental and control groups randomly in order to minimize confounding variables. Parents with an odd unique ID number were assigned to the control group while parents with even numbers were assigned to the experimental group. Parents in the control group were given instructions to take the pre-test, to allow their children to watch the DVDs containing children's education programming, and then to take the post-test. The parents in the experimental group were given the same pre-test and instructions with the only difference in

their treatments being that they were specifically instructed to co-view the programming with their children, followed by taking the same post-test as given to the control group.

Table 4.0 Frequency and Percentage of Parents Assigned to Experimental and Control Groups

Group	N	%
Experimental	17	50.0
Control	17	50.0
Total	34	100.0

Instrument Reliability

The researcher developed the instrument used to measure attitudes of parents related to co-viewing. The reliability of the instrument was computed by running statistical analysis on the data with SPSS. A Cronbach's alpha value of 0.918 indicated a high level of internal consistency.

Test for Normality of Data

Because of the low response rate, it was necessary to test the data for normality. A Shapiro-Wilk test indicated that the majority of the data collected were non-normal (all of the Sig. values were less than 0.05 except for 2), therefore non-parametric Mann Whitney tests were used for all of the quantitative analyses. Table 4.1 depicts the statistical result and significance for responses to each of the questions.

Table 4.1 Shapiro-Wilk Test of Normality

	Group	Statistic	<i>df</i>	Sig.
Q4	Control	.499	15	.000
Q4	Experimental *			
Q5	Control	.783	15	.002
Q5	Experimental	.738	16	.000
Q6	Control	.799	15	.004
Q6	Experimental	.768	16	.001
Q7	Control	.845	15	.015
Q7	Experimental	.768	16	.001
Q8	Control	.782	15	.002
Q8	Experimental	.729	16	.000
Q9	Control	.839	15	.012
Q9	Experimental	.787	16	.002
Q10	Control	.897	15	.086
Q10	Experimental	.815	16	.004
Q11	Control	.862	15	.026
Q11	Experimental	.896	16	.069
Q12	Control	.799	15	.004
Q12	Experimental	.836	16	.008
Q13	Control	.815	15	.006
Q13	Experimental	.776	16	.001
* Q4 was constant when examining experimental and was therefore not reported				

Reporting of Frequencies and Percentages

From Table 4.2, of the 34 post-test respondents about half reported that their children were eligible for free or reduced lunch. Three respondents did not answer this survey question.

Table 4.2 Frequency and Percentage Eligible for Free or Reduced Lunch

Eligibility for free/reduced lunch	Control	Exper	N	%
Yes	6	9	15	48.4
No	9	7	16	51.6
Total	15	16	31	100.0

In Table 4.3 the data shows that of the 34 respondents, 28 reported watching more than 3 children’s TV shows with their child in the past month. Two respondents did not answer this survey question.

Table 4.3 Frequency and Percentage of Parents Who Co-view

# of shows co-viewed	Control	Exper	N	%
0	0	0	0	0.0
1	0	0	0	0.0
2	1	0	1	3.1
3	3	0	3	9.4
More than 3	12	16	28	87.5
Total			32	100.0

Table 4.4 depicts how the parents were divided almost by thirds as being parents of Kindergarten, first grade and second grade students with one parent not answering this question. These data were only used to ensure that participants were well distributed among each grade.

Table 4.4 Division of Respondents among Grades

Grade Level	Control	Exper	N	%
Kindergarten	5	6	11	33.3
1 st Grade	5	4	9	27.3
2 nd Grade	6	7	13	39.4
Total	16	17	33	100.0

From Table 4.5, of the 34 respondents the majority reported agreement with the statement, watching educational TV shows with my child/children (co-viewing) is better than

them watching the shows by themselves (survey question 4). This statement was related to a perception of co-viewing having a positive impact on children.

Table 4.5 Frequency and Percentage of Parents Reporting Positive Impact of Co-viewing

Co-viewing positively impacts	Control	Exper	N	%
Strongly disagree	0	0	0	0.0
Disagree	0	0	0	0.0
Neither agree nor disagree	3	2	5	14.7
Agree	6	6	12	35.3
Strongly agree	7	10	17	50.0
Total	16	18	34	100.0

In Table 4.6, the data showed that of the 34 respondents the majority agreed that co-viewing helped to prepare their children for learning at school (survey question 5).

Table 4.6 Frequency and percentage of parents reporting positive impact of co-viewing on school readiness

Co-viewing positive	Control	Exper	N	%
Strongly disagree	0	0	0	0.0
Disagree	0	0	0	0.0
Neither agree nor disagree	4	2	6	17.6
Agree	6	7	13	38.2
Strongly agree	6	9	15	44.1
Total	16	18	34	100.0

Table 4.7 depicts that of the 34 respondents the majority reported being committed to making time for co-viewing in the family's schedule (survey question 6). Only one disagreed with this statement, though six reported that they neither agreed nor disagreed.

Table 4.7 Frequency and Percentage of Parents Reporting Being Committed to Making Time for Co-viewing

Committed to co-viewing	Control	Exper	N	%
Strongly disagree	0	0	0	0.0
Disagree	0	1	1	2.9
Neither agree nor disagree	4	2	6	17.7
Agree	6	6	12	35.3
Strongly agree	6	9	15	44.1
Total	16	18	34	100.0

From Table 4.8, of the 34 respondents the majority agreed that when they co-viewed educational programs with their children, they tended to talk about the subject matter while they were watching the program (survey question 7).

Table 4.8 Frequency and Percentage of Parents Reporting Talking about Program's Subject Matter while Co-viewing

We talk more while co-viewing	Control	Exper	N	%
Strongly disagree	0	0	0	0.0
Disagree	1	0	1	2.9
Neither agree nor disagree	1	1	2	6.1
Agree	10	6	16	48.5
Strongly agree	4	10	14	42.4
Total	16	17	33	100.0

In Table 4.9 the data shows that of the 34 respondents the majority agreed that when they co-viewed educational programs with their children, they tended to talk about the subject matter after they've co-viewed the program (survey question 8). Two respondents reported disagreeing with this statement, while three respondents reported that they neither agreed nor disagreed.

Table 4.9 Frequency and Percentage of Parents Reporting Talking about Program's Subject Matter after Co-viewing

We talk more after co-viewing	Control	Exper	N	%
Strongly disagree	0	0	0	0.0
Disagree	1	1	2	5.9
Neither agree nor disagree	2	1	3	9.4
Agree	7	8	15	46.9
Strongly agree	5	7	12	37.5
Total	15	17	32	100.0

Table 4.10 depicts that of the 34 respondents the majority agreed that when they co-viewed educational programs with their children, they tended to talk more in general after they've co-viewed the program (survey question 9). This question had fewer respondents in agreement with the statement than did the other questions.

