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Parental Perceptions of the Influence of Digital Media and Technology on Children's Reading Habits at Home

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PARENTAL PERCEPTIONS OF THE INFLUENCE OF DIGITAL MEDIA AND TECHNOLOGY ON CHILDREN'S READING HABITS AT HOME

by

Kurt W. Johnson

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ABSTRACT

Parental Perceptions of the Influence of Digital Media and Technology on Children's Reading Habits at Home

by

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Utah State University, 2014

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This study explored parental perceptions of the influence of digital media and technology on children's home reading habits, the routines and repeated activities related to reading that occur within the homes of six families located in a mixed rural/urban area of Northern Utah. Data gathered showed how parent's childhood experiences influenced the creation of rules, spatial arrangements, routines, and family identity. Comparisons were made to Bronfenbrenner's ecological systems model, specifically in the areas of dyads, $N + 2$ systems, microsystems, molar activities, settings, roles, and transitions.

Findings showed parents have concerns about how to best foster reading at home within a society inundated by technology and digital media. Recommendations are given for schools to consider and leverage roles played by parents in development of reading and literacy skills at home and how technology and digital media can support those skills.

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PUBLIC ABSTRACT

Parental Perceptions of the Influence of Digital Media and Technology

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This study explored how parents from six participating families in Northern Utah felt about the influence of technology and media on their children's reading at home. Each family was interviewed about their feelings, filled out a survey about the amount of technology devices in the home, and took photographs of the areas in the home where their children read or used technology. Additionally, each family kept a journal recording the technology and reading activities their children participated in over a 1-week period

Parents talked about how their childhood experiences influenced them to create rules for technology and as well as where televisions, computers, bookshelves, and game systems were located in their home. They also shared family reading routines such as reading to their children each night before bed. Additionally, parents shared how teachers, cousins, and friends influenced the choices their children made when deciding what to read as well as what technology devices their children wanted.

Findings showed that parents have concerns about how to encourage reading at home, especially when their children are constantly surrounded by technology at home, school, and in their neighborhoods and towns. Recommendations are given for schools to consider how to best utilize parents in the development of reading at home and how technology can be used to support those skills.

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Kurt W. Johnson

CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

From the outside, my 17-year-old son would not be considered an avid reader. He has never enjoyed reading chapter books or novels. He does not perform well on standardized testing. In his spare time he prefers being outside, playing video games, watching movies, challenging family members in a board game, or texting friends on his cell phone. Yet, he does read. He reads manuals and onscreen dialogue for the video games he plays. He prefers closed captioning when watching movies. He follows the daily Facebook updates of his relatives and friends. He receives and sends a large number of text messages each day. His Twitter, Instagram, and SnapChat feeds provide almost minute-to-minute updates on the activities of his friends. When selecting from our home library of more than 600 books of all genres and ability levels, he chooses to read comics or graphic novels.

A few years ago, in an attempt to help him explore chapter books and novels, I began encouraging him to check out audio books from our local library, and he found that listening to books was enjoyable. Our local library has more than 3,300 digital audio books available for download to a computer or portable audio player. He does not even have to visit the library to have access to these materials. Books may be downloaded onto our home computer and transferred to his iPod. My son's use of video games, digital audio, and other electronic media and associated devices symbolizes the growing use of digital media by today's youth. These new materials and tools provide access to information in a format that many youth find familiar in today's technology-saturated

society.

As a classroom teacher with more than 20 years' experience, I have seen the influence of media and technology in the lives of parents and students. I see an increasing number of elementary-age children arriving at school with smart phones and iPods in their backpacks. Recess breaks that were formally dominated by outdoor activities are increasingly filled with indoor breaks of Internet-based computer games and groups of children huddled around a tablet-computing device playing a new game. Often, it is the child who helps the teacher operate and understand how to use the computer, tablet, or the other electronic devices that are becoming more prevalent in today's classrooms.

Today's youth are commonly described as digital natives (Barlow, 1996; Prensky, 2001b). This term refers to the fact that today's kindergarten- through college-age students are the first generation to grow up with modern technology in their lives. They have always known computers, video games, iPods, video cameras, cell phones, and the other toys of the digital age. For them technology is not only a convenience, it is an expectation of everyday life. When technology is not provided at home, they find ways of adapting (Ito et al., 2008).

Today's children are learning an additional definition of literacy (Leu, 2006), sometimes known as "screen literacy" (Brown, 2002). This literacy involves not only text but also the ability to read multimedia texts and the changing imagery of computer screens, game consoles, and web page designs. The ability to navigate this ever-evolving array of multimedia input may well be the new literacy for the 21st century and a vital component of future learning processes.

For today's youth, home is the most common place to have access to digital media and associated technology, followed closely by school and houses of friends (Lenhart, Madden, & Hitlin, 2005). Parents and schools serve as the primary gatekeeper for their children's exposure to and use of technology. Throughout a child's life, teachers and parents play an important role in helping make meaningful choices about the use of media and anticipating the consequences of those choices.

As much as today's children are digital natives, adults are often classified as digital immigrants. They grew up in a different era where technology was not omnipresent. Their technology culture is founded on the experiences of their youth. They pick and choose when to be involved in the new digital culture. Whether good or bad, digital immigrants have accents, actions that connect them to the way they learned as children. These accents can be manifest in a variety of ways (Prensky, 2001a). They may include printing out email to have a paper copy in the filing cabinet, buying a new memory card for a camera because the current one is filled with last year's pictures, needing to print out a document written on the computer in order to edit it, and confirming a lunch date by email right before walking out the door to pick up the other person.

Parents often describe themselves as overwhelmed by the role that media plays in everyday activities of youth (Jenkins, Clinton, Purushotma, Robinson, & Weigel, 2006). They question the value of the time children spend playing with video games, listening to iPods, and browsing the Internet. Many adults have fears and anxieties about new technologies that were not a part of their own

childhood and that they do not fully understand (Jenkins et al., 2006). Technology and associated gadgets now play a significant role in leisure time activities at home.

I am fortunate enough to visit with many of these parents at back-to-school night, parent-teacher conferences, and in the community. Because these parents know of my interest and expertise with technology, our conversation inevitably leads to the same questions. “How much time is too much time for my child to be on the computer”? “Is listening to an audiobook the same as reading it”? “How do I get my child to put down the iPod and spend more time reading”? These questions and others are deeply personal expressions about the influence of technology on children at home. Parents with whom I interact are deeply concerned about the negative influence technology may have.

Conversely, I am surprised at the amount of technology purchased by parents for their children. The same parents who express concerns about technology’s influence on their children feel compelled to provide iPods, iPads, smart phones, and other handheld devices. The parents I work with often justify purchases by describing a need for their child to be familiar with technology so prevalent in today’s society. They know their children will be expected to enter the adult workforce with a different set of technology skills. They know their children will be saturated by technology in society. They justify these purchases with a hope that technology will have some educational benefit. However, they are often unable to provide details on what those educational benefits might be. As an educator, I find these parents eager to receive guidance on ways to more effectively use technology for educational purposes at home.

Technology can have positive impact in the home by increasing communication between adults and adolescents. The Entertainment Software Association (2013) reported that 63% of parents believe video games are a positive part of their children's lives. That same study reported that 80% of "gamer parents" play video games with their children and 66% of those parents say gaming has brought their families closer together. While confusing to many adults, new media and technology has the power to build better communication between generations and bring families closer together (Ito et al., 2010). It can certainly be difficult to find the right balance of technology given seemingly conflicting information.

A great deal of research is available addressing parental perceptions of the influence of digital media and related devices. Additionally, a significant amount of published research is available addressing children's reading habits, the routines and repeated activities related to reading that occur within the home. However, there is a distinct lack of published research discussing parental perceptions of the influence of digital media and technology on reading habits of children at home. Because recreational reading occurs primarily in the home environment, parents can provide insight into the influence that digital media and technology has on the development of life-long reading skills. Understanding parental perceptions of the influence of digital media and technology could be beneficial in improving motivational and instructional strategies that utilize new digital media and technology.

As an educator, the relationship I maintain with parents is vital in understanding

the children I work with in the classroom. I feel a strong need to form cooperative relationships with parents. After all, I work with a child in school for only a relatively short amount of time when compared to the amount of time parents serve as the primary caregiver. I feel my job is to better understand parental expectations so I can provide an environment that not only helps children learn and progress at school but also supports parental goals and expectations at home.

It is my hope that this study provides insight on how parents navigate the relationship between reading and technology in the home environment. In planning and designing this study, I wanted to better understand how a professional educator such as I could help parent better utilize technology in the home for educational purposes, specifically with reading. Additionally, I hoped to better understand parental concerns and learn more about the decision-making process influencing technology purchases and use in a home environment.

The formal purpose of this qualitative study was to better understand parental perceptions of the influence of digital media and technology on children's reading habits at home. The study was framed by the following questions.

1. What are parental perceptions of the influence of digital media and related devices on children's reading habits at home?

2. How do parents determine spatial arrangements, routines, and rules when considering the influence of technology on children's reading habits at home?

3. How does technology and reading influence the formation of family identity within the home environment?

CHAPTER II

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Literature Review

The purpose of this review of the literature is to analyze, review, and synthesize existing research regarding parental perceptions of the influence of digital media and technology, especially relating to children's reading habits at home. Additionally, it explores the determination of special arrangements, routines, and rules within the home as well as the formation of family identity within the home environment. Objectives for this review of the literature are as follows.

1. To describe the current state of research regarding parental perceptions of the influence of digital media and related devices on children's reading habits at home.

2. To draw conclusions based on existing research in order to guide the focus and design of this current study.

Locating the Studies

An extensive review of the literature included a search of the following databases: Academic Search Premier, Digital Dissertations, Education Full Text, ERIC, and Web of Science. In addition, electronic searches of the following journals were conducted: *The Journal of Adolescent & Adult Literacy, Reading & Writing Quarterly, Reading Improvement, Reading Research Quarterly, The Reading Teacher,* and *Reading Today.* As articles were retrieved, I searched reference lists for additional sources. I also consulted book sources to identify additional sources. Combinations of the following

descriptors were used in all databases: family literacy, technology attitudes, home, reading, family attitudes, family-school relationships, technology, perception, parent attitudes, new literacies, reading habits, and skills.

Research Findings

After my review of available research, I found three main threads that provide insight into this study. For purposes of this review, I divided the research into three main categories of focus: (a) influence of digital media and related devices, (b) reading and the home environment, and (c) parental perceptions of media on reading habits. Each category of research is considered separately below.

Influence of digital media and related devices. A great deal of research was available addressing the influence of digital media and related devices. For example, research on the impact of television on school-aged children has been available since the 1950s and continues today with a wide exploration of topics. As media and associated devices have increased in society, research on the effects of media has increased proportionally. Getting a clear picture of the extent to which media has saturated home life and how that saturation influences today's youth can be a challenge. For purposes of this review of literature, two national reports provide insight into prevailing trends.

Generation M and Generation M2. For anyone who knows teenagers or pre-teens, it should not be surprising how important media is in their lives. Cell phones, iPods, video games, and other electronic devices surround today's youth. To better understand the role of media in young people's lives, the Kaiser Family Foundation began a detailed study of youth media use in 1999 and repeating the study in 2004 and

2009 (Rideout, Foehr, & Roberts, 2005, 2010; Roberts, 1999). The 2009 study included a national sample of 2,002 third through twelfth graders, ages 8-18, and looked at the use of seven types of media: (a) television; (b) cell phones; (c) computers; (d) video games; (e) music and other audio; (f) print media; and (g) movies.

The Kaiser Family Foundation Study (Rideout et al., 2010) found that, on a typical day, youth spent more than 7½ hours (7:38) using media, compared to nearly 6½ hours (6:21) in 2004 and 6¼ hours (6:19) in 1999 (p. 2). Of particular interest in the 2009 survey was the amount of multitasking, the use of two or more media concurrently. Researchers found that multitasking took place 29% of the time. Thus, children in the 2009 study were actually exposed to more than 10½ hours (10:45) of total media daily. The researchers noted that the amount of media use varied significantly by age, with older age group, 15- to 18-year-olds, being the largest consumers of media.

Ownership of media devices by youth has also increased over time. From 2004 to 2009 mobile media devices have shown the largest growth in ownership among youth with the number of 8- to 18-year-olds owning laptops increasing from 12% to 29%; iPod/ MP3 player ownership increasing from18% to 76%; and cell phone ownership jumping from 39% to 66% (Rideout et al., 2010, p. 3). It should also be noted that the percentage of youth owning portable CD/tape players decreased during that same time from 61% in 2004 to only 16% in 2009. The authors of the study made no attempt to correlate the increase in iPod/MP3 player ownership with the figures for older, portable music devices.

The Kaiser Family Foundation Study (Rideout et al., 2010) also found a shift in the consumption of media. In the 2010 study 20% of media consumption by young

people occurs on mobile devices with an additional 11% of traditional media such as television or music now occurring through new online media platforms such as Netflix, iTunes or Hulu.com. Television continues to dominate media consumption, with youth in the 2009 study spending nearly 2 ¾ hours (2:39) a day on live television. Additionally, nearly two additional hours (1:50) was reportedly spent on prerecorded television or programming from alternate sources such as computers, DVDs, cell phones, or iPods/MP3 players. Listening to music (2:31), computer use (1:29), and playing video games (1:13) follow television use. The least popular use of media was reading (:38) and watching movies in a movie theater (:25; p. 11).

Kids living and learning with new media. As stated earlier, a majority of media engagement occurs in the context of home and family life. One of the most comprehensive studies of how children use digital media in their everyday lives is *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media* (Ito et al., 2010), which reports on a 3-year collaborative effort of 22 different case studies by members of the Digital Youth Project. The term *new media* is defined by the lead author as "a media ecology where more traditional media such as books, television, and radio are intersecting with digital media, specifically interactive media and media for social communication" (Ito et al., 2010, p. 10).

Of particular importance to my study was the section titled Families in which Horst (2010) focused on how parents negotiate the use of new media in young people's lives through an examination of a wide range of studies included in the larger context of the book. She focused on four main themes: the spatial and domestic arrangements that

shape new media use in the home; the creation of routines surrounding new media use; the formation, bending and breaking of rules for technology use; and the transformation, negotiation, and formation of family identity through new media.

When considering the spatial and domestic arrangements that shape new media use in the home, Horst (2010) considered both public and private media spaces. Detailed case studies of several participants examined how and why families created public media spaces in areas such as media or recreation rooms as well as private spaces such as bedrooms. Additionally, Horst considered the implications of mobile media access through hand held devices.

Horst's (2010) second theme examined how families' structure time for media use during the school day as well as weekends with an emphasis on how parents influence the time spent with media by their own interaction with new media. Horst pointed out that mothers play an important factor in the integration and structure of time spent with new media in the home because the mothers appear to "bear most of the responsibility for upholding the morality of the family, especially in nuclear and extended families" (p. 173). Media use varied in relation to economic situations as well as other family circumstances such as divorce or parental time in the home.

While the first two themes related directly to special and temporal aspects of new media use, Horst's (2010) third theme examined the dynamics of rulemaking between parents and youth. References were made to Ellen Seiter's (1999) "lay theory of media effect," the belief by parents that media causes children to become antisocial, violent, lazy, and desensitized to sex, commercialization, and violence. Horst examined how

parental attitudes, perceptions, and moral values influence the negotiation of rules for their child's use of new media. Differences were pointed out between how youth and parents view the purpose of rules as well as the negotiation of rule enforcement that appears to be in constant flux with family environments.

The final section examined how all the previous elements come together as families form identities while using new media. This section focused significantly on how cross-generational communication about new media use served as a catalyst for the creation of a new media culture in the home. Several examples of families were given that provide insight into the variety of ways new media use influences social interaction and communication about new media use.

Reading and the home environment. A significant amount of published research is available addressing the influence of the home on literacy development. These studies show that parents and the home environment play an important role in the development of life-long reading skills. Parental influence is a key factor on children's motivation to read as well as the development of life-long reading habits (Edmunds & Bauserman, 2006; Strommen & Mates, 2004). Several studies have built a strong rationale for parental involvement in their children's reading (Hannon, Morgan, & Nutbrown, 2006; Padak & Rasinski, 2007; Strommen & Mates, 2004). Access to reading material at home as well as parent-child interaction are often cited as two important factors in children's vocabulary and reading growth (Koskinen et al., 2000; Krashen, 2004; McGill-Franzen, Lanford, Gioia, & Blustein, 1996; McQuillan & Au, 2001; Padak & Rasinski, 2007) Additionally, the availability of print material in a child's community

can provide either a stimulus or a barrier to reading development (McTavish, 2007). A study by Neuman and Celano (2001) concluded that "children in middle-income neighborhoods were likely to be deluged with a wide variety of reading materials. However, children from poor neighborhoods would have to aggressively and persistently seek them out" (p. 15).