Table 4.10 Frequency and Percentage of Parents Reporting Talking More in General after Co-viewing

Talk more after co-viewing	Control	Exper	N	%
Strongly disagree	1	1	2	6.1
Disagree	1	2	3	9.1
Neither agree nor disagree	5	1	6	18.2
Agree	7	6	13	39.4
Strongly agree	2	7	9	27.3
Total	16	17	33	100.0

From Table 4.11, of the 34 respondents 22 (64.75%) agreed that when they co-viewed educational programs with their children, they tended to use the types of question-and-answer communication strategies that were modeled in the program (survey question 10).

Table 4.11 Frequency and Percentage of Parents Reporting Using Similar Communication Strategies

Similar communication strategies	Control	Exper	N	%
Strongly disagree	5	5	10	30.3
Disagree	7	4	11	33.3
Neither agree nor disagree	3	6	9	27.3
Agree	1	1	2	6.1
Strongly agree	0	1	1	3.0
Total	16	17	33	100.0

In Table 4.12 that data showed that of the 34 respondents the majority agreed that when they co-viewed educational programs with their children, they tended to use the types of problem-solving steps that were modeled in the program (survey question 11). Only one respondent strongly disagreed with this statement.

Table 4.12 Frequency and Percentage of Parents Reporting Using Similar Problem-solving Steps with their Children

Similar problem-solving techniques	Control	Exper	N	%
Strongly disagree	0	1	1	3.0
Disagree	0	0	0	0.0
Neither agree nor disagree	4	5	9	27.3
Agree	6	4	10	30.3
Strongly agree	6	7	13	39.4
Total	16	17	33	100.0

Table 4.13 depicts that of the 34 respondents 26 (76.5%) agreed that when they co-viewed educational programs with their children, they tended to use the types of question-and-answer communication strategies that were modeled in the program (survey question 12). Only one respondent strongly disagreed, while six neither agreed nor disagreed with the statement.

Table 4.13 Frequency and Percentage of Parents Reporting Using Similar Learning Experiments with their Children

Similar learning experiments	Control	Exper	N	%
Strongly disagree	0	1	1	3.0
Disagree	0	0	0	0.0
Neither agree nor disagree	4	2	6	18.2
Agree	9	8	17	51.5
Strongly agree	3	6	9	27.3
Total	16	17	33	100.0

Statistical Analysis

Statistical analysis was performed on the data to determine if there were any significant differences in responses from parents in the experimental group and control group. The experimental group includes parents who received the intervention of being told to co-view the materials on DVD with their children. The parents in the control group were only given the DVD, with no instructions to co-view. Also, the results from the pre- and posttests were compared within both groups to determine if the intervention of co-viewing children's programming with their children had any effect on the parents of the experimental group.

When the results from the experimental and control groups were examined separately with a Wilcoxon Signed Rank analysis, the pre- and post-test results within each group indicated

little change throughout the study. Table 4.14 depicts the analyses between the two groups as related to Research Question 1.

Table 4.14 Co-viewing Between Pre- and Post-tests for Experimental and Control Groups for RQ1

Survey Question	Control Z-scores	Exper Z-scores
Q4	-0.333	-1.841 *
Q5	-1.633	-1.508
Q6	-1.633	-1.811 *

* indicates significance at $p=.05$

Table 4.15 depicts the differences between the experimental and control groups after the intervention of co-viewing. A Mann-Whitney U and Wilcoxon W were run on each group of responses to questions four through six which were related to the first research question. The only question with results showing a statistically significant difference between the two groups was survey question four (Q4) ($z=-2.101$). The analysis of results for the other questions, though not statistically significant, still implied that the results tended toward supporting the hypothesis that the experimental group would show more change and have stronger agreement with statements about positive effects of co-viewing. Survey question six (Q6) was close to being statistically significant ($z=-1.053$) which may have indicated that on the issue of talking about the subject matter in particular, parents who co-view were more likely to engage in those topics than parents who do not.

Table 4.15 Co-viewing Differences to Post-test Questions between Experimental and Control Groups for RQ1

Survey Question	Mann-Whitney U	Z
Q4	96.000	-2.101*
Q5	114.000	-0.873
Q6	109.000	-1.053

* indicates significance at $p=.05$

Table 4.16 shows the Wilcoxon Signed Rank analyses between the two groups as related to Research Question 2. Though none of the results were statistically significant by themselves, all of the results ran in the direction of supporting the hypothesis as indicated by negative Z-scores in both groups.

Table 4.16 Parental Communication between Pre- and Post-tests for Experimental and Control Groups for RQ2

Survey Question	Control Z-scores	Exper Z-scores
Q7	-1.633	-1.459
Q8	-0.302	-1.403
Q9	0.000	-0.791

Table 4.17 depicts the differences between the experimental and control groups for Research Question 2. Mann-Whitney U and Wilcoxon W analyses revealed there were no statistically significant differences between the two groups. Where Z scores were negative indicated a favorable change in scoring for the experimental group. This implied that the results tended toward supporting the hypothesis that the experimental group would show more change

and have stronger agreement with statements about positive effects of co-viewing than the control group.

Table 4.17 Parental Communication to Post-test Questions Between Experimental and Control Groups for RQ2

Survey Question	Mann-Whitney U	Z
Q7	96.000	-1.508
Q8	113.000	-0.865
Q9	129.000	-0.267

Table 4.18 shows the results of analyses between the two groups as related to Research Question 3. Though none of the results were statistically significant by themselves, all of the results ran in the direction of supporting the hypothesis as indicated by negative Z-scores in both groups.

Table 4.18 Pedagogical Communication Between Pre- and Post-tests for Experimental and Control Groups for RQ3

Survey Question	Control Z-scores	Exper Z-scores
Q10	-0.832	-1.027
Q11	-1.134	-0.276
Q12	-0.816	-0.504

Table 4.19 depicts the differences between the experimental and control groups when Mann-Whitney U and Wilcoxon W analyses were run on each group of responses to questions ten through twelve. These results were related to Research Question 3. The results indicated no statistically significant differences, though still implied that the results tended toward supporting

the hypothesis that the experimental group would show more change and have stronger agreement with statements about positive effects of co-viewing.

Table 4.19 Pedagogical Communication to Post-test Questions Between Experimental and Control Groups for RQ3

Survey Question	Mann-Whitney U	Z
Q10	96.000	-1.508
Q11	113.000	-0.865
Q12	129.000	-0.267

Research Question 4 was addressed by the qualitative data in the next section.

Research Question 5 asked about differences in results from parents who co-viewed more than three programs each month with their child and the parents co-viewed three or less. Similar to Research Questions one through three, these were also compared with Mann-Whitney U and Wilcoxon W analyses. Table 4.20 depicts the analyses between these two groups. The only questions showing statistically significant differences between the two groups were for survey question four (Q4) ($z=-2.366$), survey question six (Q6) ($z=-1.702$) and survey question seven (Q7) ($z=-2.722$). Again, all of the results indicated an overall more positive attitude toward co-viewing after the intervention.

Table 4.20 Responses to Post-Test Questions Between Parents Who Co-viewed more than Three Programs per Month and Those Who Co-viewed Three or Less

Survey Question	Mann-Whitney U	Z
Q4	35.000	-2.366*
Q5	49.500	-1.592
Q6	47.000	-1.702*
Q7	28.500	-2.722*
Q8	54.500	-0.734
Q9	54.000	-1.319
Q10	61.500	-0.951
Q11	64.500	-0.816
Q12	63.500	-0.892

Research Question 6 asked about differences in results from parents in the group whose children qualified for free/reduced lunch and the parents whose children did not qualify. These were compared with Mann-Whitney U and Wilcoxon W analyses. Table 4.21 depicts the analyses between these two groups. Survey question four (Q4) was the only area in which a statistically significant difference between the two groups was observed ($z=-1.793$).

Table 4.21 Responses to Post-test Questions between Parents whose Children did or did not Qualify for Free/Reduced Lunch

Survey Question	Mann-Whitney U	Z
Q4	90.000	-1.793*
Q5	100.500	-0.848
Q6	103.000	-0.724
Q7	109.000	-0.465
Q8	97.000	-1.008
Q9	109.000	-0.159
Q10	105.500	-0.598
Q11	112.500	-0.309
Q12	106.500	-0.564

All of the results for statistical analyses were negative indicating that the post-test responses were more favorable to the effects of co-viewing than the pre-test for all participants in the study.

Qualitative Data Analysis

While quantitative data gathered in the study did not yield significant differences between groups of parents on the topic of co-viewing, the qualitative data gathered were remarkably richer. The qualitative data gathered in this study were responses to open-ended survey questions that were only given on the posttest. These related to research question 4: What common themes on benefits and issues of co-viewing are reflected in the interview comments of parents who have had a co-viewing experience? The purpose of this set of questions was to ascertain if the parents reported any discoveries or changed perceptions based on the co-viewing experience.

Using a Constant Comparative method of analysis, the researcher first identified common themes among the responses to the open-ended survey questions. These were coded and tallies kept for every response that fit each code. Common elements among responses to each research question as coded by the researcher are presented in the tables below.

Survey Question 13: What is your overall impression about the co-viewing experience? Responses ranged from “Enjoyable” (13 responses coded) to “No Impact” (1 response coded). Other notable responses for this question were coded as: “Increased communication” (4 responses), “Surprised” by the experience (3 responses), “Learned about child” (3 responses), and “Co-viewing is better” than not (3 responses). The responses to this question indicate an overall positive response to the experience of co-viewing. Table 4.22 depicts the frequency of codes identified by the researcher to survey question thirteen.

Table 4.22 Frequency of SQ13 Responses Fitting Codes as Identified by Researcher

Overall Impressions	Number of responses fitting code		
	Control	Exper	N
Enjoyable	6	7	13
Communication increased	2	2	4
Positive	2	2	4
Parental involvement increased	0	3	3
Co-viewing is better than solitary	1	2	3
Learned about child	2	1	3
Surprised by experience	1	2	3
Time difficulties	1	1	2
Child said it was weird	0	1	1
Mutually beneficial	0	1	1
Frequent co-viewing practiced	0	1	1
Shows interest in child	0	1	1
Children more engaged	0	1	1
No impact	1	0	1

Survey Question 14: What benefits does co-viewing provide for you and your child?

Responses to this question were coded as “Increased discussion” (16 responses) and “Monitor amount of TV time” (1 response). Other notable codes created were: “Learning” (13 responses), “Quality time” (9 responses), and “Awareness of content” (8 responses). The majority of parents responded with comments noting the benefits of increased interaction and learning that resulted from co-viewing. Table 4.23 gives the frequency of coded responses for benefits mentioned by respondents.

Table 4.23 Frequency of SQ14 Responses Fitting Codes as Identified by Researcher

Benefits	Number of responses fitting code		
	Control	Exper	N
Discussion	10	6	16
Learning	6	7	13
Quality time	4	5	9
Awareness of content	3	5	8
Feedback	0	1	1
Monitor TV viewing time	1	0	1
Model experiments shown	0	1	1

Survey Question 15: What issues or concerns, if any, does co-viewing present for you and your child? Responses to this questions were coded ranging from “None” (19 responses) and “Having enough time” to co-view (7 responses) to concern that television should “Not replace reading time” (2 responses), “Child would rather be alone” than to co-view with the parent (2 responses). Most parents did not respond with any issues or concerns about co-viewing, indicating a high level of agreement that it was an overall positive experience. Table 4.24 depicts the frequency of responses as coded by the researcher for survey question fifteen.

Table 4.24 Frequency of SQ15 Responses Fitting Codes as Identified by Researcher

Concerns	Number of responses fitting code		
	Control	Exper	N
None	8	11	19
Having enough time	2	5	7
Not replacing reading	1	1	2
Child rather be alone	2	0	2
Limiting screen time	0	1	1
Worry that child associates learning with tv	1	0	1
Children enjoy repeated episodes, parents do not	0	1	1

Survey Question 16: Is there anything else you can share about you or your child's experience viewing the programs? Responses to this question ranged in codes from “Enjoyable” (8 responses), noticing the “Learning benefits” (8 responses), and “Bonding” (4 responses) to “Difficulty matching content to learning level” (2 responses) and “Having enough time” (1 response). These open-ended questions revealed that most parents agreed that co-viewing is an enjoyable experience with learning benefits for their children. Table 4.25 reveals the frequency of codes identified by the researcher for survey question sixteen.

Table 4.25 Frequency of SQ16 Responses Fitting Codes as Identified by Researcher

Anything else?	Number of responses fitting code		
	Control	Exper	N
Enjoyable	6	2	8
Learning benefits	3	5	8
Bonding	1	3	4
Difficult to match content to learning level	0	2	2
Co-viewing only part of what makes it educational	0	1	1
Modeling games used	0	1	1
Awareness of content	0	1	1
Didn't like negative behaviors presented	1	0	1
Instructed parent on learning strategies	0	1	1
Having enough time	0	1	1

Next, the codes identified were grouped into collections of similar concepts. Concepts observed to be supported by the coded responses were: positive or negative impressions, benefits, concerns, and positive or negative observations about the experience. The concepts reflected the wording of the open-ended survey questions. By dividing the bulk of the coded responses among these concepts, the researcher was able to identify two overall categories of responses: those reflecting a positive experience with co-viewing (125 coded responses) and

those reflecting a negative experience (25 coded responses). The majority of responses from parents appeared to reflect an overall positive experience with co-viewing. A chi-square test was used to determine whether or not there was a significant difference between the experimental and control groups' responses being categorized as positive or negative. There was no significant association between being in the experimental and control groups and categorization of responses ($\chi^2 = 0.570$, $df = 1$, $p = .450$). Table 4.26 depicts the frequency of codes that fit categories that were identified by the researcher and the expected count for each group.