Parental perceptions of media on reading habits. There exists a distinct lack of studies discussing parental perceptions of the influence of digital media and technology on reading habits of children at home. One of the few attempts to understand how technology influences reading was conducted in 2010 by Scholastic and the Harrison Group (Sinek & Sparkman, 2013). Their report surveyed a nationally representative sample of 2,090 parents and focused on "attitudes and behaviors about reading books for fun and how technology may be influencing and changing them" (p. 2). Conducted online over a one-month period, this report was one of the first to directly address parental perceptions about technology's impact on home reading habits.

The report showed that parents are still influential in their children's reading habits. When children were asked about who gave them ideas for books to read for fun, parents were most often mentioned (77%), followed by teacher or librarian (57%), and friends (56%). However, parents were concerned about the effect electronic or digital devices have on the time their children spend reading books for fun. Parents of children age six through seventeen reported the time their children spend reading for fun each week decreased while time spent online for fun and time using a cell phone to talk or text increased. Fifty-six percent of respondents reported that they feared their child would

become less interested in reading books for fun as they became more involved with electronic and digital devices.

The survey also addressed how reading is defined and what classifies as reading. Parents and children differed in their responses. When asked if texting back and forth with friends is reading, only 8% of parents responded yes compared to 25% of children. Fifteen percent of parents considered looking through postings or comments on social networking sites like Facebook as reading compared to 28% of children. Both groups, 51% of parents and 54% of children, considered looking for information online as reading. Interestingly, 39% of children and 47% of parents surveyed did not think any of these activities count as reading.

Children were asked about the different reasons they read books for fun. The top reason named for why they might read a book for fun was to be entertained, 78%. Only 47% said that a primary reason was to give them time away from technology. Interestingly, when asked about attitudes towards electronic books (eBooks) and related devices, only 25% reported having read a book on a digital device, including computers. However, 57% were interested in doing so, if given access to eBooks.

While the numbers presented by the Scholastic survey provide insight into the current state of technology's influence on reading habits, it does little to provide depth into how parents feel about specific issues. It provides no background on the decision making process parents use to implement rules surrounding technology in the home.

Theoretical Framework

In addition to the literature reported above, two theoretical frameworks will provide structure for this study, *ecological systems theory* and *new literacies*. Both were chosen for the perspective they provided into the relationship between the home, literacy and technology. Each provided a unique framework upon which the data in this study may be viewed, organized, and analyzed.

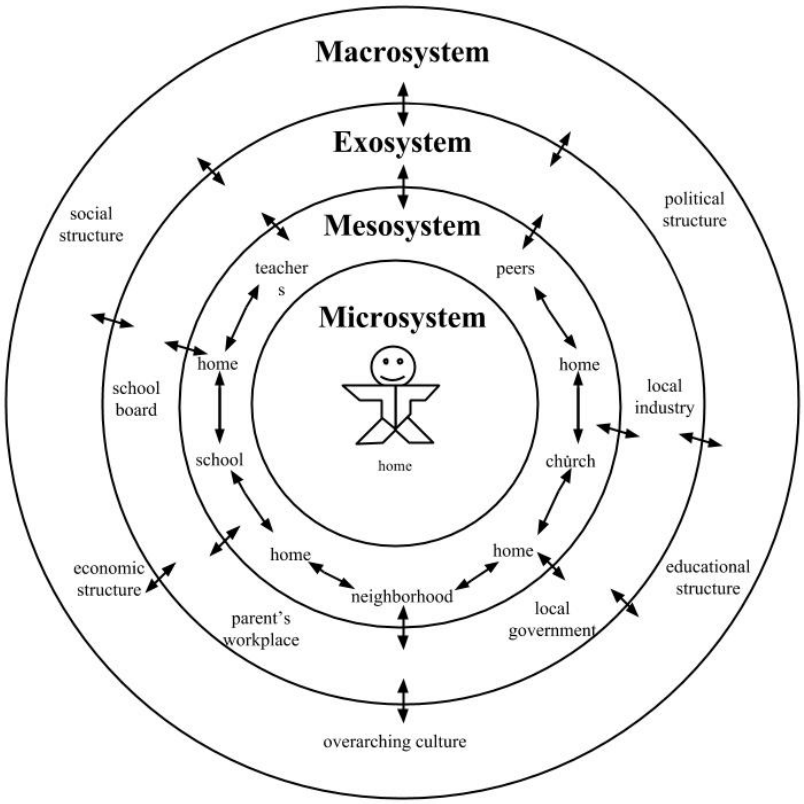
Ecological Systems Theory

Ecological systems theory, as developed by Urie Bronfenbrenner (1979), provided a lens to better understand the importance of home and parental influence in a child's life, especially in regard to technology and reading. This theory describes the forces, or systems, that: (a) "[comprise] the relations between the characteristics of learners and surroundings in which they live out their lives," and (b) "the relationship and interconnections that exist between these environments" (p. 5). In further describing this dynamic relationship between people, their environment, and learning, he described four successive, nested levels within a person's environment. These systems have bi-directional influence between the other systems as well as upon the learner.

The four systems described in Bronfenbrenner's (1979) original theory are: (a) the microsystem, the learner as well as the immediate environment containing the learner; (b) the mesosystem, the major setting where a learner interacts; (c) the exosystem, an extension of mesosystems that includes formal and informal social structures that influence meso and microsystems; and (d) the macrosystem, the overarching culture that

includes social, economic, educational and political structures that define the boundaries of a culture (see Figure 1).

The microsystem is the level closest to a child and is defined by the immediate surroundings where the child interacts in activities and within a specific role. The home serves as the key environment where this interaction occurs. A child's fundamental emotional, cognitive, and biological systems are developed as a direct result of this environment. It is this microsystem level that is often described as having the primary influence on predictors of reading development (McQuillan & Au, 2001) as well as technology access (Ito et al., 2008).



Note. Adapted from Bronfenbrenner (1979).

Figure 1. Ecological systems theory: Systems.

The second level of Bronfrenbrenner's ecological systems theory is the mesosystem. Bronfrenbrenner (1979) described the mesosystem as "the system of microsystems" (p. 6) that influence and are influenced by a learner. It encompasses the interactions between the child's microsystem and other major settings that influence that child. This relationship includes interactions with a child's family, peers, school, church, neighborhood, or any other important setting that influence a child on a regular basis.

When mesosystems embrace concrete social structure, they are then classified as an exosystem. Exosystems tend to be larger, fundamental elements of a society such as neighborhoods, school systems, governmental systems, social networks, and communication systems. While they may not directly influence a learner's microsystem, they do directly affect the structure of mesosystems. In turn, they are influenced and shaped by the mesosystems and microsystems that define them.

The final system, the macrosystem represents the outermost layer of a child's environment. This system is defined by systems of a culture, including values, customs, laws, economics, and education (Berk, 2009). Bronfrenbrenner (1979) described such macrosystems as "carriers of information and ideology that, both explicitly and implicitly, endow meaning and motivation to particular agencies, social networks, roles, activities, and their interrelations" (p. 6).

Many factors critical to understanding the influence of technology and the home environment on children's reading habits may be better understood through ecological systems theory. For example, it is reported that a majority of "media engagement" occurs in the context of home and family life (Ito et al., 2008). Consequently, parents serve as

gatekeepers for their children's access to these new tools. Parents in socioeconomically disadvantaged communities are afforded fewer resources and even fewer educational programs to help acquire skills and self-confidence to help their children master new media literacies when compared to affluent communities (Jenkins et al., 2006). In this case, the mesosystems and exosystems that surround a child have influence on technology engagement within the home.

The primary questions of this proposed study are meant to probe the relationship between a child's microsystem, the home, and the mesosystem, a child's family, peers, school, church, neighborhood, or any other important setting that influence a child on a regular basis. When interpreting the data in this study, Bronfrenbrenner's ecological systems theory provided clarification on how the technology that is so prevalent in society influences the formation of rules and routines at home, especially related to home reading habits. Additionally, this theory shed light on how technology influences the formation of a family identity.

New Literacies

Today's youth may be spending less time using traditional methods for reading. However, they are still reading as they utilize the wide varieties of new technologies for communication, friendship, play, and self-expression. These new tools are of great importance in the lives of children even though they are in direct competition with traditional activities such as reading or playing outside. Young people have a great desire to own an iPod, cell phone, various gaming systems, and other technology gadgets (Thomson & Laing, 2003). Instead of hanging out at local parks, children choose to hang

out online (Ito et al., 2008). Video games, movies or television are preferred leisure activities over reading a book.

What does it mean to grow up in the digital era? The terms *New Literacies* and *Information and Communication Technologies* (ICT) have been used to help describe the interaction of youth with the wide variety of today's technology. These concepts are not stagnant in their definition. These literacies continually change in response to the emergence of new technologies and communication methods. However, in order to frame a basic concept of New Literacies and ICT for the purposes of this study, the following definition is used:

> The new literacies of the Internet and other ICTs (Internet communication technologies) include the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives. These new literacies allow us to use the Internet and other ICTs to identify important questions, locate information, critically evaluate the usefulness of that information, synthesize information to answer those questions, and then communicate the answers to others. (Banks & Banks, 2003, p. 1572)

It is important to understand that these literacies and technologies do not replace the time-honored notion of literacy as the rudimentary ability to decode, comprehend, and produce written language. They, instead, accommodate the availability of new tools and forms through which children communicate. They also give us insight into the interaction of today's youth with technology.

New literacies theory is defined by two distinct levels; uppercase (New Literacies) and lowercase (new literacies). Uppercase New Literacies serves as an encompassing, broader theoretical framework defined by literacy skills, both new and

traditional, used by today's youth as they interact with technologies such as video games, social networks, web browsing and cell phones (Lemke, 2002; Leu, 2006). As such, New Literacies view the Internet in the context of a communication tool. It assumes a view that the Internet provides a variety of opportunities for interaction within a diverse set of communication tools. It is assumed that all these tools and interactions involve a level of literacy knowledge in order to acquire, store, and make meaning of information (Leu, O'Byrne, Zawilinski, McVerry, & Everett-Cacopardo, 2009). The larger theory of New Literacies is continually changing, being adapted and shaped by the development of new Internet communication tools.

In contrast, lowercase new literacies explore focused concepts of new literacy such as text meaning within Twitter communication (Greenhow & Gleason, 2012) or a focused disciplinary base such as semiotics of multimodality in online media (Kress, 2003). As such, these more focused concepts of new literacy help shape and define the larger theory of New Literacies. An early review of New Literacies defined four elements shared by lowercase new literacies that help define the larger theory (Coiro, 2008): (a) New Literacies include the new skills, strategies, dispositions, and social practices that are required by new technologies for information and communication, (b) New Literacies are central to full participation in a global community, (c) New Literacies regularly change as their defining technologies change, and (d) New Literacies are multifaceted, and our understanding of them benefits from multiple points of view.

This study utilizes the concepts of New Literacies Theory as well as new literacy skills to better understand parental perceptions of the impact of digital

media and technology on children's reading habits at home. Since the concepts of new literacies most often pertain to youth, generational views of technology are often drastically different in perception of value. This study explores parental perceptions of New Literacies and compares those perceptions to current research, providing insight on generational differences.

CHAPTER III

METHODOLOGY

Parents have a desire to be involved in their children's education. Parental involvement has been listed by both teachers and public surveys as one of the top ways to improve public schools (Langdon & Vesper, 2000). Research has shown positive educational benefits when parents are involved with their schools (Rose, Gallup, & Elam, 1997). In the elementary school years, the involvement of parents has been shown to have significant impact on children's academic achievement, sense of well-being, attendance, attitude, homework readiness, grades, and educational aspirations (Greenwood & Hickman, 1991). Yet, for a variety of reasons, parent involvement is nonexistent or underutilized in the public schools (Gonzalez-DeHass & Willems, 2003).

When I taught in the public school system, I wanted parents to be involved in their child's education, both in and out of the classroom. I believed the parent, as the primary caregiver, had the greatest influence on a child's overall academic, social, and emotional development. As an educator, I wanted to form a partnership where I could advise parents on good educational practices that could be utilized in the home. I felt that the classroom experience should be a cooperative arrangement rather than the parallel existence of the two separate worlds of home and school. Yet, I saw the hesitancy of many parents to become involved for a wide variety of reasons. Namely, parents questioned their ability to make a difference, and parents do not know how to translate their desire to be involved into actual involvement (Decker, Decker, Boo, Gregg, & Erickson, 2001; Eccles & Harold, 1993). Parents find themselves as outside observers to

the educational process that occurs in the classroom. They are most likely not trained educators and rely on the professional judgment of those working in the school. For educational decisions, they desire to be involved but question that their input or effort would have significant impact given their lack of training in the education field. While they have much to offer, they are unsure about how to best transfer their skills or knowledge for use in the classroom.

This research project was a result of my desire to communicate better with parents, especially those who were unsure about the use of technology in the home. Too often those parents asked me what they should be doing at home to help their child become a better reader. They asked for recommendations of electronic devices for their child. They commented that they were inspired to listen to audiobooks on family commutes because their child had listened to an audiobook on a classroom iPod. They asked for recommendations about how much time their child should be spending each day reading, watching television, or playing video games. They wondered how reading on an electronic device such as a Kindle compared to picking up a book, especially as their children were beginning to enjoy and read a lot of chapter books. In short, they had a strong desire to utilize technology to help improve reading and other academic skills for their children, but they were often unsure about what course of action to take. As an educator and researcher, I hoped to gain a better insight into these parents as well as learn more about how technology and reading influence each other in the home environment. In so doing, I hoped to provide better recommendations and improve the cooperative relationship between home and school.

Naïveté and Subjectivity

When considering my research questions, I knew I held some very strong beliefs about the interaction of reading and technology at home. This did not surprise or concern me since, as noted by Shumsky (1958) more than 50 years ago, the specific content of a research question may "have a deep personal significance to the researcher" (p. 152). However, I also understood that my beliefs did not represent a truth. Rather, they present insight into a complex issue with many perspectives and variables. My purpose was not to promote my beliefs but instead to discover and accurately represent the beliefs and insights of my participants.

I was familiar with four of the participants in this study, having been the classroom teacher of one or more of their children over the last ten years. I understood some of their predispositions, attitudes, and home habits regarding technology and reading. Despite this familiarity, I worked to set aside my assumptions and subjectivity to focus on participant's perceptions, attitudes, and stories. In a sense, I was a seeker of knowledge and approached my interactions with research participants as a learner rather than a subject matter expert. My approach was based on the idea of deliberate naïveté, as described by Glesne (2006):

> Naïve characterizes the researcher's special learner role. It entails a frame of mind by which you set aside your assumptions (pretension, in some cases) that you know what your respondents mean when they tell you something, rather than seek explanations about what they mean…you must be alert to taking on the mindset of a learner, not an expert. (p. 94)

This naïve approach also helped when considering my own subjectivity as a researcher. I did not expect my subjectivity to be absent from this research. Although usually

expressed in negative terms in the research world, I felt that my subjectivity, when appropriately recognized and controlled, could contribute to my research (Denzin & Lincoln, 2005; Glesne, 2006; Peshkin, 1988; Wolcott, 2005). My awareness of subjectivities allowed me to monitor how my perspective and experience might skew, distort, or misconstrue what I both saw and heard from my participants.

Participant Identification

Participants consisted of six families with one or more children enrolled in grades 3-5. All participants had primary legal care or guardianship of a child in this age range and lived within the boundaries of Cache Valley, an agricultural valley situated in the northern end of the Wasatch Range, part of the Rocky Mountain region of the Western United States. The valley is surrounded by mountain ranges on both the eastern and western edge. These mountains provide a natural border on the east, west, and south side of the valley. The northern end of the valley extends nearly 50 miles into Idaho. Major state roads provide access in each cardinal direction with the route leading to the larger populous areas of Ogden and Salt Lake City passing through the Wellsville Mountain Range at the south end of the valley.