Table 4.26 Frequency of Codes Fitting Categories as Identified by Researcher

Category	Number of responses fitting code		
	Control	Exper	N
Positive	45	80	125
Negative	11	14	25

The final step of the constant comparative method is to examine broad groups of categories to develop a theory. Categories from this qualitative analysis were used to construct a theory to explain the results of this study. Several positive themes stood out among the groups. Parents appeared to agree that co-viewing children's programs with their child did have a positive impact on their child's learning. One of the commonalities was that the parent was immediately able to explain if the child had questions about the content. Some parents remarked about what they were learning from the programs. "[Co-viewing] gives us a relational connection point. Helps us learn new things together." Gaining a better understanding the child's educational level was also mentioned. Another benefit noted was that the time spent watching television was monitored more closely. Other positive outcomes were related to the mere act of

spending additional time with the child. “We have a bonding moment while watching educational television.” “It was fun.”

Negative themes were minimal. For those not familiar with co-viewing, the additional time together was a new experience. “The 7 year old said it was weird,” responded one parent. Other concerns were focused on the amount of time spent consuming media. “We try to limit screen time in our home.” Another parent responded about how television could displace other learning activities--“it can’t replace reading together that day.” Additionally, having the time to complete the co-viewing experience was difficult for some parents.

When the qualitative data were divided between experimental and control groups, the analysis revealed that both groups were favorable to co-viewing. The total amount of responses to the open-ended survey questions was greater among the experimental group. Of responses that were coded as “positive experience”, almost two-thirds of the total came from the experimental group (45 from control group, 80 from experimental group). Of the responses coded as “negative experience”, only three more responses came from the experimental group (11 from control group, 14 from experimental).

Most responses to the open-ended survey questions were close to evenly split, with similar feedback from each group. However, some notable differences in responses were found in response to each question and are discussed below.

Survey Question 13: What is your overall impression about the co-viewing experience? Responses from the experimental group were more often to be coded as “enjoyable” (seven responses from the experimental group, six from the control group); as creating “Parental Involvement” (three responses coded from the experimental group); or expressing that “co-

viewing is better” than solitary viewing by the child (two responses from the experimental group, one from the control group).

Survey Question 14: What benefits does co-viewing provide for you and your child? Responses from the experimental group were more often coded as noticing “discussion” based on the co-viewing experience (ten responses coded from the experimental group, five responses from the control group). There were also more responses coded as having greater “awareness of content” (five responses coded from the experimental group, three coded from the control group).

Survey Question 15: What issues or concerns, if any, does co-viewing present for you and your child? There were more responses from the parents in the experimental group that indicated they had no concerns about co-viewing (coded as “none”, 11 responses from the experimental group, 8 from the control group). There were also a majority of responses from the experimental group coded that indicated parents concern with “having enough time” (five responses from the experimental group, two from the control group). Lastly, there were two responses from the control group indicating while viewing educational programming on DVD their “child would rather be alone”.

Survey Question 16: Is there anything else you can share about you or your child's experience viewing the programs? There were more responses from the experimental group coded by the researcher related to the “enjoyment” experienced while viewing the DVD (seven responses from the experimental group, three from the control group). Five parent responses from the experimental group were coded as having observed “learning benefits” of viewing the DVD while only three responses from the control group were coded as having observed “learning benefits”. However, several parent responses from the experimental group were coded

as “modeling games used” in the program (one responses from the experimental group) and that viewing by the parent “instructed the parent on learning strategies” (one responses from the experimental group). Also three parent responses from the experimental group were coded as having “bonded” while only one control group parent response was coded as having “bonded”. Parents generally agreed that the co-viewing experience was positive, enjoyable, and led to learning benefits for their child.

Summary of Results

The analysis of quantitative and qualitative data showed some support for the hypothesis that parents who participate in co-viewing would see it as capable of providing an engaging, fertile environment for improving children’s learning abilities. The low response rate of parents participating in this study was a major limitation. There were few statistical differences between parents who co-viewed more than three programs each month with their child and parents who co-viewed three or less programs each month with their child. There was only one statistical difference (Q4) in responses from parents whose children did qualify for free/reduced lunch and those whose children did not.

The quantitative data supported the hypothesis that parents valued the experience of co-viewing. Overall, parents agree that co-viewing can be educational—even more than just allowing their child to view the programming on their own. The qualitative data shed more light on the positive benefits of co-viewing that the majority of parents valued, while also noting that a fairly large number noticed that their availability or lack thereof would be a factor in committing time to co-viewing programs with their child. Co-viewing was considered important to a large

number of the parents in this study, particularly to those in the experimental group who received the intervention of being asked to co-view the educational materials on DVD with their child.

CHAPTER V

SUMMARY, DISCUSSIONS, AND CONCLUSIONS

Introduction

The purpose of this study was to determine whether the variable of co-viewing educational programs with children would impact the communication patterns between children and their parents. Previous studies have shown many positive effects of children's viewing of educational programs for appropriate amounts of time and that this educational exposure could be maximized when parents co-view the material (Fujioka & Austin, 2002; Nathanson, 2001a; Scott-Jones, 1995). This study added to the existing body of literature by shifting the focus of the study from the children to the parents and their perceptions of the co-viewing experience. Because co-viewing and active mediation were seen to have a magnifying effect on children's learning potential from educational programming, it may be necessary to encourage such activity on the part of parents. The results of this study shed light on how parents feel about the experience of co-viewing and provided some insight into how such behavior can be encouraged.

Review of Methodology

This study was conducted as a mixed-methods approach, with qualitative data helping to interpret the quantitative results. The quantitative data were taken from Likert-scale responses to questions on a survey given to parents of Kindergarten through second grade students at two zoned magnet schools. The questions related to the co-viewing experience and the parents'

agreement with statements about the benefits of having co-viewed with their child. Qualitative data were gathered from responses to open-ended questions about impressions parents had of the overall experience, the benefits observed from co-viewing, concerns they may have had, and other observations they wished to share.

Summary of Results

The quantitative data gathered in the study revealed several important findings. These were that parents, by and large, valued the experience of co-viewing. Even though the intervention of asking parents in the experimental group to co-view materials provided on DVD did not yield many statistically significant differences from those in the control group, the overall attitude of parents in the study indicates a positive reaction to the experience. Because of the high percentages of positive reactions, opinions about co-viewing can be seen to be in congruence with the researcher's hypotheses about parental co-viewing of educational materials being a better overall educational experience for children than viewing the materials in solitude.

The qualitative data gathered shed more light on the overall positive perceptions parents had related to co-viewing children's educational programs. The majority of parents valued educational programming in general. Most parents in the experimental group who were instructed to co-view the educational materials on the DVD provided by the researcher were receptive to the concept of co-viewing and noted their enjoyment of the experience, the bonding that took place, increased discussion based on the experience, and noticed the learning benefits of having co-viewed the programs.

Interpretation of Findings

After all of the data were collected and analyzed, the research questions were better understood. The quantitative data obtained from the survey revealed few statistically significant difference between the experimental and control groups, but did point out an overall agreement on the value of co-viewing. The qualitative data shed light on how parents felt about the educational materials on DVD and the experience of co-viewing. Each research question was examined using the results of the study.

Research Question 1: Do parents in the experimental group (who have had a co-viewing experience with their child) reflect more positive perceptions of the value of co-viewing than do parents in the control group (who have not had a co-viewing experience)? This was addressed in the survey by three items that asked parents about their perceived value of co-viewing with their children. These were survey questions four, five, and six. The experimental and control groups were examined for changes between pre- and post-test results, there was a statistically significant difference in the response to question four in the experimental group ($z=-1.841$). The only statistically significant differences observed between the groups were for questions four (Q4) and question six (Q6). However, both groups showed an overall positive agreement with the statements of agreement with the benefits of co-viewing.

Additionally, when the data gathered from these questions were analyzed with Mann-Whitney and Wilcoxon analyses to determine if there were differences in post-test results between the groups. The changes in response to the question, how much do you agree with the statement, Co-viewing educational TV shows with my child/children helps me better prepare them for learning in school, may indicate that parents who participated in the co-viewing

experience during the study had a greater respect for the educational benefits of co-viewing on their child.

Research Question 2: Do parents in the experimental group (who have had a co-viewing experience with their child) report greater agreement that co-viewing increases their communications than do parents in the control group (who have not had a co-viewing experience)? This was addressed in the survey by questions that asked parents about the impact of co-viewing on their communications with their children. These were survey questions seven through nine. These were analyzed with Mann-Whitney and Wilcoxon analyses to determine if there were differences in post-test results between the groups for these questions. While none of the comparisons had results that met the criteria for statistical significance ($p < .05$), responses to question seven were close to that margin ($z = -1.508$). The question asked whether the parent agreed to the statement: If I watch children's TV programs with my child/children, we tend to talk about the subject matter in children's TV programs WHILE WE'RE WATCHING the program. This p value of .057 for this question suggested that there was a possible difference in parents' communication patterns in the experimental group after they had completed the co-viewing. However, due to the low number of respondents and lack of statistical significance, the researcher couldn't confirm this result. None of the results demonstrated any statistically significant differences between groups, however, both groups showed positive agreement with statements that co-viewing positively impacts parental communications.

When the experimental and control groups were examined for changes between pre- and post-test results for these questions, neither group saw statistically significant differences for question seven. For question eight, the experimental group did show a change ($p = .429$), and both groups showed change in response to question ten ($p = .405$ for control and $p = .305$ for

experimental). Question eight asked parents to indicate their agreement with the following: If I watch children's TV programs with my child/children, we tend to talk about the subject matter in children's TV programs after watching the program together. While the level of significance is very low, these results indicate that parents in the experimental group believed that their communications were impacted by the educational content of the program after the co-viewing experience.

Question nine asked parents to indicate their agreement with the statement: If I watch children's TV programs with my child/children, we tend to talk more about things in general. The changes in responses to question nine indicated that both groups had stronger belief that their overall communications with their children increased after co-viewing. The fact that both groups showed change in response to this question may have indicated a weakness in the study, or that the experience of participating in the study increased agreement with the statement whether or not the participant received the intervention.

Research Question 3: Do parents in the experimental group (who have had a co-viewing experience with their child) report greater agreement that co-viewing has an impact on their pedagogical communication patterns than do parents in the control group (who have not had a co-viewing experience)? This was addressed in the survey by questions that asked parents the about impact of co-viewing on their communications with their children. These were survey questions ten through twelve. The data gathered were analyzed with Mann-Whitney and Wilcoxon analyses to determine if there were differences between the groups on these questions. There were no statistically significant differences observed between the groups. However, both groups of parents showed an overall positive agreement with the statements of agreement with the increased pedagogical communications with their children after co-viewing.

When the experimental and control groups were examined for changes between pre- and post-test results for these questions, the only statistically significant difference was a change in response to question eleven from parents in the control group. Question eleven asked parents to indicate their agreement with this statement: I feel that if I watch children's TV programs with my child/children, I would tend to use the problem-solving steps that we saw modeled in the program. The researcher believes this difference among the parents in the control group to be an anomaly.

Research Question 4: What common themes on benefits and issues of co-viewing are reflected in the responses to open-ended survey questions of parents in the study? This was measured by responses to open-ended questions on the post-test, survey questions thirteen through sixteen. The data gathered were analyzed using a constant comparison method of coding qualitative responses.

Survey question thirteen asked the parents to respond to the question: What is your overall impression about the co-viewing experience? The majority of responses from parents to question fourteen were identified by the researcher as indicating that the parents had a "positive experience" (34 responses in this category), while only three indicated a "negative experience". One parent indicated that the experience had "No impact" on them at all.

Many of the responses from the experimental group indicated that the parents discovered educational value of co-viewing educational program with their children. "Seems like my kids learn more if we watch it together versus them watching it by [sic] themselves." "The entire experience was amazing to me. I thought the shows would be very boring honestly. I actually enjoyed myself watching them with her." Other parents indicated that they had already been co-viewing before the study. "My child and I watch many childrens' [sic] shows together and we

have done so since she was a toddler. In fact both of us have watched other episodes of all four of the selected programs.” “This is something we do frequently. I am nearly always in the room with my children as they watch TV and I only allow educational programs.”

Responses to question thirteen from the control group were also positive about co-viewing. “I think it helps ensure conceptual understanding for the child and helps the parent to have a sense of the child's progression.” “I enjoy watching some of the programs with my daughter. It is a good time for us to spend together.” “Co-viewing gives the parent an opportunity to see how their child interprets what he/she is watching.” “I love the co-viewing because it gives me ideas on how I can increase my children's learning experience.” However, other responses from the control group were not as positive. “Didn't seem to have that much of an impact. They didn't ask any questions or seem to be interested that I was there.” “It's hard for me to sit with him and just watch a kid's show, when his sister is competing for my attention and there are chores, etc. to be done. Overall I do see the benefits of seeing what he watches, but I generally hear enough of it while I'm walking around doing other things to have an idea of the strategies and topics.”