Cache Valley was named for the fur stashes made by many of the fur trappers of the late 1800s. The 2010 Census listed the population at 112,656. Most of the valley area is relatively flat agricultural land with an assortment of minor rivers that feed into a larger, meandering river traversing the valley. The area is dotted with small farm towns that reflect the pioneer history of the local area. Settled by Mormon pioneers beginning in

1853, many of these small towns represent the community spirit of the rural United States, with an assortment of local celebrations held in the communities during a typical year. However, much of the farmland is slowly being replaced with newer housing subdivisions as these small towns see an influx of growth from families seeking a rural setting in which to raise their families. These smaller towns are appealing to much of Cache County's growing population because access to the county seat and largest city, Logan, is only a 30-minute drive from the farthest reaches of the valley.

The city of Logan sits in the center of the valley and serves as the major industrial, cultural, and educational hub. Logan hosts a wide diversity of economic sectors, with a focus on education, manufacturing and processing, medical services, agriculture, and retail businesses. Utah State University, a nationally recognized land-grant research institution, is the county's largest employer. Additionally, the area is headquarters for numerous national and international companies including ICON Health and Fitness, Harris Research Inc., Campbell Scientific, iFrogz, Conservice Utility Management & Billing, and S&S World Wide.

For the purposes of this study, I selected six families to proportionally match demographic data for Cache County, Utah. I used U.S. Census Bureau data to identify five categories for participant inclusion: race, household type, housing tenure, and educational attainment of adults as listed by the 2010 U.S. Census data (Profile of general population and housing characteristics: geo: Cache County, Utah). The percentage of each subcategory found within these five inclusion categories was used to determine the number of participants with who met identifying criteria as indicated in Table 1.

Table 1

Population Selection Criteria

Category	% of county population	# of study participants
Race		
Hispanic or other race	9.1	1
White	90.9	5
Household type with own children under 18 years		
Householder, no spouse present	15.4	1
Husband-wife	84.6	5
Housing tenure		
Renter-occupied	34.7	2
Owner-occupied	65.3	4
Educational attainment		
High school or less	30.4	2
Some college	25.4	1
Associate or bachelor's degree	29.6	2
Graduate or professional degree	14.7	1

Note. Adapted from U. S. Census Bureau (2010).

Accordingly, one of the six participant households represented a minority population with the other five being white. Five participant households had a father and mother in the home while one represented a single parent home environment. Two participant households lived in renter-occupied housing with the remaining three living in owner-occupied housing. Finally, adults in two participant households had a high school education or less, one had some college experience, two held an associate or bachelor's degree, and one participant household had at least one adult holding a graduate or professional degree.

It was understood that Cache County, Utah, was not representative of racial,

economic, and educational demographics elsewhere in the United States. Additionally, it was understood that the implementation and use of technology in the rural area such as Cache County differs from technology-based interaction in an urban area. These urban populations have greater broadband access than rural areas (Grubesic, 2004). Access and usage of technology differ between urban and rural areas. For example, the uses of smart phone applications such as Yelp or Chowhound to recommend and find places to eat differ between rural and urban settings. A rural location such as Cache County has more limited restaurant options that are generally known to the local population. An urban setting such as Salt Lake City, Denver, or Las Vegas has significantly more eating options with new restaurants and eateries opening on a regular basis. In such a setting, applications such as Yelp or Chowhound are significantly more useful, even to the local population. The boundaries between face-to-face communication and technology-based communication are more blurred in urban areas where larger populations exist.

Despite these differences, my hope was that the general insights, understanding, and process used to talk to parents about the topics of this study could be useful in starting similar conversations in other local populations.

I identified participants through cooperation with community organizations and the Edith Bowen Laboratory School (EBLS) on the campus of Utah State University. I had worked at EBLS since 1998 and was familiar with the demographics represented by families enrolled at the school. As a public charter school, EBLS families represented a wide variety of educational and ethnic backgrounds. Additionally, EBLS enrollment drew from families living in many geographical locations within Cache County, Utah. An

introductory email was sent to EBLS parents of children in grades three, four, and five. This email introduced the research project as well as solicited participation.

One participant was needed to represent the race criteria of Hispanic or other race. Because Hispanics were the predominant minority population within Cache County, I wanted to find an Hispanic participant. However, no potential Hispanic participants volunteered from EBLS families. When I approached Hispanic families that I was personally acquainted with, each declined my invitation to participate, citing time limitations due to family and work obligations. Additionally, potential Hispanic participants identified through my community connections declined to participate due to either family and work obligations or hesitancy to work with a researcher with whom they were not familiar. Due to these difficulties, I selected a husband and wife who had grown up in India but had moved to the United States for careers and to raise a family.

The most difficult participant population to recruit was those with limited educational attainment. Two participants were needed to represent the 30.4% of Cache Valley population with a high school education or less. Of the approximately 150 sets of parents at EBLS who were sent information, no potential participants matching the aforementioned educational criteria responded. When I personally approached three families whom I knew matched the desired educational criteria, each indicated a hesitancy to participate, citing their embarrassment about their lack of education as a reason not to participate. To complete the representative participants, I utilized personal connections I had within the community to identify potential participants. Each potential participant was introduced to me by personal introduction through a mutual friend. Each

of these participants were verified by phone that they each met the criteria needed and were willing to participate in the study.

Four participants were selected from families at EBLS. It should be noted that all four families had children for whom I had been the classroom teacher for their fourth grade school year. Seven of the EBLS families who volunteered for the study were not selected because another participants had been identified that better matched representative criteria.

Each of the six participants was contacted by phone. During this initial conversation, I outlined the general purpose of the study as well as the requirements for participation. I also provided potential participants with a verbal explanation of the study as well as a formal consent letter. At the first meeting I asked participants to select a pseudonym of their choice. All participants are identified by these pseudonyms throughout this study. All efforts have been made to protect participants' personal, identifiable information.

Each family's involvement in this study occurred over a 1-week period of time. Following the initial interview, each participant spent the ensuing week filling out the journal, taking photographs, and completing the survey. I returned at the end of the week to review the materials with them and complete the follow-up interview. I intentionally scheduled each family's involvement during different months of the calendar year beginning with the first participant in October and ending with the last participant at the end of the following summer. Four families met with me during different times of the traditional school year. I met with the last two families during the summer. I found

participants' schedules and activities had a great deal of influence over parental perspectives regarding reading and technology. Those I interviewed in the summer often mentioned how different their expectations and schedules were from the school year to the summer. Those I interviewed during the school year centered our conversation on current school expectations and homework. The timing of these interviews allowed me to see family perspectives throughout a calendar year, often gaining perspectives that would not have been thought about had I interviewed a family at a different time of year.

Five of the families chose to host the initial interview at their home, allowing me to see first-hand the home environment that would often come up during our conversation. Each family was gracious as they invited me into their home, with many offering a quick tour of the entire home. Only one family requested the interviews take place at a neutral location, as noted below in the family descriptions. The six homes varied in both size and location from a small, two-bedroom apartment in an older, high-density rental area of the city to a large, five-bedroom home located on the hills overlooking the valley. All families were accommodating and excited to share their home environment as part of the research project.

I also found each family to be accommodating and excited to talk about their use of technology and reading habits in the home. Several parents mentioned how important the topic was to them. Often they asked questions of advice on appropriate use of technology in the home or guidelines on how to encourage reading in the media-saturated environment in which their children were growing. Each participant was excited to share their experiences to help better understand how reading and technology interact in

today's home environments. Often the children also wanted to be involved in the discussion and share their opinions. Because the study was designed to focus on the perceptions of their parents, the children were often disappointed not to be involved in the interview.

Data Collection

In order to understand the experiences and perspectives of each participant, five data collection methods were used: (a) initial interview; (b) journal; (c) photographs; (d) survey; and (e) follow-up interview. Each is described below. I used multiple methods of data collection so that I could gain a more comprehensive understanding of the phenomenon being studied (Denzin & Lincoln, 2005) and increase confidence in my research findings (Berg, 1995; Glesne, 2006). Each data collection method afforded me a different view and understanding of the participant's home environment and both the role and interaction between reading and technology in participants' lives.

The primary data collection method, the initial interview, was conducted with each family. At this first interview, I asked parents questions regarding their child's home reading habits, interactions with reading materials, and how they perceived the use of audio books and other kinds of technology have influenced these factors (see Appendix A for interview questions). Additionally, this interview allowed me to introduce the participants to the other data gathering methods and clarify any questions participants had about the study. Interviews were conducted on an individual household basis. Parents were interviewed together. Excerpts from these interviews appear later in this study and

help provide some of the most detailed insight concerning topics addressed by this study.

As a second data collection method, parents kept a week-long journal at home. They were asked to record observations and thoughts regarding their child's reading habits and technology use. Additionally, I asked them to describe in detail specific instances regarding reading interaction, technology interaction, and the perceived influence of technology on their children's lives and home reading habits. I hoped that this journaling would allow participants to reflect on the role of reading and technology in their child's life and give them an opportunity to gain a deeper understanding of how that is exhibited at home.

Third, I asked participating parents to take pictures of their child's home reading environment and available technology. Participants were asked to consider spaces, materials, or anything else that played a part in their child's reading at home, as well as any technology that they feel influenced their child's reading habits. In both cases, I encouraged them to include examples of both positive and negative influences.

I provided an instruction sheet for participants that described the basic requirements for the photographs they were asked to provide (Appendix B). Specifically, I asked participants to focus on the reading environment and technology influence in the home, not the children themselves. I indicated that the study would exclude any photograph that included a person, whether child or adult. Additionally, I informed participants that no photographs containing personal, identifiable information would be included in the final, published manuscript.

Photographs and other visual media are frequently used in qualitative research to

enhance contextual understanding and shed light on other data sources (Glesne, 2006; Guajardo & Guajardo, 2004; Menchaca, 1995, 2001). Benefits of using photographs in fieldwork include building rapport, conducting cultural inventories, and probing deeper into cultural context (Collier & Collier, 1986). It was my hope that photos would gather specific information, "with qualifying and contextual relationships that are usually missing from codified written notes" (Collier & Collier, 1986, p. 10). Photographs can provide a greater understanding of participants' perceptions of technology use and children's reading habits at home. Additionally, photographs can empower participants in that they will be choosing what to add to the data set.

As a fourth source of data, I asked each parent or set of parents to complete a survey (Appendix C) regarding technology, media and associated use within the home. In addition to gathering data about the quantity of media and technology devices in the home, this survey also asked parents to estimate daily media use within the home. Data from this survey provided a basis to discuss media use in the home with participants during a second, follow-up interview.

Questions chosen for this study's media survey were adapted from the larger Kaiser Family Foundation Study (Rideout et al., 2010), a national study that surveyed 2,002 third- to twelfth-grade students, ages 8-18. Each participant of the Kaiser Family Foundation Study completed an anonymous 40-minute, self-administered, written questionnaire. Additionally a subsample of 702 respondents also volunteered to complete seven-day media use diaries.

For the purposes of this study, parents were asked to complete information about

the number of working media devices found in their home such as computers, mp3 players, video game systems, and televisions. Additionally, parents were asked to estimate how many minutes during an average day their child spent interacting with various media such as reading print books, watching television, watching movies on other devices such as a computer, iPod, or cell phone, listening to music on a radio, playing video games on a handheld system, or using the computer for general use.

Because qualitative research seeks an in-depth understanding of the phenomenon in question (Denzin & Lincoln, 2005), the final data collection method was a second interview that took place following completion of the journal, media survey, and photograph collection. This second interview allowed me to ask for clarification of descriptions found in the journal as well as allowed participants to explain their reasoning for including specific photographs. I engaged in preliminary data analysis to determine questions and topics for the second participant interview. Both interviews were recorded, and I transcribed and analyzed them for relevant and reoccurring themes.

These different data collection methods provided a variety of ways for the participant to reflect on the influence of technology on their children's reading. This participatory process allowed participants to "create the sense that images, sounds, and understandings are blending together, overlapping, forming a composite, a new creation. The images seem to shape and define one another, and an emotional, gestalt effect is produced" (Denzin & Lincoln, 2005, p. 4). My analysis of the participants' experience provides a clearer picture of parental perceptions of the influence of digital media and technology on home reading habits.

Data Analysis

As mentioned earlier, this study employed qualitative methodology that was primarily constructivist in its approach. Data was analyzed within the sociological tradition, with thematic analysis used to view data "as a window into human experience" (Sudzina, 1999, p. 769). The constant comparison of multiple data sources helped clarify the difference between participants' thought (perceptions) and what actually occurred (actions). This distinction became important because it helped form an overall picture of media use within the home on both a perceived and actual level. A comparison between participant perceptions and participant actions was especially important because previous research on families and their interaction with new media and technology shows that parents live with what might be called a Jekyll-and-Hyde complex. Parents regularly express anxiety and discomfort surrounding media use, yet they feel pressured to provide access to the newest technology for their children (Buckingham, 2008; Davidson & Ritchie, 1994; Gutnick, Robb, Takeuchi, & Kotler, 2011; Ito et al., 2008, 2010; Jeffs, Behrmann, & Bannan-Ritland, 2006; Livingstone, 2002; McPherson, 2008; Rideout et al., 2010).

Interviews

Interviews provided me with the greatest insight into participants' perceptions. In order to effectively capture participant perceptions during both the initial and follow-up interviews, I used several crucial aspects of qualitative research interviewing as outlined by Kvale (1996):

- A qualitative interview seeks to discover the everyday lived world of the interviewee;
- Once the interviewee's everyday lived world is discerned, the interview goes on to search of key meaningful themes that are part of that lived world;
- The interviewer cultivates a deliberate openness and, if possible, naïveté instead of trying to pull everything together too soon;
- Ambiguities and contradictions are accepted and duly noted, not brushed away or ignored;
- An interview is an interpersonal event, and any knowledge generated by the interview is inexorably shaped by these interpersonal dynamics, whether that shaping is apparent or not;
- A good interview can do much good and be the source of much knowledge and insight, not only for the research project, but often for the interviewee, and in some cases, for the interviewer's personal life as well. (pp. 30-31)

Data analysis began immediately following each participant's interview. As initial and follow-up interviews were recorded, I transcribed each within 24 hours of the completion of the interview. Using printed transcriptions, I began an initial coding and segregating of data into general themes for further analysis and review (Glesne, 2006). Initial themes regarding the influence of digital media and technology on children's reading habits at home were identified based upon Bronfrenbrenner's Ecological Systems Theory as well as New Literacies Theory. I also identified additional themes as I discerned commonalities among multiple participants' interviews. These additional themes were analyzed in terms of their connections to existing research and are presented later.

Journals

Participant journals, surveys, and photographs were my primary source into participant actions. Journals, in particular, provided insight into the day to day activities

of each participant homes during the week following our initial interview and served, as described by Sudzina (1999) "as a window into human experience" (p. 769). I collected each journal, along with photographs and surveys, at the follow-up interview held with each participant. The journal provided a discussion during the follow-up interview about the preceding week, including the interaction of technology and reading in home environment. No formal tabulation of information within the journals was done.

Surveys

Numerical data from each participant's survey (Appendix C) were compiled in a spreadsheet to help form a picture of reading and technology practice in the home. Although quantitative in form, I analyzed this data from this survey using qualitative methodology. Specifically, I compared the data regarding both individual homes as well as a grouping of all participants to findings of the national 2010 Kaiser Family Foundation Study (Rideout et al., 2010). I also compared each participant's survey responses to transcripts of individual interviews, photographs of participant homes, and insight gained from participant journals.

Photographs

Participant photographs were important elements to help better understand parental feelings concerning technology and reading in the home environment. Each participant was asked to take 10 to 20 pictures of their child's home reading environment and available technology (see Appendix B for participant instructions). My analysis of the photographs was based on Collier and Collier's (1986) work utilizing photography as

a research method. My primary intent was, as Collier and Collier stated, "to (move) from raw data to refined conclusions, a process that is a form of reduction" (p. 169). Specifically, I analyzed the content of participant's photographs utilizing Collier's four-stage model for the analysis of visual records (p. 178); (1) open immersion, (2) inventory or logging process for content, (3) structured analysis, and (4) search for the overtones and significance of the details by returning to the complete field record.

During the open immersion stage, I met with each participant to review the content and reasoning for each photograph they chose to include. Clarifying questions were asked to help me better understand how each photograph represented a significant aspect of reading or technology in participant's home. This phase allowed me to determine not only participants' foundational reasoning for each photograph chosen but also helped define new, unanticipated themes that I had not previously considered that warranted a more structured analysis. During the second phase, the content of each photograph was analyzed. Based on these observations as well as conversations I had with each participant, I tabulated the content of each photograph for use in further analysis. This led to phase three, a more detailed, structured analysis of the photographs as described by Collier and Collier (1986).