Survey question fourteen asked the parents to respond to this question: What benefits does co-viewing provide for you and your child? The majority of responses from parents to survey question fourteen were identified by the researcher as having noted particular attributes about the experience of co-viewing. Mostly notably, there were sixteen responses indicating the parents noticed “discussion” and thirteen responses in which the parents noticed “learning”.

Responses from the experimental group to survey question fifteen indicated that parents in this group noticed many positive benefits of co-viewing educational programming with their children. “Gives us a relational connection point. Helps us learn new things together.” “Co

viewing is important because it gives me an opportunity to reinforce values and education. We often stop and discuss the ‘Bad Guy’s’ behavior. I ask my children to explain how he could have handled that better.” Some of these parents mentioned benefits in the areas of communication and relationships. “I believe that co-viewing helps my child and I have a closer relationship. Because we discuss the things that happen in the program, we are able to discuss other things that happen in life.” Other parents mentioned the learning benefits more directly. “With co-viewing, it has helped my son and I work on his reading comprehension. My son has had issues with understanding the over-all story. When we watch shows together, he likes to ask questions and give his opinion as to what is going on. It also benefits the both of us because the shows focus on everyday behaviors and habits that I try to teach my children, such as responsibility, respect, and appreciation. I love introducing new words to my children and co-viewing educational shows with my children helps a lot.”

Parents in the control group had less frequent and less substantive responses to this question, however, the responses were generally positive. “They learn more.” “Cuddle time.” “Watching with my son does impact my understanding of how he learns and how to help him along in school.” Parents in this group were also more likely to respond about being able to know monitor what their children watched than they were to indicate learning benefits. “I know what they are watching.” “TV time is monitored and we get to spend quality time together.” The researcher believes this difference in frequency and thoroughness of responses indicates the impact that the intervention of co-viewing had on the experimental group.

Survey question fifteen asked the parents to respond to this question: What issues or concerns, if any, does co-viewing present for you and your child? Nineteen parents responses

were coded by the researcher as “None” followed by “Having enough time” (seven responses), “Not replacing reading” (2 responses), and “Child rather be alone” (2 responses).

Responses from the both the control and experimental groups indicated concerns about television replacing time spent on other educational activities. “Time we would rather spend reading or doing other activities.” “I want to make sure that it is not our only time learning together. It can't replace reading together that day.” Also, parent in both groups voiced concern about having time in their schedule for co-viewing. “The only issue is that co-viewing does take up a lot of time and you have to be more organized with your time.” “Having/making the time to do it.” “We don't always have time to view shows together. I appreciate networks like PBS, Nick Jr, and PBS Sprout because I can step away without worrying about my children seeing something inappropriate.” One parent mentioned the difficulty with the repetition of programs broadcast each day. “They often watch the same episodes over and over, which is developmentally important for their learning, but would drive me bonkers.” Others mentioned the children might prefer to watch programming alone. “At our house TV is used after homework, as a downtime, mostly independent, activity. I think if we were still trying to engage during TV time it could be frustrating for our daughter.”

Survey question sixteen asked the parents to respond to this question: Is there anything else you can share about you or your child's experience viewing the programs? There was some repetition of previous answers to this question, but also some insightful responses not expected by the researcher. Responses were coded as “Enjoyable” (8 responses), having noticed the “Learning benefits” (8 responses), and “Bonding” (4 responses), as well as “Difficulty matching content to learning level” (2 responses) and “Having enough time” (1 response).

Responses from parents in the experimental group were very insightful. Many mentioned specific learning benefits that they had noticed. “My two year old daughter can pronounce stygimoloch. Awesome!” “I am better prepared as a parent during homework time now because I can use some the strategies used in the shows to help her with her homework.” Other reaffirmed their awareness of the bonding that occurred while co-viewing. “We enjoy spending time together and co-viewing is just one of the ways that we can spend time together and connect with one another.” “This was really interesting and make us more aware of the things she was interested. It let us hear the sometimes funny things she comes up with.”

Similar to survey question fourteen, parents in the control group had less frequent and less substantive responses to this question even though the responses were generally positive. “They enjoy it.” “It was fun.” Responses were similar to those from the experimental group. “We have a bonding moment while watching educational television.” “He enjoyed the shows and we appreciate the opportunity.” The researcher believes this difference in frequency and thoroughness of responses indicates the impact that the intervention of co-viewing had on the experimental group.

Research Question 5: Was there an increase in the perception of benefit from parents who reported a higher level of co-viewing compared to those who reported less time co-viewing? This was addressed in the survey by one item that asked parents about the frequency of co-viewing with their children. This was survey question three (Q3). The data gathered from this question were analyzed with Mann-Whitney and Wilcoxon analyses to determine if there were differences between the groups with various levels of self-reported co-viewing on other survey questions. The researcher examined differences between parents who reported co-viewing three or more programs in the past month and parents who reported co-viewing less than three programs in the

last month. Because the 87.9% of parents reported viewing more than three programs in the last month (n=29), there were not enough cases to validate any statistically significant differences between the groups. However, because all of the statistical analyses showed negative results between the two groups, the researcher believes this supports the hypothesis that parents who co-view more frequently are likely to more highly value the experience.

It was noted that in some of the qualitative responses to open-ended survey questions from the less frequent co-viewing parents appeared less impressed with the co-viewing experience as predicted by the researcher. “Didn't seem to have that much of an impact. They didn't ask any questions or seem to be interested that I was there.” This may have supported the hypothesis that parents who co-viewed more frequently would value the experience more highly had there been a higher population participating in the study and more diversity in responses.

Research Question 6: Are there differences in the responses of parents of children who qualified for free/reduced lunch as compared to the results of parents of children who did not qualify for free/reduced lunch? This was addressed by survey question two (Q2) which asked whether the parent's children were or were not eligible for free/reduced lunch. The data were examined for differences between parents whose children did and did not qualify for free/reduced lunch. When responses from parents from each group for questions on the post-test were compared, the only question that showed a statistically significant difference between the two groups was survey question four (Q4) ($z=-1.793$).

The responses to survey question three indicated that parents whose children qualified for free/reduced lunch were more likely to have co-viewed more than three complete 30- or 60-minute children's television programs in the past month than parents whose children were not qualified for free/reduced lunch (n=16). Twelve parents whose children did not qualify for

free/reduced lunch reported co-viewing more than three complete 30- or 60-minute children's television programs in the past month (75%), while four watched two to three complete thirty or sixty-minute children's television programs in the past month (25%).

The responses to survey question four indicated that nine parents whose children qualified for free/reduced lunch strongly agreed with the statement, Watching educational TV shows with my child/children (co-viewing) is better than them watching the shows by themselves (56.3%), while another five agreed (31.3%). For parents whose children did not qualify for free/reduced lunch, seven strongly agreed (41.2%) with the statement while another seven agreed (41.2%). This indicated to the researcher that parents whose children qualified for free/reduced lunch had a stronger affinity for the co-viewing experience than parents whose children did not qualify for free/reduced lunch.

The responses to survey question five indicated that eight parents whose children qualified for free/reduced lunch strongly agreed with the statement, Watching educational TV shows with my child/children (co-viewing) is better than them watching the shows by themselves (50.0%), while another six agreed (37.5%). For parents whose children did not qualify for free/reduced lunch, seven strongly agreed (41.2%) with the statement, while another seven agreed (41.2%). This indicated to the researcher that parents whose children qualified for free/reduced lunch had a slightly stronger belief that co-viewing helps them prepare their children for learning than parents whose children did not qualify for free/reduced lunch.

The responses to survey question seven indicated that eight parents whose children qualified for free/reduced lunch strongly agreed with the statement, If I watch children's TV programs with my child/children, we tend to talk about the subject matter in children's TV programs while we're watching the program (50.0%), while another eight agreed (50.0%). For

parents whose children did not qualify for free/reduced lunch only six strongly agreed (35.3%) with the statement while another eight agreed (47.1%). This indicated to the researcher that parents whose children qualified for free/reduced lunch had a stronger belief that they talked more while co-viewing than parents whose children did not qualify for free/reduced lunch.

Relationship of this Study to Previous Research

This study built upon a large body of research investigating the effects of educational programming. The researcher was concerned about the effects of co-viewing on parents. There were several areas of previous research on co-viewing and parental communication that formed the foundation for this study. Research on the positive impact of children's educational programming was a basis for understanding the potential benefits that viewing an appropriate amount of educational programming can have on children's learning outcomes. The types of programming being viewed, whether it was educational or entertainment-based, were important in judging learning outcomes. The researcher found the latest curriculum-based content to be used in conducting the research. Research on co-viewing or parental mediation of viewing was pivotal for understanding how parents can be a multiplier for potential learning outcomes when they co-view educational programming with their children. Lastly, previous research on parent-child communication patterns was examined by asking parents about how they interact with their children during and after the co-viewing experience.

Implications of the Study

The goal of this research was to explore the impact of co-viewing educational programming on parents of children in Kindergarten through second grade. The intent of the

research was to ascertain whether parents would see co-viewing as a valuable investment of time in their children's preparations for learning. Some of the findings indicated that parents did value the experience of co-viewing. A better understanding of parents' perceptions of co-viewing could lead producers of educational programming as they produce and promote future programs.

Due to the exploratory nature of the study and the limited response from parents, the findings of this study were not conclusive. This study revealed that there is a strong affinity for co-viewing held by parents, though many mentioned the difficulty of scheduling this activity into their already busy parenting routines. However, even with limited statistically significant differences between the experimental and control groups, the researcher found enough evidence to support the promotion of co-viewing as a useful pedagogical tool for parents to use. Even if parents merely believe that co-viewing impacts children's learning, the activity will likely have a positive effect on school readiness. The researcher concludes that encouraging co-viewing is indeed a worthwhile cause that could greatly enhance the learning that takes place when a child is viewing educational programming.

Parents and educators may also derive value from this study by encouraging co-viewing among parents. The multiplying effects of communicating during and after co-viewing a program and the more frequent use of pedagogical practices illustrated in these educational programs can have a tremendous impact on children, as shown in the literature review. Additionally, children of parents of lower socioeconomic status may have the most to gain by the increased educational capacity of the co-viewing experience.

Recommendations for Future Studies

While this study attempted to explore the impact of co-viewing on parents with a smaller population, a much larger sample is needed to more firmly grasp the subject. The limited response rate of parents from an already small number chosen for the sample was a limiting factor for this study. Additional data about parents and their co-viewing habits nation-wide would be useful for producers of content that is broadcast nationally. Additionally, research into the growing number of ways children can access this content, from mobile devices and tablets to portable and desktop computers, could lend further understanding of which types of viewing devices are most useful as delivery tools.

Conclusions

This study contributes to the already large body of research with its shifting of focus from the children to the parents. While no statistically significant differences were found when comparing responses from the experimental and control groups for several of the research questions, it was found that parents generally agree on the value of the co-viewing experience for the children. Parents in the experimental group who participated in the co-viewing of materials on DVD provided by the researcher did have an increase in agreement with the statement, Co-viewing educational TV shows with my child/children helps me better prepare them for learning in school. This indicated that these parents were affected by the experience. It is conceivable that many more parents may be encouraged to schedule time for co-viewing and have a similar response.

Parents in the experimental group also had a significant change in the response to how much they agreed with the statement, If I watch children's TV programs with my child/children,

we tend to talk about the subject matter in children's TV programs after watching the program together. The researcher believes that parents who make time for co-viewing will be more likely to engage in conversation with their children about a wider variety of topics they are exposed to in the subject matter of the programming. This window on the world that exists in children's educational programming is broadened by parent interaction with their children after co-viewing.

Parents who reported more frequent co-viewing were more expressive about their co-viewing experience with their children than parents who reported less frequent co-viewing. Parents who are encouraged to make time to co-view educational materials with their children may be more likely to value the experience.

Parents whose children qualify for free/reduced lunches at school, an indicator of lower socioeconomic status, were more likely to co-view frequently, had higher agreement that co-viewing is superior to solitary viewing by children, and agreed that they talked more about the subject matter with their children after co-viewing. All of these findings lead the researcher to believe that children from lower socioeconomic status families have the most to gain from parental co-viewing of educational materials and therefore this activity should be particularly encouraged in this group of parents.

Finally, the statements from parents about the affect the experience of co-viewing had on them and their children were reassuring to the researcher about the value of said activity. "Very impressed," said one parent while another noted, "I believe that co-viewing shows my child that I am interested in them and in what they learn and experience." Parents in study understood the important role that they play in being their children's primary educators. "I feel that children need parents to play an active role in their lives to have a better foundation. Not only just TV viewing but in all aspects of life. I feel a strong foundation is something that they will need to

draw from later in life.” “He seems more focused on the matter and has given me new ways not only to teach but connect with him. I’m glad I got to do this survey.”