> The ideal analysis process allows the data to lead to its own conclusions through a dynamic interplay between open and structured procedures. In this manner analysis involves a two-part question: "What do I see"? and "How do I know"? or better "What can be seen and identified in the visual record that gives me that impression"? (p. 172)

This detailed analysis allowed me to incorporate significant details from the photographs into my understanding of the main themes of the completed study.

CHAPTER IV

RESULTS AND ANALYSIS

The purpose of this study was to provide insight on how parents navigate the relationship between reading and technology in the home environment. I wanted to better understand how a professional educator such as me could help parents use technology in the home for educational purposes, specifically with reading. Therefore, this study explored three specific research questions.

1. What are parental perceptions of the influence of digital media and related devices on children's reading habits at home?

2. How do parents determine special arrangements, routines, and rules when considering the influence of technology on children's reading habits at home?

3. How does technology and reading influence the formation of family identity within the home environment?

This chapter presents a descriptive analysis of data regarding parenting perceptions of technology and reading within the home, with particular attention given to how parents feel technology interacts with and influences home reading habits. Each research question is examined separately through descriptions and analysis of interviews, photographs, journals, and survey results.

Definitions

At this point it is important to present working definitions of key terms used in this study's analysis. These definitions are not intended to be all-inclusive or without

dispute. Many scholars understand and use these terms in different ways, depending on needed context, use, and functionality. Below, I explain the ways I have come to understand each term and how they are used in this study. The definitions I present frame the context for the use of these terms for this study only.

Families

It is outside the scope of this study to define the all-encompassing term *families* and the complex relationships that may be involved in such a definition. This study recognizes that the term family has been broadly used over time in a wide variety of social, historical, and cultural contexts (Alters, 2004). For the purposes of this study, the term family defines the household unit comprised of children and a parent or parents for each study participant. The specific demographics of each participant were presented earlier. Family, families, and participants are used synonymously within this study.

Home

This study focuses specifically on home reading habits. The home environment is of particular interest. Ecological Systems Theory (Bronfenbrenner, 1979) defined the elements that both surround and directly influence a child as the microsystem. Specifically this theory defined the microsystem as "a pattern of activities, roles and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics" (p. 22). This study utilized that definition for both the terms *home* and *home environment*. These terms are used synonymously throughout this analysis.

Technology

The term *technology* is used in this study to describe physical devices that are used to access, create, or interact with digital content. These devices include televisions, computers, mp3 players, and a wide variety of other devices as indicated in the Media in the Home Survey (Appendix C). These devices have a physical presence, are powered by electrical circuitry, and provide access to information in the form of video, audio, electronic print or other electronically transmitted data.

New Media

Technology is defined as physical devices. However, today's technologies also include media and content that has an express purpose to provide interaction between a user and an object. Perhaps the best example of this is a video game. The game itself can be described by its physical characteristics such as size, weight, or compatibility with a specific gaming system. Most users, however, would describe a video game by the media it contains, the interaction a user has, and the rules that govern game play.

For purposes of this study, the term *new media* is used to describe the environment where traditional media such as books, television, and radio are intersecting with digital media, specifically interactive media and media used for communication (Jenkins, 2006). In this study new media includes software and digitally delivered content. I have used the term new media instead of digital media or interactive media because it represents the larger scope and influences that media has in today's society.

New Literacy and New Literacies

As stated earlier, the term *new literacies* has been used to describe the skills today's youth use as they play video games, participate in social networks, and utilize cell phones (Lemke, 2002; Leu, 2006). A detailed explanation of New Literacy and new literacies can be found in Chapter I. In this study, lowercase *new literacy* and *new literacies* will be used to describe focused literacy based skills used by youth. Such skills include but are not limited to electronic communication using email, Facebook, or Internet chat forums. Skills also include reading text in an electronic format such as viewing webpages, reading eBooks or using online research skills within a web browser.

Participant Descriptions

Each participant was unique in many ways. They represented a variety of economic and social conditions. Even though each had at least one child in elementary school, grades k-5, the dynamics of each family were vastly different. Children varied in age from newborns to adult children who were married and living outside the home. Parents had a variety of interests, hobbies, and occupations. They represented a wide variety of upbringings, cultures, and educational backgrounds. In order to better understand the uniqueness each participant, I have included a short narrative description below. They are inspired by the narratives shared by Marx (2006) in her study of teacher education students and are meant to help readers better understand the uniqueness of each family. Each family is presented in chronological order, beginning with the first participants I interviewed. Each parent and child is identified by his or her pseudonym.

Sam and Greta

I met with Sam and Greta in the early October just as the colder, crisp fall evenings began to replace the warmer, late summer evenings. Their home was located in a fast-growing city in Cache Valley and was typical of the rapid transformation of Cache Valley's rural farmland into housing. The subdivision in which their home sat contained several hundred homes built within the last 10 years, many through an owner-cooperative program. In this program each homebuyer was required to provide an allocation of construction labor for both their home as well as the rest of the homes in the subdivision. As such, many of the families in this relatively new area were young with elementary-age children.

Sam, 36 years old, earned a B.S. degree in German and liberal arts. He had previously studied for a M.S. degree in architecture but stopped his schooling when his artwork began gaining in popularity. When we met he was a self-employed artist selling his original artwork through his own small business. He frequently traveled to art shows, craft fairs, and galleries to promote his work. On the night I interviewed the couple, Sam arrived 30 minutes into our discussion due to extra work that needed to be finished at his business office.

Greta was a stay-at-home mother with a B.S. degree in special education. She talked often about the importance of being home for her girls, especially their youngest who was only 2 years old. She was actively involved in the children's lives, often volunteering at her daughters' schools.

Sam and Greta had four daughters, ages 2 to 12 years old. During the evening I

spent talking with Sam and Greta, the girls played happily together both upstairs and downstairs. When one of sisters came upstairs, the others followed. Elise, the oldest at 12 years old, had just begun her first year of middle school and was described by her parents as becoming more independent. Michelle, 10 years old, had been a fourth grader the previous year in my classroom. Despite some academic struggles, she was consistently happy and always had a wide assortment of friends at school. Addie, 8 years old, appeared to enjoy getting attention from her older sisters as well as taking care of the youngest sister, only 2 years old.

I began our interview with only Greta and the children at home. Sam was finishing up some work and would be late arriving home. The girls enthusiastically brainstormed pseudonyms for each member of the family, and Greta was patient in guiding some of their sillier suggestions towards more reasonable names. The girls' night was full of laugher and giggles, even after retreating to the downstairs playroom and bedrooms when Sam arrived home.

Sue

Sue was excited to participate in this study, despite limitations on her time. In addition to her role as a single mother, Sue held a part-time job, was enrolled in school full time to finish her bachelor's degree coursework, and was applying for pharmaceutical school. She planned to pursue graduate studies the following fall but was unsure where she would continue her schooling to become a licensed pharmacist. She was gracious enough to take an hour out of her busy schedule to meet with me at the library of her daughter's school.

I had been her daughter's fourth-grade teacher and was aware of Sue's active involvement as a parent. When beginning her undergraduate program at Utah State University, she applied for her daughter Amia's enrollment at the Edith Bowen Laboratory School. The location of the school on the campus of Utah State University allowed Sue to eat lunch with her daughter on a regular basis as well as visit her daughter's classroom when her class schedule allowed. Additionally, the after school program offered by the school allowed Sue to pick up Amia at 5:30 pm most days, thus accommodating the busy schedule of this single mother.

As a fourth grader, Amia was tall for her age. As a voracious reader, she often had 8 to 10 books stuffed in her desk, locker, and even coat pockets. Often her love of reading would distract her from other required work in the classroom. Amia often struggled with organization skills. Both her locker and desk were usually packed with a wide assortment of papers, coats, books, and other odds and ends. Even after weekly cleaning and organizing time in class, these areas quickly returned to a state of disorganization within hours. She regularly misplaced items around the room and frequently struggled to find homework that needed to be turned in.

This lack of organization skills were also a frustration to her mother. Since enrolling at EBLS, Amia had regularly lost books checked out from the library and her name was often on the library's "cannot check out" list because of pending fines. Sue usually paid the replacement cost for two or three books a year, not an easy thing to do given her limited financial situation at the time. Despite these frustrations, Sue understood and shared her daughter's fascination with reading and did all she could to

encourage that at home.

Because we met at Amia's school, I was not able to see their home environment in person. Despite this, Sue was eager to provide me details about their apartment as she shared her study photographs with me. Unlike most study participants, Sue and I spent almost as much time in this second interview as we had in her initial interview. She thoroughly described the multiple bookshelves that lined the walls of what she explained was a "very small," two-bedroom apartment. In the photographs, reading was the predominant activity at home. Photographs showed books lining the floor, kitchen table, beds, and every other horizontal surface. Two bookshelves extended from the floor to the ceiling and another half-size bookshelf was in the living room packed to overflowing. Amia's room had books spilling out of a bookshelf next to her bed with many more on the floor.

Dan and Linda

I met with Dan and Linda in early December as the first snows and colder temperatures of early winter set over Cache Valley. It was a bitter cold, with the temperature hovering around 0° F on the morning I met them at their home in an older, established neighborhood bordering the university.

Dan and Linda's home was built in the late 1940s and early1950s, an era when many returning soldiers from World War II enrolled at Utah State University under the GI Bill, became newlyweds, and were looking for housing for their small families. Their home had one master bedroom and two other bedrooms used by the family's four children. A small, built-in table nook provided a space where the family had just finished

breakfast. The outdoor toys had been put away in response to a recent snowstorm. The trampoline in the backyard had been disassembled. From the toys, books, and other items in the living room, it appeared that many of the children's activities had moved indoors for the winter.

On the morning we met, Linda had just returned from taking the middle two children, 10-year-old Edward and 7-year-old Emma, to school. The oldest, 12-year-old Aaron, was quickly finishing breakfast in order to catch the bus to school. I had taught both Aaron and Edward as fourth-grade students. Edward, 12 years old, had begun his first year at the local middle school. Both Aaron, 10 years old, and Emma, 7 years old, attended the EBLS. The youngest child, only 6 months old, was born premature and spent a significant amount of time in a specialized children's hospital about 80 miles from Dan and Linda's home. Despite his early struggles, at the time of the interview, he was healthy enough to be at home where he had been developing normally and gaining weight, despite being fed through a feeding tube.

As a stay-at-home mother, Linda managed the schedules of children at two different schools, attended to the special needs of their baby, and taught music lessons on the side. With a BSA in liberal arts and piano pedagogy, she was heavily involved in music, often volunteering her time at her children's elementary school to help with classroom parties or providing short musical lessons in a classroom. She also performed folk songs on a variety of instruments at the community gardener's market during the summer.

Dan worked as a software engineer, programmer, network specialist, server

administrator, and self-described "Jack of all trades" for a local software firm. He began working for the company while taking undergraduate classes in computer science at Utah State University. Since beginning that part-time job several years ago, the company had grown significantly. With that growth, Dan's role grew into a full-time job and his pursuit of his bachelor's degree had been put on hold.

Greg and Tara

It was a late spring afternoon when I met Greg and Tara at their home on an older street on the west side of Logan. The warming spring weather had brought more people outside to the nearby community outdoor swimming complex, which had recently opened for the summer season. The street on which their home sits experiences heavier traffic than most residential areas due to its proximity to the largest city park, community skate park, county fairgrounds, and the local zoo. Their home was located on a larger parcel of land because, when built, it was located in an agricultural area at the edge of the city. In the years since its construction, the surrounding areas have seen many large subdivision projects expanding the city farther into the fields to the west of Logan.

Greg and Tara were living in the home under a rent-to-own agreement with Greg's parents. Greg's parents were listed as the current owners and served as mortgage agent. The brick home had gone through some past remodeling, the most obvious being the conversion of the garage into a bedroom, presumably to allow more living space. Because of this, cars were parked either in the driveway or the street. The interior of the home was well organized for the limited space available. There was no pretense with furniture or decorations. Their entertainment center held a smaller console television with

built in DVD and VCR hooked to a Wii video game system.

Greg, 43 years old, was a computer programmer at a communication company, offering program support for both company employees as well as customers. His computer skills were mostly self-taught, having moved directly into the work force after graduating from high school. Tara, 41 years old, was a stay-at-home mother who was active in local community and religious service organizations. Both parents maintained an active role in their children's lives. Encouraging their children to be involved in extracurricular activities at school, they were often found in the stands at sporting and musical events in which their children were participating. They actively set aside time each week for what they described as dedicated "family time" where they coordinated individual schedules, played family games, or simply spent time with each other.

Of all the participants, Greg and Tara's family had the oldest children, with two of their children living outside of the home. They had a 22-year-old son attending Brigham Young University, working towards a pre-med degree with the goal of becoming an optometrist. Their 21-year-old daughter was married with two children and was taking nursing classes at the local technical college. Their other three boys all lived at home. Chris, 16 years old, was a senior in high school where he was on the wrestling team. He was planning to attend college to become an educator, having been influenced by many teachers during his school years. Bill, 14 years old, was a high school sophomore who enjoyed band and running. Like his older brothers, he also wanted to attend college and planned to be an engineer. The youngest, Adam, had just turned 12 years old and participated in band and running. While the rest of his siblings were avid readers, Adam

struggled with reading and had only recently found success since beginning middle school.

David and Preeta

For the purposes of this study, David and Preeta represented the race criteria of Hispanic or other race. As mentioned earlier, I wanted to find a Hispanic participant for this study because they represented the largest minority population within Cache County. The Hispanic families I had approached each declined my invitation to participate, citing time limitations due to family and work obligations. Additional Hispanic participants identified through community connections declined to participate because of previously mentioned reasons or hesitancy to work with a researcher with whom they were not familiar. Because of the challenges of finding a Hispanic participant, David and Preeta were selected.

I met with David and Preeta on a summer evening as the sun was beginning to set and dusk was covering the valley. Their home sat on the foothills, overlooking the valley below and representing a growing trend of subdivisions built higher on the foothills. These newer subdivisions offered expansive views of both the valley and the Wellsville Mountains that border the western side of Cache Valley. Their home was on the end of one of the newer streets in the subdivision, with more homes being completed around them and even more planned in the future.

I had been the classroom teacher for two of David and Preeta's children previously and knew that scheduling a convenient time for an interview would be a challenge. Both were physicians in the valley and had to carefully coordinate their

schedules to accommodate their children's activities as well as their own work requirements. David, 46 years old, worked as a gastroenterologist. Preeta, 41 years old, was a pediatrician. On the evening we met, Preeta was on call for her medical group and was periodically called away by her pager. Both David and Preeta graduated from college in their native country of India before completing medical training in the United States. They were conscientious parents, expressing high academic expectations for their children. They encouraged each child to develop talents through extracurricular activities. Preeta described herself as "a very hands-on parent" and took primary responsibility for the children's school and extracurricular activities. She was the primary parent who attended parent teacher conferences, communicated with teachers, and picked the children up from school on most days.

David and Preeta had four children, ages 12, 11, 9, and 2 years old. They set high expectations for the children to perform well academically. At home, homework included not only assignments from school but also enrichment activities selected by Preeta. David and Preeta were careful and deliberate about the schools their children attended. David and Preeta openly expressed their concerns about the local public schools, pointing out high class size and a perceived inability of public schools to offer high academic standards. The oldest, 12-year-old Namdev, had entered sixth grade at a local charter school with a smaller student population than the neighborhood middle school. Their second child, 11-year-old Annisa, was preparing to start her sixth-grade year at the neighborhood middle school. Annisa enrolled in advanced math courses despite her age. Preeta was still unsure about the public middle school saying that, "We'll go to sixth

grade and see how things are." As parents, they were unsure about the ability of the neighborhood middle school to live up to their high expectations. Shray, their 9-year-old son, was preparing for his third-grade year at the EBLS.

Jim and Stacy

I met with Jim and Stacy during a hot evening at the end of July. Their small apartment was located in the area of town dominated by inexpensive rentals apartments. Many of the apartments in the area were older and not well maintained. A high turnover rental rate in the area was typical, with many renters living in the area for less than 2 years. However, a recent revitalization effort, led by an 80+ lot housing subdivision nearby, had improved the overall condition and feel of the area. On the night I visited, many neighborhood families and children were outside visiting and enjoying the cooler weather afforded by the shade from apartment buildings and trees. A large Hispanic population in the neighborhood was evident by the families visiting on the lawns of the neighboring apartments as well as by the Spanish language menu on both the ice cream and taco trucks that passed down the street several times during my visit.