This study expanded the boundaries of research on the topic of children’s educational television in only a small way, but the unique focus on the parents led to a new understanding of how they value co-viewing and what difficulties may keep them from participating in the practice. It is believed that this research may help producers, parents, and educators all advance the cause of learning in this digital age.

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APPENDIX A
PARENTAL COMMUNICATION SURVEY

Parental Communication Survey

Please enter the unique identifier number from the instructions sheet. This is a 4 digit number at the bottom right corner. If you need help please contact Chris Willis at thf212@tennessee.edu or by phone at (423) 697-3151.

1. What grade is your child completing this Spring? If more than one child, please indicate the youngest.

Kindergarten

1st Grade

2nd Grade

2. Does your child qualify for free or reduced lunch?

Yes

No

3. How many complete 30-minute or 60-minute children's TV shows have you watched with your child in the past month?

0

1

2

3

More than 3

4. Watching educational TV shows with my child/children (co-viewing) is better than them watching the shows by themselves.

Strongly Agree

Agree

Neither Agree nor Disagree

Disagree

Strongly Disagree

5. Co-viewing educational TV shows with my child/children helps me better prepare them for learning in school.

Strongly Agree

Agree

Neither Agree nor Disagree

Disagree

Strongly Disagree

6. I am committed to make time for co-viewing in our family schedule.

Strongly Agree

Agree

Neither Agree nor Disagree

Disagree

Strongly Disagree

7. If I watch children's TV programs with my child/children, we tend to talk about the subject matter in children's TV programs WHILE WE'RE WATCHING the program.

Strongly Agree
Agree
Neither Agree nor Disagree
Disagree
Strongly Disagree

8. If I watch children's TV programs with my child/children, we tend to talk about the subject matter in children's TV programs AFTER WATCHING the program together.

Strongly Agree
Agree
Neither Agree nor Disagree
Disagree
Strongly Disagree

9. If I watch children's TV programs with my child/children, we tend to talk more about things in general.

Strongly Agree
Agree
Neither Agree nor Disagree
Disagree
Strongly Disagree

10. I feel that if I watch children's TV programs with my child/children, I would tend to use the types of question-and-answer communication strategies that we saw modeled in the program.

Strongly Agree
Agree
Neither Agree nor Disagree
Disagree
Strongly Disagree

11. I feel that if I watch children's TV programs with my child/children I would tend to use the problem-solving steps with my child/children that we saw modeled in the program.

Strongly Agree
Agree
Neither Agree nor Disagree
Disagree
Strongly Disagree

12. I feel that if I watch children's TV programs with my child/children, I would tend to do learning experiments that we saw modeled in the program.

Strongly Agree
Agree

Neither Agree nor Disagree
Disagree
Strongly Disagree

13. What is your overall impression about the co-viewing experience?

14. What benefits does co-viewing provide for you and your child?

15. What issues or concerns, if any, does co-viewing present for you and your child?

16. Is there anything else you can share about you or your child's experience viewing the programs?

APPENDIX B
IRB APPROVAL

Institutional Review Board
Dept. 4915
615 McCalle Avenue
Chattanooga, TN 37403-2598
Phone: (423) 425-5867
Fax: (423) 425-4052
instrb@utc.edu
<http://www.utc.edu/irb>

MEMORANDUM

TO: Chris Willis IRB #13-075
Dr. Lloyd Davis

FROM: Lindsay Pardue, Director of Research Integrity
Dr. Bart Weathington, IRB Committee Chair

DATE: April 16, 2014

SUBJECT: IRB #13-075: The Effects of Co-viewing Children's Educational Programming on Parental Communication Patterns

The Institutional Review Board has reviewed and approved your application for Annual Renewal for the IRB project listed above.

You must include the following approval statement on research materials seen by participants and used in research reports:

The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this research project #13-075.

Please remember that you must complete a form for completion when the project is completed or provide an annual report if the project takes over one year to complete. The IRB Committee will make every effort to remind you prior to your anniversary date; however, it is your responsibility to ensure that this additional step is satisfied.

Please remember to contact the IRB Committee immediately and submit a new project proposal for review if significant changes occur in your research design or in any instruments used in conducting the study. You should also contact the IRB Committee immediately if you encounter any adverse effects during your project that pose a risk to your subjects.

For any additional information, please consult our web page <http://www.utc.edu/irb> or email instrb@utc.edu

Best wishes for a successful research project.

APPENDIX C
CONSENT FORM

UNIVERSITY OF TENNESSEE AT CHATTANOOGA INFORMED CONSENT FORM

The effects of children’s educational programming on
parental communication patterns.

This study is being conducted by Chris Willis, a graduate student in the UTC Doctorate in Learning and Leadership program. Chris Willis is an assistant professor of Media Technology at Chattanooga State Community College and can be reached at (423) 697-3151 or at thf212@mocs.utc.edu. Further questions about the study can be directed to the chair of the UTC Institutional Review Board, Dr. Bart Weathington by phone at (423) 425-4289 or email instrb@utc.edu.

For many years researchers have suspected that children’s educational programming has positive impact on children’s education. But what are the effects on the parents? This study will attempt to understand that question by asking parents of children in Kindergarten through second grade about their viewing habits.

If you agree to participate in the study you will be asked to complete a survey about your children’s viewing habits and your communication patterns around the home. You may also be given a DVD containing children’s programming for your child to view. You will be given a follow-up survey. Additionally, you may be asked to come to a brief interview with the researcher to answer a few open-ended questions about the experience.

If you do not agree to be in this study no further action is needed. No other alternatives are available for participating.

There are no known risks or discomforts expected to occur as a result of participating in this study. All of the information obtained by the researcher will be kept confidential. After records are made from the surveys and interviews all of the original materials submitted will be destroyed. Additionally, during the reporting of information all participants’ names will be excluded from the report.

Participants in the study codes for learning apps provided by WTCI Public Television and volunteer hours from your child’s school. The results of this study will be of benefit to educators and administrators as they make recommendations to producers of children’s educational programs.

If you have any questions about the study you may contact the researcher by phone or email.

You have been asked to sign this form to ensure that you understand that your participation is the research is voluntary, you do have the right to decline participation, or you may withdraw at any time for any reason without penalty to your child or you.

Printed Name

Date

Signature

Researcher (or person who explained consent form to participant)

VITA

Chris Willis was born in Gallatin, TN, to parents Ken and Clyde Ann Willis. He graduated from the University of Tennessee at Chattanooga in 1996. In 1998 he completed his Master of Arts in Writing degree, again from UTC. Mr. Willis has been teaching college-level courses for almost 15 years, first as an adjunct at UTC and more recently for 5 years as full-time faculty with Chattanooga State Community College. In the Fall of 2014 he was given the First Tennessee Chair of Excellence in Business and Information Technologies.