Jim and Stacy's small apartment building was typical fourplex in the area with two apartments upstairs and two downstairs. Their building faced west, exposing their front windows to the hot summer sun. The inside of the apartment was darker than I expected. Shades blocked the sun from the west-facing windows in an effort to keep the apartment cooler in the afternoon and early evening. Even though it was hot outside, Jim and Stacy's apartment was cool due to a large air conditioning unit mounted in the front living room window. Despite the apartment building's age and external upkeep, the

inside was clean and organized. Furniture lining the outer walls of the rooms did not make the apartment feel cramped. A large television/entertainment center with a newer flat screen television sat on the living room wall opposite two couches. A computer desk area lined the wall passing into the small kitchen/dining room area. Several bookshelves lined both the living room and kitchen. Everything had a place and a purpose.

Jim began working full time as a machinist for a local manufacturing company immediately following high school. He described his job as very "technical and mathematical" with most of his work being done on the computer. He often talked about how much his job had changed since his father, also a machinist, began work. While his father still worked, Jim felt the skills needed to be successful as a machinist deal more with the ability to understand computer systems than with the ability to run machinery. Jim described himself as being very analytical, enjoying reading technical manuals, scientific magazines, and other materials that are informational. As a father, he expressed his love and concern for his children's future, often talking about the rapid change of skills needed in a growing information society.

Stacy recently had become a stay-at-home mother, foregoing a supervisor's position at a manufacturing company in order to pursue a college education online. While excited to be taking courses through an online university, she was worried that her previously diagnosed learning disabilities would make classes difficult. She talked often of the challenges she faced growing up: her parent's divorce, moving often into new homes and apartments, bullying at school, dyslexia, and eventually dropping out of high school. She credited a few key adults for helping her find some form of success in the

public school system. Taking their advice, she eventually enrolled again at an alternative high school where she completed requirements for a GED before her 18th birthday.

She credited Jim with influencing her enjoyment of reading, something she did not do before their marriage. During her high school years, she was diagnosed with dyslexia. At the time I interviewed her, she still had difficulty reading certain types of materials and even struggled reading books she enjoyed. However, she spoke strongly of her determination to not let dyslexia stop her from being able to accomplish goals she had set for herself. She was a strong advocate for her children's education, providing them with access to a lot of books both in the home and through the local library where her children and she check books out on a weekly basis.

Jim and Stacy's children were excited at my arrival. That enthusiasm quickly faded when they found I was not there to interview them—only their parents. Dane, 11 years old, was described by his parents as a "watcher" who enjoyed fantasy, science fiction, and computer games. He did not come out of his room during the time his parents and I talked, providing proof of his parent's assertion that he would "rather be left alone to read a book or play with his Legos." Tasha, 10 years old, came out of her bedroom a couple times while I was there, apparently eager to see what was going on. Her parents described her as a girl who is easily influenced by others and as a "butterfly" that "flitters from here to there and everywhere." The youngest, Alan, was 8 years old. His parents described him as a caregiver and told a story of how, during a parade earlier in the summer, Alan noticed a 4-year-old child sitting close to them along the parade route. His mother said that "Alan made sure, when he ran out and got a whole bunch of candy, he

would give some to the 4-year-old." Alan appeared most often during the time I interviewed his parents—obviously eager to share or be involved in the discussion.

Looking Into the Lives of Participants

In my Ph.D. coursework I had been influenced through my readings of Sherry Marx's *Revealing the Invisible* (2006) and Douglas Foley's *The Heartland Chronicles* (1995). Both researchers addressed topics in which they held a deeply personal interest through the use of in-depth, qualitative and ethnographic research. Both researchers pursued their topics through a naïve approach and used their subjectivity to provide clarity and insight into their topics. These two researchers provided me with examples of how I could approach and investigate a topic in which I had a vested interest.

In an attempt to frame this study in ways that were similar to those of Marx and Foley, I utilized qualitative methodology that was primarily constructivist in its approach. I analyzed the data within the sociological tradition, with thematic analysis used to view data "as a window into human experience" (Sudzina, 1999, p. 769). As such, I was seeking to achieve a discovery of consensus from the wide variety of participant experiences (Mazurek & Winzer, 2000). I valued the views, interpretations, and insight of participants in helping co-construct with me the realities that exist regarding the research questions.

Additionally, I approached the study within the paradigm expressed by Glesne (2006) that "no one participant's perception is 'right' or more 'real' than another, and that these realities must be seen as wholes rather than divided into discrete variables that are

analyzed separately" (p. 7). In the context of this study, the value of individual interpretation and insight had more value than facts and figures. While this study does address the physical number of electronic devices in the home, as well as an accounting of the number of minutes spent in various activities, the participants' perceptions and expressions of feelings are of primary concern.

Last, the conceptual structure as well as data analysis of this study was strongly influenced by Ecological Systems Theory as outlined in Bronfenbrenner's (1979) book, *The Ecology of Human Development: Experiments by Nature and Design*. Of specific guidance was Proposition A, which stated, "In ecological research, the properties of the person and of the environment, the structure of environmental settings, and the processes taking place within and between them must be viewed as interdependent and analyzed in systems terms" (p. 41). As such, all contributing factors are of value including participant's perceptions, environments, roles, activities, and relationships. These factors are considered in detail in the analysis of this study as well within the specific context of Bronfenbrenner's work.

Analysis of data is organized below by each of the three main research questions and associated subtopics. Each research question is examined separately through descriptions and analysis of interviews, photographs, journals, and survey results.

Question: Family Identity Within the Home Environment

How does technology and reading influence the formation of family identity within the home environment?

Family Identity

Based on existing research, the definition of family identity, especially when considering media and reading, can be complex. Bennett, Wolin, and McAvity (1991) defined family identity as a "composite construct of what the family represents in the minds of its members" (p. 211). Family identity is subjective and must resonate and be accepted by the family with which the identity is being associated. It is based on a balance of actual and intended practice, influenced heavily on how parents want the family to be perceived both internally and externally. Bennett and colleagues explained this subjective nature of family as follows.

> Family identity is the family's subjective sense of its own continuity over time, its present situation, and its character. It is the gestalt of qualities and attributes that make it a particular family and that differentiate it from other families. As a family-level construct, family identity is analogous to individual-level construct of ego identity conceptualized by Erikson (1959). Like ego identity it is subjective and reflexive: By definition, it must resonate within the family whose identity it is. (p. 212)

All elements that contribute to family identity are based on a "shared system of beliefs… about roles, relationships, and the values that govern interaction in families and other groups" (Bennett et al., 1991, p. 212). It is important to understand that because of its subjective nature, family identity is often unarticulated within the home. Instead, it manifests itself through the rules, routines, and expectations of family members.

For the purposes of this study, family identity was defined as the activities, routines, and rules that convey the values, beliefs, morals, and intentions of parents regarding reading, technology, and new media. It involves the shared beliefs and implicit assumptions about the roles, morals, values, and expectations that govern interaction

within the family.

All families in this study were selected because they had children in the middle elementary school years, grades 3-5. Bennett and colleagues (1991) defined this stage of family development as the child-rearing years or middle stage. They described this stage as follows.

> Conditions are at their best for the consolidation of family identity…[with a] myriad of everyday routines and interactions taking place in the home. This is a long stretch of time in which "the way we do things" gets acted out with relatively little interference from the outside world and in which there is as much internal consistence as the family will ever achieve. (p. 214)

As such, I held the expectation that rules and routines within each family involved in this study would be relatively stable.

Parental History

Family identity is developed through a number of different influences and factors. One readily identified factor is the generational history brought by the parents into the family. Each parent brings into a developing family a set of expectations based on the conditions in which they were raised. Bennett and colleagues (1991) suggested that this family history is significant as "families will invoke the past as precedent in determining their behavior, whether consciously or not" (p. 215). These generational influences include the expectations, rules, and routines that dominated the childhood in which each parent was raised.

While all participants talked about the importance they placed on reading within their homes, not all participants felt they had grown up in homes where books and reading were a high priority. As Stacy reflected on her childhood she recalled that, "I

don't remember ever seeing my mom read or having very many books in the house. I know my mom was a single mom so she didn't have a lot of time at home. She worked a lot." Conversely, Larry grew up in a home where books held high value, this despite his father being an eighth-grade dropout. Larry described his father's attitude in the following dialogue.

> His biggest thing, throughout my entire life, was "Get an education." To him, books were gold. Take care of books. You treated them with respect. His biggest thing was that no one end up like him. You don't want to end up a minimum job, fingers to the bone for the rest of your life. All of us got that beat into our head. You take care of books more than anything in the world…. We didn't have the technology in our home. I was seventeen before there was ever a video game in my parents' house.

Larry's family only had one small television and media was highly regulated in the home. His parents would preview all movies before they letting their children watch. Larry described how his parents never relied only on the movie rating system. They screened each movie for elements that were not aligned with their family's morals. As a parent, Larry and Stacy followed that same guideline and did not allow their children to watch a movie without either of them seeing the movie first. They felt that many PG13 movies they had previewed should have had an R rating for content they felt was objectionable.

Larry and Stacy grew up in homes with drastically different values about reading and books. Both, however, wanted to make reading an important part of their children's lives. Larry wanted to emulate the reading environment that was cultivated in the home in which he grew up. Stacy wanted her children to avoid what she experienced as a child, an environment that discouraged reading and left her without a desire to read for enjoyment. Stacy and Jim make a conscious effort read in front of the kids, talk about reading with

their children, and intentionally turn off the TV off to pick up a book instead. As Stacy described, “If it’s not something that they see other people truly enjoying reading a book, they’re going to look at it as work. That’s how I viewed it. It was homework. I had to read this book for homework. It wasn’t fun. It wasn’t something I wanted to do.” Both Jim and Stacy felt the best thing they could do to promote reading at home was to lead by example.

Similarly, Greg and Tara described the homes in which they grew up as lacking an emphasis on reading. Tara did not recall having books growing up and said her parents never encouraged her to read. She stated, “School wasn’t important when I was growing up so I don’t remember reading anything growing up.” Greg recalled playing Dungeons and Dragons, a role-playing game, a lot as a child. He felt that most of his childhood reading centered on learning the rules of the game, playing the game, and creating stories surrounding his game play. Both Greg and Tara recalled with fondness how much time they spent outside as children. Greg described his feelings in the following conversation.

> I wish our kids could just go play. I always tell my kids I lived out on the highway out that way, Wellsville area…College Ward. I lived right on the freeway. My grandma lived down here on Park Avenue, just a couple blocks over that way. I walked, probably 4-5 miles. I was first or second grade. I walked all the way down the highway and back to my grandma’s house. Now days you would never do that.

Tara expressed dismay that “Kids don’t do that. I wish the kids just played outside like we did when we were kids.” Both Greg and Tara wished their children had more opportunities to play outside, participate in neighborhood night games, and be active, all activities they enjoyed as children.

Despite the lack of reading in their own childhood, Greg and Tara have tried to

encourage reading and outdoor recreation. As young parents, Tara made an effort to have "boxes of books" for her small children and described her reasoning and efforts in the following dialogue.

> I always knew because school and reading wasn't important in my family…. I knew when I had kids I wanted that to be important. So, we always made sure we had material available for them to read and we still like to make sure…we'll recommend a book to Chris. "Chris, you should read this book. It's a good book. I read this book and loved it. You should try it." So, we're trying all the time to make sure they have material to read.

Greg liked the fact that they were reading the classics to their young children such as Dr. Seuss' *Cat in the Hat* and *Where the Wild Things Are*. He described these books as ones he enjoyed as a child and felt they would be a good place to build a love of reading with his children.

Both David and Preeta grew up in homes with a large quantity of books and other reading material as well as high academic expectations. David described his experience growing up in India where his father kept a huge collection of books at their home, mostly on the topics of science and math. Upon returning from school each day, he and his three brothers would stay up with their father each night until 11:30 pm or midnight reading, doing mathematical problems, and studying science concepts. David felt his father's influence prepared him for the rigors of the surgical residency entrance examination. In that exam, David competed against 27,000 other doctors for only 1,500 openings. Because he had no idea concerning how much time he should spend preparing for the examination, he spent nearly 16 hours each day reading and reviewing material. He described how, when he was really drowsy but needed to study more, he would shower with his clothes on and then return to his studies. By doing this, he would not fall

asleep in his wet clothes. He felt his dedication to reading and study paid off as he was ranked 79th out of all doctors taking the exam.

Preeta, who also grew up in India, had access to a large amount of reading materials in the home in which she grew up. She described her childhood in the following excerpt from our interview.

> We had textbooks. We were very regimented with our textbooks. I was the youngest of three siblings. I had hand-me-down books. My summer, I would spend reading, getting ready for the next year, which I really felt I had to do. I figured I had the books so why not? I was often sitting where my mother taught the other children. Other than that I would read anything I could get my hands on…. We had the newspaper that would come in. In India you would get morning newspaper and you'd get an evening edition that would come out in the big city. My family was big on newspapers. We would read it cover to cover. We would get the equivalent of the Times for India once a week. TV was not huge. We would get 30 minutes of news once a day. That was it. Honestly, I would read whatever I could get my hands on.

She went on to lament the lack of free libraries growing up and recalled spending her pocket change to purchase books at a local bookshop. Her father, a geologist, traveled a lot but made sure there was an academic emphasis in their home. Preeta described schools in India as "survival of the fittest." She went on to say that, "We obviously had to be bookish because there was no other way. Everything depends…your college education depends on your marks." Since her family could not afford tuition for college, high academic standards were emphasized in home. Her academic performance allowed her to attend a government college for free as one of the top students in her academic class.

This emphasis on reading and academics had influenced David and Preeta's expectations for their own children. They expressed that while the quality of education in America was much better than in India, it was difficult to compare the culture their

children were growing up in with their own childhood. David said, “They are different situations. A different perspective of life, completely.” David and Preeta felt their own children have a “lack of intensity. The intensity to perform, to be better than someone.” As a family, schoolwork and academics were very important. Preeta’s schedule allowed her to pick the children up from school each day. Upon arriving at home Preeta helped each child with homework as dinner was prepared.

During the summer, David and Preeta had regular expectations for reading and learning with the children. Because David and Preeta both worked during the morning hours, they hired a nanny for the children. The nanny was left with specific instructions concerning the amount of time the children were allowed to spend playing video games, reading, and watching television. There were limitations during the summer for the types of television content. The children were required to watch education programming and documentaries before any programming of their choice. The influence of David and Preeta’s childhood homes was evident in the home.

Technology and Media Influence

In today’s technology laden society, family identity often involves the purchase of technology. Media adds a level of complexity to the definition of a family’s identity. A study by Hoover, Clark, and Alters (2004) attributed differences in the adoption of new media to religious and sociomoral beliefs, values, and views. Other studies have shown that parents justify their purchase of computers, iPads, mp3 players, and other new technology as an investment in their children’s future (Haddon, 2004; Lally, 2002; Livingstone, 2002; Sefton-Green & Buckingham, 1996; Seiter, 2007). That same

technology also influences how families promote reading within their homes and, consequently, within their family identity.

As parents in this study discussed how technology disrupted reading in their homes, one of the most commonly mentioned distractions were video games. Among the six participating families, there was an average of 3.2 video game consoles in each home. Even Dan and Linda, who listed no console or hand-held devices on their survey, described how video games distracted their children from other activities. From our discussions, Dan and Linda's children played video games on the family computer, at friend's houses or on the newly acquired iPads the two older children recently received from their grandparents. However, Dan and Linda never made it clear when the children played video games, only that they were a distraction to their children's reading.

Technology clearly influenced how Dan and Linda viewed their family's identity. In the following dialogue from our interview, Linda described the give and take between reading, technology, and family's attempts to limit the amount of technology in favor of reading and other activities.

> We are technology savvy. Our kids all love technology. So, it's just trying to find a balance. We try to have limitations. We try to have a day a week where we just don't do any of it. Stuff like that helps me feel better. Every once in a while if I say, "we're going a whole week with none of it." The first couple days are agonizing. After that they start doing more stuff. They find things to do. They do creative things. It's awesome. And then I give them a reward. They get a new book for a prize and that's great. But we haven't done that for a long time.

Linda went on to express that "It's hard to get them to do that stuff after they have played video games." Dan described how easy it was for his children to turn on video games when they are bored rather than choosing writing, reading, or other activities.

Sam and Greta also talked about the difficulty finding balance between technology, reading, and other activities. Greta thought it was important for her daughters to be familiar with technology in order to succeed within the ever-changing world in which she saw her girls growing up. In the following snippet from our interview, she summarized her feelings about finding balance between all activities in her children's lives.

> We're not like a no TV family. We definitely watch movies and we watch some things together sometimes. But, I think it's good for them to have balance. There are so many great things. Our kids love to be outside. We just put an art room in the basement and they love that.

Both Sam and Greta felt there was value in allowing their girls to play educational video and computer games. However, Sam felt that even educational games could become addicting, citing his oldest daughter's complaints when she was asked to choose another activity after spending an hour and half playing educational games on the computer earlier that day.

Greg and Tara had always tried to emphasize reading in their family. Tara explained that, growing up, reading and school were not important in her family. That lack of reading during her childhood gave her a desire to make reading important within their home. They also saw technology as an important in their children's lives and worked to develop a family identity that involved both reading and technology. To do this, Greg and Tara had to balance the advantages and disadvantages of technology in their children's lives. They liked the ability technology gave to do online research via the Internet, communicate with family and friends via cell phones, and allowed them to spend time together playing video games. When Greg was young, he enjoyed playing

multi-user dimension games (MUDs) that combined elements of role-playing, interactive fiction, and player versus player challenges in an online text based environment. He felt his typing speed and spelling improved when he was playing. Greg described this mixed benefit of technology by saying, “So, just because there is a bad side of it there is a positive side of it also.” When their oldest son, Chris, first started texting on a cell phone, Greg and Tara felt his spelling also improved even though they felt Chris was not using standard punctuation in his messaging.

Family Member Roles

Family identity is also influenced by the roles each member assumes. Parents have significant influence by implementing rules, routines, and expectations within the home. Mothers are most often the parent responsible for creating and upholding specific moral parameters, especially in the case of nuclear and extended families (Hochschild & Machung, 2003). The mother is the primary parent in determining what a child should be doing with their time, what activities are acceptable or unacceptable, and what technology and new media a child has access to (Ito et al., 2010).

In four out of the six families in this study, mothers described themselves as stay-at-home mothers who did not work outside the home. Jim and Stacy had recently made the decision for Stacy to quit her job so she could spend more time at home with the children. Their oldest son was starting his sixth-grade year in middle school and they decided, as Stacy put it, “I just needed to be home more than we needed the money.” Stacy was hoping that being at home would allow her to be more involved and that it would be “a turn for the better” as her children were entering their teenage years. This

decision also allowed Stacy to work on some online college courses with the hope of obtaining an associate degree in the future. In developing their family identity, Stacy and Jim were emphasizing reading and education, two things that Stacy felt were lacking in the single parent home she grew up in. Stacy did not remember seeing her mother read or having very many books in the house. She knew her mom didn't have a lot of time at home and worked a lot. As a parent, she wanted to spend time with her children and provide a positive role model for reading in their home.

Even in homes where both parents worked, parents described the mother as the primary caregiver for the children. David and Preeta, both practicing physicians, consciously made an effort for Preeta to be the primary caregiver. David described her as the one who dropped the children off at school, picked them up, brought them home, took them to activities, and "then does all the homework and supervises after that." Preeta had to cut back the number of hours she spent at her practice in order to focus more time as the primary caregiver for their children.

Sue, a single mom, was very aware of her role as the primary caregiver for her daughter Amia. Despite working a part time job and taking a full load of university courses, Sue described her highest priority as that of a parent. Additionally, she actively maintained a home environment where reading played a significant part. When describing a photograph of her front room, it showed an entire wall of bookshelves, filled to overflowing. Books were also on the chairs, a book table, and almost every other horizontal surface in the room. When asked about a photograph of a desktop computer in her home, Sue replied with some interesting insight into how technology, media, and

reading influence the formation of her family's identity:

> Sue: I thought I would be guilty about the amount of time I let her go on the Internet. But, as I was doing it, my thought pattern was a lot more reasonable. "Hey, I'm pretty good." It also came out that I really need try to sleep at night instead of taking naps during the day. I napped and then she was on the computer. You know, the computer is a really useful tool for single parents, which they've talked about in single parent groups. I don't like going out and leaving her home very much so it's nice to talk to other adults (online). It's good for Amia sometimes. I think it's a little healthier than interacting with the television. I don't have a television. Amia thinks it's because we're poor but we're not that bad off. It's because I feel I am so busy that she has a lot more opportunities to be influenced by outside places than kids with two parents. So, in my home, every book, even those I don't necessarily agree with… she can read every book in the whole wide world. Those are good influences on her, expand her mind. And the Internet is something I can watch what's going on. TV has a lot of messages that I don't want. I don't want the TV to help raise her at all.
>
> Researcher: So, that's a conscious choice?
>
> Sue: Yeah. She's been teased at school. "You guys are so poor you don't even get TV." And she would start coming home, "why are we so poor"? I'm like, "We're fine. I get really good scholarships. I just don't want one." She's getting a lot of library books but, at home, I really can't overstate how many books I have, both from childhood, and she inherited a whole bunch of Animorph books from other people. I've got a lot of bookshelves and for a tiny, single parent apartment that is the most furniture I have. So she has all my books from when I was a kid plus I've always bought her lots of books. Plus, some of the places that we go with my scholarships and things give her lots of free books. She usually gets 20 or 30 for Christmas. So, we've gotten enough books that we can almost keep up with her reading habit at home. Not quite. She complains.

Sue discussed openly her desire for Amia to be confident, educated, well read, and know that her mother was there for her despite the pressures of being a single parent working toward a university degree.

Question: Spatial Arrangements, Routines, and Rules

How do parents determine spatial arrangements, routines, and rules when considering the influence of technology on children's reading habits at home?

Spatial Arrangements

While technology and new media saturate all areas of society, the home is the primary space in which children engage with new media, technology and reading (Ito et al., 2010). It is not uncommon for new homes to contain media specific designs such as dedicated theater rooms, integrated wiring for entertainment systems, networking connections in each room for Internet or television subscription services, and smart intercom systems with built-in media capabilities. Even in older homes and apartments, technology and new media have a major influence on the physical layout of furniture and room usage. Bakardjieva (2005) found that many Canadian families placed media in the living room or other rooms designated specifically for computer or entertainment use. Others studies describe how families have wired and redesigned other spaces within the home, especially basements, for the express purpose of accommodating new entertainment systems and associated media (Lally, 2002; Livingstone, 2002).

The decision of how technology and new media will physically fit within the home environment revolve around infrastructure issues such as available space or furniture, as well as the affordability of a particular technology (Alters, 2004; James, Jenks, & Prout, 1998; Lally, 2002). Parents play the primary role in determining the spatial arrangements within the home environment, especially when technology and new media are involved.

What: A Survey of technology. To better understand the spatial arrangements within the homes in this study, each participant was asked to take multiple photographs showing their child's home reading environment and available technology (Appendix B).

Follow-up interviews with each participant allowed clarification of both the content of the pictures as well as the context of why each photograph was included. Because all but one of the interviews were held in the participant's homes, I was able to view each home environment and see participant's spatial arrangement for reading and technology. The only exception was Sue who asked that we meet at her daughter's school for the interviews in order to accommodate her limited time as a full time student and mother. Sue did provide detailed information about each photo of her apartment during a second interview.

Participants in this study were also asked to complete a Media in the Home survey indicating the type and number of media devices in the homes (see Appendix C). This survey was based on the 2010 Kaiser Family Foundation Report (Rideout et al., 2010) entitled "Generation M2: Media in the lives of 8-18 year-olds." All categories from the Kaiser Family Foundation Report were included in this study's Media in the Home survey. Additionally, four devices beyond the Kaiser Family Foundation Report were included in this study: iPod or MP3 players, handheld devices that connects to the Internet (Blackberry, iPad, Smartphone), video game players (handheld), and eBook readers (Kindle, iPad, Nook, etc.). The addition of these four devices was meant to reflect the growth in popularity of these devices in the 2-year gap between the Kaiser Family Foundation Report (Rideout et al., 2010) and this research.

The purpose of presenting this data was not to make a formalized, statistical comparison between the Kaiser Family Foundation Report (Rideout et al., 2010) and this study. Instead, it was meant to provide an understanding of the quantity and types of

media contained in the homes of the participants of this study. Additionally it helped clarify the importance of particular types of media in the lives of families who opened not only their homes but also their attitudes about technology and reading for investigation in this study.

The number of devices found in the homes of participants in this study are shown in Table 2. Compared to averages of the participants in the national Kaiser Family Foundation Report (Rideout et al., 2010), families in this study had fewer media devices in their homes than the national average.

Table 2

Media in the Home

	# of devices by participant							
Device	SG	DL	S	DP	GT	JS	Study average	National average[a]
TVs	2	1	0	2	2	1	1.3	3.8
VCR or DVD players	2	1	0	4	2	1	1.7	2.8
Digital TV recorder (TiVo, ReplayTV, Sonic Blue etc.)	1	0	0	1	0	1	0.5	1.0
CD or tape players	2	3	2	1	0	0	1.3	2.2
iPod or MP3 players	4	2	0	4	4	3	2.8	-
Radios	3	2	2	1	5	0	2.2	2.5
Computers (desktop)	0	1	1	1	1	1	0.8	2.0[b]
Computers (laptop)	2	1	0	2	1	2	1.3	-
Handheld device that connects to the internet (Blackberry, iPad, Smartphone)	2	1	1	2	3	2	1.8	-
Video game players that hook to a television	1	0	0	1	7	3	2.0	2.3
Video game players (handheld)	0	0	0	2	4	1	1.2	-
eBook readers (Kindle, iPad, Nook etc.)	0	2	0	0	1	2	0.8	-

Note. SG = Sam and Greta; DL = Dan and Linda; DP = David and Preeta; S = Sue; GT = Greg and Tara; JS = Jim and Stacy.

[a]Data retrieved from Rideout et al. (2010).

[b]The Kaiser Family Foundation Report (Rideout et al., 2010) combines desktop and laptop computers in one category.

As noted in Table 2, participants in this study had fewer devices across all categories than were reported in the Kaiser Family Foundation Report (Rideout et al., 2010). However, one notable exception was Greg and Tara who owned seven video games systems compared to the Kaiser report average of 2.3. In our interview, Greg and Tara shared how they acquired so many gaming systems in the following conversation:

> Tara: They don't play the systems as much as they do the computer. We do have a Wii. We have everything.
>
> Greg: I think we've gone through everything. We don't have the Xbox 360. I imagine we will at some point along the line. We started with the Nintendo, the old gray box system, and just worked up each time a new system came out. We would get it a year or two after it came out.
>
> Tara: They don't spend a lot of time playing those systems though. Most of the time they spend with electronics they spend on the computer.
>
> Greg: I think that depends though. Because if they get a game they like, they will spend six days doing nothing but that. Then they will beat it or get bored of it and they won't do it anymore. It's kind of a cycle. "Oh, we got something new!" For that extended time that it's new, that's all they want to do. But, after that, it's like, "no, we don't want to do it anymore."

Greg and Tara have kept each of the gaming systems they have acquired. However, they readily admit that most of them are no longer used and can be found stored "in the closet."

Why and where: Parenting influencing spatial arrangements in the home.

The decisions about what technology and new media should be allowed in a home environment often depend on the affordability of a particular technology as well as infrastructure issues of available space (Alters, 2004; James et al., 1998; Lally, 2002). Another factor that determines where technology and new media is accessed within a home is whether the technology will be used by an individual or shared by members of a

family (Holloway & Valentine, 2003). For instance, if a computer is put in a child's room, that placement infers use by a specific individual and constitutes a form of ownership of the device by the child.

For this study it was important for me to understand not only what technology participants had in their homes, but also how parental attitudes concerning reading and technology influenced spatial arrangements in the home. To help me quantify and understand parent's attitudes, I relied heavily on the time I spent conducting interviews in participant's homes.

I also utilized the Media in the Home survey (see Table 2). However, to gain more insight into parent's attitudes towards reading and technology, I relied on photographs each participant was asked to take. Directions were intentionally broad to allow a greater breadth of freedom for what participants chose to include in their photographs (see Appendix B for instructions on photography). Participants were directed to take, "between 10 to 20 photographs to help me better understand how your children's reading habits at home are influenced by technology." While instructions indicated that participants should take picutres of the home reading environment as well as available technology, no specific instructions concerning what objects or spaces should be contained in photos.

In my analysis of the interviews and participants' photographs, I tried to understand how parent's attitudes influenced spatial arrangements in the home. My approach was broadly influenced by the field of material culture studies as described by Prown (1996) in *Learning From Things: Method and Theory of Material Culture Studies*.

In this book, Prown described material culture studies as, “the study of material, raw or processed, transformed by human action as expressions of culture” (p. 21). Of specific interest to me was the idea that when an object or physical space had significant meaning, it becomes “authentic.” It is the primary concern of the researcher to learn as much about the object and space as possible, allowing for a greater degree of authenticity. Prown also suggested that if little is known or learned about an object or space, the, “cultural interpretation will be shaky” (p. 21). Only when an object or space is authentic can it provide an interpretation of culture.

My objective in studying objects and spaces described by participants of this study was to better understand the “authenticity” of each within the culture of participant’s home. In order to accomplish this task, I first categorized the main subject of each photograph taken as either technology or reading. I then categorized the main subject of each photograph as either an object or a space (see Table 3). Often, the categorization of the main subject of each photo was aided by participant descriptions given in either a follow up interview or notations made by participants.

Each item classified as an object represented a specific item involved with reading or technology. Objects included photographs of specific items such as computers, televisions, books, or gaming systems. While varying in complexity and functionality, photographs of objects represented objects that were necessary for a reading or technology-based activity. Participants described these photographs using terms such as “things,” “objects,” or “items.”

Settings represented physical areas within a home. Participants described such

Table 3

Participant Photographic Analysis

	Participants							
Main subject of photograph	SG	DL	S	DP	GT	JS	Total	Category[a]
Books: Bookshelf	1	4	3	1		2	11.0	Object
Bedroom		3	2		1		6.0	Space
Computer: Desk		1	1	1		2	5.0	Object
Couch	1	2			1		4.0	Space
Books: Bedroom		1	2	1			4.0	Object
Computer: Laptop		1		1	1	1	4.0	Object
Books: Floor			1	2			3.0	Object
iPad, iPods, mobile devices	1	1				1	3.0	Object
Radios, CD players		3					3.0	Object
Television: Entertainment center		1			1	1	3.0	Object
Game system: Console		1			1	1	3.0	Object
Table: Kitchen	1		1		1		3.0	Space
Table: Living room			1	1			2.0	Space
Table	1				1		2.0	Space
Books: Closet		1		1			2.0	Object
Cell phones	1			1			2.0	Object
Outside: Trampoline		1					1.0	Space
Books: Countertop				1			1.0	Object
Game system: Handheld						1	1.0	Object

Note. SG = Sam and Greta; DL = Dan and Linda; DP = David and Preeta; S = Sue; GT = Greg and Tara; JS = Jim and Stacy.

[a]Categories were determined by the researcher based on follow-up interviews discussing participant's photographs.

areas as spaces where reading or technology-based activities took place. For example, a photograph of a couch in a living room may represent a space where a child likes to read. However, a photograph of a kitchen table or child's bed may also represent a space where reading occurs. Participants described photographs of spaces using terms such as "places" and "locations."

For example, a photograph of a dining room table was classified as a space because participants most often spoke of the table as the location where the family would read, play games, or have meals together. Photographs of desktop computers were classified as objects because participants most often discussed them as the tool used by their children to access the Internet, play online games, or type homework for school.

Objects. When categorizing reading and technology as objects, participants described items in their homes that had a specific purpose related to reading or technology. Photographs of objects included televisions, bookshelves, computers, iPods, and books. In interviews, participants described these objects in relationship to either reading or technology such as a favorite book, a gaming system, or an audio CD.

Books were the most common object identified in photographs, with five out of the six participants included at least one photograph of books and half of the participants included multiple photographs of books. Books were photographed in a variety of areas in the home, including in a stack on the floor, on a bookshelf, in a closet, or in a variety of locations in a child's bedroom.

Bookshelves were the most commonly photographed piece of furniture with 11 total bookshelves included in photographs. Bookshelves are also the most commonly associated location for books in participants' homes. Sue admitted that bookshelves are comprise a majority of her furniture and felt she had an overabundance of bookshelves in her small, single-parent apartment. She told how the bookshelf in the center of her living room was the first piece of furniture she bought as an adult, when she was 19, because, as she described, "I thought it looked pretty." Other participants placed similar importance

on bookshelves, displaying them in prominent locations in living rooms and children's bedrooms. Jim and Stacy wished they had more room for bookshelves in their apartment and admitted that they had a storage shed where they keep extra books in hopes that someday they will have a larger apartment or home where they could display more of their books.

Half the participants included photographs of books located in their children's bedrooms. In Sue's photographs, her daughter's bedroom was filled with books on the bed, nightstand, and floor. Sue had recently purchased a small bookshelf for Amia's room because "She was getting a lot of books and I wanted her to keep them in her room." Sam and Greta had always placed bookshelves in their children's rooms. Reading at bedtime had been a family tradition since their children were infants. Greta described her children as "almost always reading at bedtime" and wanted to do all she could to encourage a love of reading with her girls. Keeping books in the bedroom made it easier to carry on that tradition.

When describing technology in the home environment, participants regularly spoke about objects. Photographs submitted by participants contained a wide variety of technology devices including televisions, computers, iPods, video gaming consoles, cell phones, and radios. All participants in this study found it easiest to describe technology in their home by creating a list of devices with which their family interacts. Sue, for example described the technology in her home very matter-of-fact by when she stated, "We have a desktop computer. We have 2 CD players. She (Amia) has an mp3 player. And I also have an Android phone. And that's the technology in our home." This matter-

of-fact summary was reflected in participant photographs where technology devices were often featured in close-up shots that removed any identifying features of the room to provide context for the location or use of the device.

In participant's photographs, a desktop computer was the most prominent technology object shown, with four out of the six participants including at least one in photographs they took. Most often a desktop computer was located in a living room, kitchen or other public area. Four of the six participants also included photographs of laptop computers.

Though not represented in all participants' photographs, the living rooms of all homes I visited contained an entertainment center with an assortment of ancillary equipment such as a VCR player, DVD player, video game console, or subscription television service. The only exception was Sue who had no television in the home. She, instead, watched movies and television on her computer though the subscription services of Netflix and Hulu.

Spaces. Participants, when categorizing reading and technology as a space, described locations in their homes where reading took place or spaces in which members of the family interacted with technology. Photographs of spaces included bedrooms, couches, computer desks, or tables. Within both the photographs and interviews, spaces were more often associated with reading than with technology, and participants usually described spaces where reading was the primary activity.

In photographs, half of the participants identified the bedroom as an important space where reading took place. Sue identified her own bed as a space that served as a

special treat for her daughter to go and read. When her daughter had a difficult day, Sue would send her to the bedroom to calm down. It had become a favorite space for her daughter to request even though she is not allowed there very often. Other families described children's bedrooms as the primary space for reading to occur in the evenings. In my follow-up interview with Greg and Tara, their middle son, Bill, joined our discussion of the photographs they had submitted. In the following conversation Bill helped describe a special reading nook he and his brother had discovered in their bedroom and used as their preferred reading location.

> Tara: There is a spot between the bed and the wall. It's not very big. It's about this (3 feet wide) and about as long as the couch. And they just sit back there and read.
>
> Bill: We've got two big pillows and a little pillow and these little fold out chairs. And I put the fold out chairs against the wall. Put the pillow right on top of them. Another pillow. You just sit there. It's the most comfortable spot in the whole house.

Tara was amazed that her boys can spend hours in that spot and read, especially when she sees them with short reading attention spans when reading in other locations in the home. While being a bit confused at the reasons that location was popular, Tara was happy her boys had a space in the home they felt comfortable and secure when reading.

Similarly, other families talked about or submitted photos of special reading nooks their children had discovered within their homes. The families described these spaces with feelings of fondness and security where their children felt very comfortable reading independently. During our interview Dan and Linda described this secret nook with this interesting insight.

> Dan: Just kind of a cozy spot, especially the vents. They regret that we don't have

> a floor vent. They'll sit there with a blanket, with their back right up against it. They haven't done that for a little while but that used to be a big thing.
>
> Linda: The heat vents on the floor were the best when I was young. They're very comfortable.

Later, I also asked about a photograph of a trampoline on their back lawn. Linda shared how, in the summertime, her children would go outside to the trampoline with a pile of books and just sit and read together. Additionally, Dan and Linda's only daughter liked to read under her princess canopy tent on her bed while their oldest son had a secret reading nook in his bedroom closet.

The kitchen table was also mentioned as a space where children and families spent time reading. Sue, when asked about a picture of the kitchen table she included, shared that the table was the primary location for her daughter's reading both in mornings and after school. She described her feelings about her daughter reading there in the following dialogue.

> That's our kitchen table where she reads a lot. All the time. She sometimes gets annoyed when I insist we eat together because she can't read then. She also reads in the bathtub. I probably should make more rules about the books because she's trashed my comic books. But, I like it when she reads the books I like because she usually doesn't like my books that I had when I was younger.

While her daughter still reads in the bedroom as well as in the bathtub, Sue described how the kitchen table provides a reading space where she and her daughter are able to bond and discuss the things they are reading.

Jim and Stacy also expressed the importance of having a shared reading space in their home. They designated their front room to this purpose for several reasons. Not only did it serve as the primary gathering spot for the family, it was also the location for their

flat-screen entertainment center and contained two couches that allowed them to fit their children and themselves comfortably. To promote this space as a reading area, Jim and Stacy intentionally turn the television off and pick up a book. When Jim or Stacy are reading in the living room, they encourage their children to find a book and read with them. They also used the living room as the location for a nightly family scripture reading time. Jim and Stacy realized that the living room was a great area for reading together as a family. However, they also expressed that their children preferred the bedrooms for private reading time. Thus, the bedroom rather than the living area was the primary location for the children's book collections as well as any books checked out from the local library.

Routines

For this study, data was collected during different times of the calendar year. Half the participants kept journals, completed surveys, took photographs, and participated in interviews during the traditional school year, specifically during the months of October, December, and January. The other three participants were involved during the summer months of June and July. Not surprisingly, participants during the school year discussed routines centered on their school schedule and associated homework and expectations. Participants during the summer talked more about free time activities, vacations, and maintaining reading routines during the break from school.

Routines regarding technology and reading manifested themselves in families as schedules, traditions, patterns, procedures, and expectations vocalized by parents. Routines change seasonally. Parents spend more time during the school year closely

monitoring the use of new media and technology, while summers and breaks remained relatively unstructured (Ito et al., 2010). Parents, especially mothers, feel responsible to monitor and regulate their children's time spent with technology and new media (Hochschild & Machung, 2003). The Merriam-Webster collegiate dictionary (2005) defined a routine as, "a regular course of procedure." Routines are different from rules. Where rules maintain a prescribed adherence to specific actions, routines are a habitual performance of an action or established procedures. Rules have established consequences for performance or nonperformance of an action. Routines have no such consequences prescribed.

One of the most vivid examples of school year routines I was able to observe was in the home of Dan and Linda. They had scheduled our interview for 8:30 a.m. to allow Dan to participate in the interview before the beginning of his workday. I arrived at their home just as Linda pulled up in her van, having just dropped two of her children off at school. Inside the house, there was evidence of the morning activities with dishes still on the kitchen table, school papers in the family room, and the oldest son getting his backpack ready to catch the bus for the middle school. Dan and Linda explained that mornings were quite hectic, especially with children attending two different schools. To reduce the amount of chaos, they prepared backpacks, clothes, and lunches the night before so they could eat breakfast as a family each morning. They described this as an important morning routine that allowed everyone in the family to feel calmer and more prepared for the school day.

Unfortunately, their routine was thrown off the day I visited. They apologized for

the papers in the living room, explaining that they had forgotten to have the children go through their backpacks the night before. They had to get old homework assignments, newsletters, and other papers out of backpacks before taking the two youngest to elementary school. On the day I visited, their oldest son was preparing for a late start day at the middle school. He usually was the first to leave each morning except on this late start day. He was busy packing his backpack and heading out the door for the bus when we began our interview. He returned a few minutes later to inform his parents he had missed the bus. They calmly informed him that they were busy and he should walk down the street to catch the city bus that would drop him near his middle school.

As we discussed their chaotic morning, Dan and Linda shared the importance that routines had in providing a feeling of calmness in their home. They felt that routines, especially involving reading, provided stability and gave their children goals to accomplish. Linda described her family as "regular library people" who always had stacks of books for their children. To encourage their 10-year-old son to expand his interests into longer chapter books, they had decided, as parents, to read with him each night. However, as Dan explained, "We start doing that (reading with him at night) then schedules get broken up and then the consistency falls apart and he begins to lose interest." Dan expressed that Edward enjoyed listening to a good story and felt their routine had helped Edward become more interested in chapter books.

David and Preeta maintained a heavy emphasis on academics, both during the school year as well as the summer. As a physician, Preeta tried to maintain a regular schedule that allowed her to be home with the children at 2 p.m. or 3 p.m. each day, year

round. This permitted her to implement a regular homework routine with her children where she "can make sure they are sitting with me reading or out on the trampoline or they are playing. I do not give them those free times to do whatever." She felt her effort to be home each afternoon helped her children be successful getting homework done because of the consistency they had developed through this afternoon routine.

Families in this study established routines to regulate not only the types of activities their children were involved with but also the amount of time they spent with each activity. In addition to weekly trips to their local library, Jim and Stacy had a family reading time each night where everyone took turns reading religious scriptures. They felt this regular activity helped encourage reading in their children. Stacy did admit, "We have our good weeks. We have our bad weeks." However they felt that intentionally turning off the television and computer each evening for family reading time benefitted their children in the long run.

When Sam and Greta's daughters were young, they started a routine of reading to them at bedtime. Sam described their reasons by stating, "I guess it's this idea that instilling them the desire to read and giving them opportunities, early on, to have successes and good experiences in reading." They had continued that routine by listening to audio books whenever they took long car trips. They also, when feeling tired, put a laptop in the hallway playing an audiobook instead of reading at bedtime. Sam stated that when given a choice, however, their girls would "much rather" have their mother read to them than listen to an audiobook.

The amount of time parents allow children to use technology and new media is

also dependent on family circumstances, such as economics, marital status of the parents, and family size (L. S. Clark, 2004). Sue, a single mother, confessed that she initially felt guilty about the amount of time she allowed her daughter, Amia, to spend on the Internet each day. Her busy university course schedule did not leave much free time in her day. As she discussed her daily routines of schoolwork, meals, and parenting, she came to the conclusion that her patterns of letting her daughter use the computer were reasonable, given her situation. She explained, "You know, the computer is a really useful tool for single parents." She went on to explain that not only has the Internet served as a pseudo babysitting tool for her daughter but also as a connection to single parent groups, women involved in science, and others she is not easily able to connect with during the day. She felt the computer helped her to organize a routine that allows her to study at home while providing educational opportunities for her daughter.

Rules

Families are constantly defining the rules and practices that govern the use of technology, new media, and other activities in the home. Rules help define the morals, values, and other important elements that comprise the home environment. Alters (2004) argued that rules are "part of the family's project of building and maintaining a family identity" (p. 128). The ever-increasing amount of technology and new media in the home environment has increased the complexity of parental decisions regarding the activities, interactions and environment in which their children grow up. Silverstone and Hirsch (1992) observed:

Media pose a whole host of control problems for household, problems of

> regulation and boundary maintenance. These are expressed generally in the regular cycle of moral panics around new media or new media content, but on an everyday level, in individual households, they are expressed through decisions to include and exclude media content and to regulate within the household who watches what and who listens to and plays with and uses what. (p. 20)

This parental anxiety and discomfort has led to a moral panic about the effects of media and has been referred to by Seiter (1999) as the "lay theory of media effects." This theory, similarly expressed by others, is the belief that children's increasing interaction with media causes them to become unproductive, antisocial, violent, and desensitized to negative influences such as drugs, promiscuous behavior, and blatant commercialization (Alters & Clark, 2004; Cassell & Cramer, 2007; L. S. Clark, 2004; Lusted, 1991; McPherson, 2008). This moral panic, warranted or not, has caused parents to think seriously and deeply about the effects of technology and new media in their children's lives.

The discussion of rules dominated a significant portion of the interviews comprising this study. Participants referred to family rules regularly during the wide variety of topics we covered. Because it was a large part of participants' dialogue, this section covers of a wide variety of topics regarding rules. The section begins by exploring three broad areas of rulemaking regarding technology and reading within the home environment: (a) the influence of parents' personal histories regarding the inclusion or exclusion of technology, new media, and reading in the home environment; (b) the differentiation of rules for children in the home based on age, interest, or needs; and (c) the reasons for specific, listed rules versus more broad guidelines.

The middle section explores what I term the "two Ws" of rulemaking, when and

where. These two broad areas help define the content of specific rules regarding technology, new media, and reading in the home environment. When rules apply to a specific time or time frame, and where rules apply to a specific space or location.

The last section explores the concept of balance regarding technology, new media, and reading in the home environment. It looks at the internal strife parents often feel in making rules and decisions that sometimes appear in conflict with family morals, a parent's own upbringing, or the demands families often feel from society.

The influence of history and tradition on rulemaking. Parents feel pressure to create rules restricting access and control their children's use of new media based on the cultivation of a specific family identity or reputation (Hoover et al., 2004). This identity is often based on the parents' experiences as a child, their home environment, and upbringing. Parents use a specific set of rules, standards, and expectations to create what Silverstone and Hirsch (1992) termed the "moral economy of the house" (p. 15).

Many of the parents in this study referred back to their childhood when talking about rationale and reasoning behind rules governing technology and reading within the home. Dan and Linda held a permissive attitude regarding Saturday morning cartoon watching in their home. This attitude appeared to be directly tied to Dan's experiences as a child. During his childhood he was allowed to "watch cartoons after school every day." He additionally described his parents' permissiveness in allowing him to watch Saturday morning cartoons regularly and for long stretches of time. Linda, when talking about her childhood, mentioned that watching Saturday morning cartoons was "a big privilege" and that music lessons were always the first priority.

As a compromise between their childhoods, Dan and Linda had an expectation that their children would finish chores on a daily basis before any television watching, computer gaming, or other activities. They both expressed feelings that blending the expectations between their two childhoods had been difficult at times and caused some contention. As Linda described it:

> It was just a whole different way of life, and I'm trying to adjust to it because, of course, there needs to be some compromise. We are trying to combine our different backgrounds and beliefs. Sometimes it's been tricky, but, for the most part, I think we've been able to work that out.

Both Dan and Linda agreed that there needed to be accountability with their own children. They felt the expectations and rules they had for their own children were a good compromise between their childhoods and the technology-filled world in which they found themselves raising their children.

Conversely, David and Preeta felt strongly that academic responsibilities are a much higher priority over cartoons, movies, and other media. They both grew up in India where Preeta described schools as "the survival of the fittest and that…your college education depends on your marks." David explained the importance his father placed on obtaining high marks in order to attend better schools and receive better scholarships for higher educational opportunities.

> In fact, we were going to Calcutta from another city in India. It is a three-day train travel. After a week of evaluation we had an entrance examination to get to seventh grade. And that school was one of the best schools of Calcutta. So, my father shut down all the windows in the train compartment so we could not look outside. We read for the whole three days on the train.

In David and Preeta's home, rules reflected the high academic expectations they held for their children. iPods and other electronic devices were not allowed on family car trips.

During the summer their children had scheduled, regular study time. Academic pursuits always had priority over television, video games, and other media. When asked to describe mindless distractions to reading, David and Preeta mentioned video games, movies, and cartoons as things that bothered them the most. David described it as "a different perspective of life" and that they both felt they were trying to balance the academic focus of their childhood with a very different culture of learning found in America.

Reading also plays a dominant role over television, video games, and other media in Jim and Stacy's home. Their apartment was filled with books. When the children were young, they regularly purchased books at discount stores to build their family library. Stacy explained they had so many books they rented a storage shed because they "don't have anywhere else to put them." Stacy recalled that, growing up, television was not a large influence. She talked fondly about playing outside, riding her bicycle, playing kickball in the middle of the street, and other activities outside the home. However, the lack of television did not mean that reading was important. She described her home life in our interview.

> I look back to my childhood, and I don't remember ever seeing my mom read or having very many books in the house. I know my mom was a single mom so she didn't have a lot of time at home. She worked a lot. Anytime she could get overtime she would jump on it because we needed the money.

Despite the lack of books in her own childhood, Stacy had learned to love reading as an adult. She credited her husband's enthusiasm as the catalyst for her current love of reading. Jim loved reading. He loved learning new things from books and credits his father for teaching him that books were something to be cherished and sought after.

Television and video games were not a big part of his life growing up and Jim reminisced that, "I was 17 before there was ever a video game in my parents' house."

As a couple, they wanted their children to develop a love and passion for reading they had developed. As a family their home environment and schedules were all intended to prioritize reading. Television and video game time were limited to an hour each day. Jim and Stacy made sure the children saw them intentionally turn off the television and pick up a book instead. They had weekly family outings to their local library to check out new books.

Differentiated rulemaking. Parents in this study talked a lot about the differences between their children. A majority of families in this study had multiple children with a wide range of ages. Some children loved reading while others enjoyed video games. Some struggled with schoolwork while others could not get enough homework. Subsequently, rules surrounding technology and new media differed in the homes I visited. Parents in this study differentiated rules for their children on two main criteria, age and individuality.

First, parents differentiated rules based on a child's age. The natural development of a child includes an increased sense of judgment, allowing the child to make increasingly more complicated decisions based on a greater range of factors that influence that decision. Alters (2004) described this as "a process of critical evaluation that develops as one matures, with help from parents" (p. 114). As children grow older, parents tend to loosen control in selected areas, allowing teenagers greater opportunity to exercise their judgment. Because of this, these older children often have access to a wider

variety of games or a greater diversity of technology devices. Greg and Tara, for example, allowed their high school age children access to cell phones, a privilege denied to their middle school age son. Dan and Linda were concerned about the amount of violent video games available to their children, all under the age of 12. They did not like their children playing those games, but Linda expressed, "It's kind of something I'm working on, and I have to adapt to as they get older." David and Preeta's oldest children, ages 12 and 11, have iPods while the younger children do not. Greg and Tara's oldest children were given access to cell phones while the youngest was not.

A second way parents differentiate rules is based on children's individual interests, personalities, and preferences. Not surprisingly, parents in this study talked openly and often about the differences between their children. Stating the obvious, Dan said, "Everyone is different. That's true." He went on to describe how his 7-year-old daughter, Emma, would spend hours in her room being creative, doing arts and crafts type things. Because she did not have a strong desire to compete with her brothers in the realm of video games, Dan and Linda found themselves applying a different set of rules regarding video gaming with Emma. They admitted being more relaxed about Emma's use of video games, allowing her to play longer than her brothers, especially since she preferred educationally oriented games over the more traditional video games her brothers played.

Greg and Tara differentiated consequences based on the individual interests of each of their boys. As Greg stated, "Each child was so different. If we tried to do everything the same all the way through, that would have never worked." Greg and Tara

described how each of their three boys were different and how, as parents, they approached the consequences for spending too much time using technology and not enough time reading in the following conversation.

> Tara: I hate to push Adam to read because he hates it so much. I feel like if we make it a big thing, he's going to hate it even more. Our kids are pretty good about understanding that there are limits because that's just the way they grew up. They are just good kids.
>
> Greg: Each child was so different. If we tried to do everything the same all the way through, that would have never worked. We couldn't find anything we could take away. Chris could be sleeping on the floor with a blanket and he would be happy. He wouldn't care. "Go ahead and take whatever you want. I don't care. I'm still going to do what I want to do." But Bill, we take his book away for an hour and he's like, "Ok, what do you want me to do. I'll do it." And Adam is somewhere in between there. One set system just doesn't seem to work and wouldn't have worked in our case because our kids are so different.

In addition, Greg and Tara differentiated reading incentives. When their children were younger, they would use a reading chart to track time spent reading. As the boys had grown, they found each child responded better to different incentives. Chris, the oldest was motivated by rewards received at school, especially certificates received from teachers for reading consistency or improvements. If his parents wanted him to read more, they enlisted the help of his teachers. Bill, their 14-year-old was also an avid reader. Because of that, Greg and Tara could remove his reading privileges if they needed him to focus more on other homework or if he was not completing assigned chores at home. Adam, their youngest, did not like reading. As such, it was more challenging for Greg and Tara to come up with incentives to get him to read. They also had to be very careful to not use reading as a punishment as he already saw reading in a negative light. For each child, using personal interests as an incentive or punishment was an interesting

balance.

Listed versus understood rules. Parents expect their children to not only know but also internalize parental values (Ito et al., 2010). At the most basic level, parents choose to express these values as expectations. While not specifically stated, a parent may expect a child to complete homework each night before spending time watching television. There may be an expectation that assigned chores must be completed before a child can play video games. As parents become more invested in expressing internalize values, formalized rules are created. Parents understand the importance of having rules as a way to vocalize the internal morals they want reflected in their home.

However, not all rules within a home are explicitly stated or understood by both the parent and the child. Hood and colleagues (2004) found that discussions between parents and children about rules surrounding new media and technology reflect parents' intentions rather than actual practices. A study of new media and families by Horst (Ito et al., 2010) found that, despite the importance parents place on rules within the home, those same rules are regularly bent or broken for a variety of reasons. Alters and Clark (2004) described this bending, breaking, or changing of rules as "media transgressions" and found them to be a pervasive practice among families they studied. Alters (2004) maintained that this constant changing of rules is not failure but a normal "part of the family's project of building and maintaining a family identity" (p. 128).

Like most parents in this study, Sam and Greta did not have specific rules listed. Greta described them as "more like general guidelines" that governed their children's interaction with new media, technology and reading. They determined on a daily basis

how much time their children should have watching television, playing outside and reading. Greta said that "it hasn't been a big issue so we haven't really said like a half hour a day or like that." Although not directly stated, they appeared to talk to their girls daily about expectations and used those conversations to help plan schedules and activities for each day.

Similarly, Jim and Stacy had specific expectations for new media and technology use in their home yet lacked formal rules. Stacy actively tried to limit her children's time watching television, playing video games, and using the computer. However, she readily admitted that, "Some days I will let them get away playing on the computer or whatever for a long time." Jim and Stacy determined the use of new media and technology on a daily basis, as voiced by Stacy when she said, "It's when I decided they've been on the TV too long or on the computer too long and they need to go outside and play." They also "strongly encourage" reading in the home and made an effort to read nightly as a family.

When asked early in our interview about rules regarding technology and reading, Jim and Stacy indicated they had no specific rules. As we talked further, however, it was clear that while there may be no list of rules posted in their home, they did have specific rules and expectations about both technology and reading. Like other participants in this study, they saw their expectations as the guiding principles for technology, new media, and reading within the home. They felt their children had a basic understanding of those rules, and, as parents, they looked for opportunities to help their children better understand why those expectations were used in their home. The conversation with Stacy

provided insight into the process the couple used to help their children understand established expectations.

> Researcher: You talk about the structure you have with the kids. Do you find they ever push back on that? If so, how do you negotiate that with them?
>
> Stacy: They do push back on occasions. Usually I just sit them down and have a talk to them about it. Just because it's a rule. It's my rule. Then they can go sit on their bed and think about it. Then they have to come back out later and tell me why we had the discussion and what their views are on it. Usually, by then, they've decided they understand what we're talking about. A lot of the time it's not too big of an issue because usually I'm just telling them they need to get off the computer and go outside. I don't make them just sit around.

As a couple, they decided to teach their children by example. Because one of their priorities was to develop a love of reading in their children, they made efforts as parents to read in front of the children. Stacy described it as an intentional process and felt that, "If it's not something that they see other people truly enjoying reading a book, they're going to look at it as work." Jim and Stacy intentionally turned off the television and picked up a book to read. When they finished reading they discussed what they liked and disliked about the book with each other and the children.

Participants often had a difficult time describing how children came to understand the expectations and rules of the home. Greg and Tara described their children as "pretty good about understanding that there are limits because that's just the way they grew up." They felt each child had a good understanding of the expectations regarding computer use, television viewing, and gaming time. However, when asked to spend one week during the month of June tracking their children's time using new media and technology, they found some surprising results, as shared in the following conversation.

> Greg: For me it was a little bit of an eye opener. It was like, "Holy cow! You

> really spent five hours playing on the computer, playing that game." And then there was like, "yeah, but, he also spent an hour reading and a half an hour doing something else too." It's like, "OK."
>
> Tara: He never spent five hours in one day, did they… on the computer?
>
> Greg: Yeah?
>
> Tara: Shows you what I know.

It was clear that children did not always understand expectations held by their parents. Consequently, those expectations did not provide the results parents desired.

Preeta expressed that they do not need to be very strict when enforcing rules because they feel their children know what is expected of them and feel the children do what is expected. However, she admitted that she must maintain a constant vigil in monitoring media consumption in the home. David admitted that it is difficult to reconcile parental values and expectations with their children's television viewing habits. They wished it were easier to get the children to do activities preferred by the parents. He summarized our discussion about this topic by saying:

> We are not really strict about enforcing rules on our kids. We let them feel free and interact. They can say no if they don't want to do something. At the end of the day, they know what we expect out of them, what they are supposed to do.

Because both David and Preeta were practicing physicians, they hired a babysitter for the children during the day throughout the summer months. To feel positive about their summer television viewing, Preeta filled their Netflix cue with educationally oriented documentaries and instructed the babysitter to have the children watch at least one documentary a day. David and Preeta's held strong feelings that the children's favorite television shows, *Psych* and *Phinneas and Pherb*, had no benefit or value. Yet they hesitantly allowed the children to watch them regularly during the summer months if they

had previously watched an educational documentary.

Rules concerning when. Parents in this study spent a lot of time reflecting on the amount of time their children spend playing video games, watching movies, and being involved in other new media. They described their children as being enthusiastic, involved, engaged, entranced, mesmerized, and in many other ways drawn to technology and associated media. At the same time these parents also regretted the small amount of time they felt their children spent reading, playing outside, and doing other activities that did not involve technology. They wanted their children to be involved in activities the parents remembered fondly from their own childhood. Often, they spoke of those childhood memories and expressed the wish that their own children would take an interest in such things.

To encourage children to be involved in activities other than technology and new media, parents in this study utilized a wide variety of methods. Three main strategies emerged from interviews. The strategies included allowing children to earn technology time through the completion of chores or other tasks, restricting the amount of time children were allowed to access technology, and mandating that children spent time in tasks that did not involve technology. While each strategy was unique, all parents utilized one or more with their children.

Earning time with technology. All families involved in this study, to some degree or another, used a system where the amount of time their children were able to use technology and new media was directly linked to predetermined tasks. For most families in this study, children had specific chores that needed to be completed before they could

use the desired technology. Dan and Linda's children had weekend chores to be completed before they were allowed to watch Saturday morning cartoons. David and Preeta, along with Sam and Greta, held expectations that their children were to complete homework before watching movies, playing games, or using the computer. Sue's daughter earned nightly computer time by completing tasks around the house. Greg and Tara asked their boys to do a chore or job around the house in order to earn time on the computer or game system. Because their youngest boy struggled with reading, they required a specific amount of reading time to earn technology privileges.

While none of the families discussed a formalized tracking system such as a job chart, all parents had specific expectations about the priority of activities within the home. Preeta, who worked as a pediatric physician, arranged her work schedule so she could be home with her children after school to supervise homework, family reading time, and dinner. For her, it was important to spend that time with the children each day. She estimated that she supervised "at least 2 hours" each afternoon before "(they) go and do mindless stuff or something." David, when talking about his academically oriented upbringing in India shared that he hoped his children would learn, "(the) intensity to perform, to be better than someone. To be better than you are right now." They both agreed that helping their children prioritize activities was an important step in their children's academic and social growth.

Dan and Linda had no specific system for how their children earned time. When asked about how much time their children could earn, the following conversation ensued.

> Dan: We have limits on the amount of screen time so they only have a couple days a week.

> Linda: It ends up being 3-4 days a week. A half hour to an hour. Sometimes Saturday we let it go a little more. We try to have them do a certain amount of jobs, especially on Saturday they are supposed to do their reading and music and a few other things before they go play. For a while I was being more consistent about making sure they read. We don't do a ton of computer as much we used to.
>
> Dan: When they do, it's more looking up stuff they want to purchase. A couple of games on the computer. If they want to get on there and do something more productive like write a paper, that's a free pass. Sure, we'll help them out, get them set up on that.

Like most parents in this study, the actual guidelines or expectations were vague in terms of what needed to be done before using technology or new media. Often, those expectations were dependent upon how the parent was feeling at the moment, and some described scenarios where rules were more stringent when the parent had had a difficult day at work. Three families mentioned that they regularly allow exceptions to their earning time rule when computer use included educational games or homework/school needs. Sue mentioned that when her daughter had an exceptionally difficult day at school, she allowed extra reading time or computer time to allow her daughter an opportunity to relax.

Greg and Tara described a unique situation that demonstrated parents' use of the "earn time with technology" rule. With several teenagers at home, communication with friends had become more important in their children's lives. Instead of providing their teenage children with a cell phone on the family plan, Greg and Tara chose to use a pay-as-you-go cell phone plan for their teenage children. If one of their children wanted a phone, the child had to earn $15 to pay the monthly fee. As Greg described, "It doesn't hurt our credit at all. It doesn't rack up a bill. It's just $15 a month. Unlimited texting. It's

been nice because we've been able to get a hold of our kids when we need to." Even with their children earning the right to use the technology by paying the monthly service fee, Greg and Tara still monitored cell phone usage and enforced appropriate behavior. Just before our interview, they had taken away the cell phone of an older son because he was texting what they considered to be inappropriate messages and using the phone in the evening, outside the hours they had determined were appropriate.

Restricting time spent with technology. Jim and Stacy shared how they rely on technology to help control the amount of time their children's spend playing video games. As owners of an Xbox video game system, they worried that their children spent too much time playing the video game and not enough time reading or playing outside. They especially worried about their oldest, Dane, who they felt had a tendency to become engrossed in a video game for hours. Just a few years previously, Jim and Stacy both worked full time, leaving the children unsupervised at home during the day. During that time they had a nephew live with them, feeling that he would provide supervision in the parents' absence. Unfortunately, the situation did not turn out as they anticipated, as recalled by Stacy in the following story from our interview.

> We did have my nephew living with us for a couple of years. He was 14 when he came to live with us. He lived with us til he was 16. He was raised in a household where the TV was the babysitter. They didn't put regulations on the games he could play. They didn't put regulations on how long he could play. He was babysitting for us. We were paying him for us. Come to find out he was on the Xbox playing video games from the time he woke up in the morning until we would walk in the door at night. The kids would just be sent to their room to play with their toys.

Both Jim and Stacy pointed to this situation as the main reason they started using automated parental controls built into the Xbox gaming console. With those controls,

they were able to set the system to shut itself off after the children had played for a specified number of minutes. They felt the automated system was more reliable and maintained standards expected by them as parents. As Jim said, “We have a time limit on it so it automatically kicks us off. We can’t get back on it till a full 24 hours has gone by and it resets. They can’t sneak on.” Since that time, they had also implemented parental controls for their Netflix account, denying access to any movies with an R rating or higher. Because only Jim and Stacy knew the passcode, it gave them peace of mind, especially when both Jim and Stacy needed to leave the children home alone when they were at work.

Many parents felt the time their children spent with technology and new media was wasted time. Preeta described video games as “mindless distractions.” David, her husband, described the iPhone games his children liked to play as a “big distraction” and felt they were too simplistic, giving his children low expectations for success. Dan summarized their feelings in the following statement from their interview.

> We both have a strong belief that we don’t want to waste time. Develop some talents and find some things you’re good at and interested in and turn into a hobby or career. By doing those type of things you build your self-esteem more than getting a high score in Halo or whatever it is. That is really temporary.

It was clear that parents had high expectations for their children. They also felt it was necessary to limit time spent with technology in order for their children to find balance between technology, reading, and other activities.

A ways to restrict time with technology was described by Dan and Linda. Each week they tried to have at least one day where the use of technology and new media were restricted. This decision came from previous feelings that their children were becoming

dependent on technology. If they felt the children were spending too much time watching television or playing on the computer, they would mandate the next day as a "no tech day." Dan stated this was "to wean the kids of the electronics." Sometimes they decided to go a whole week without technology. Their attempts, for the most part, had been met with varying degrees of success, as described by Linda.

> The first couple days are agonizing. After that they start doing more stuff. They find things to do. They do creative things. It's awesome. And then I give them a reward. They get a new book for a prize and that's great. I really feel like it stifles some of the creativity that kids can find in their lives if they spend a lot of hours doing that (technology)…. It's kind of something I'm working on and I have to adapt as they get older. We all have to work as a family unit on it.

Dan and Linda admitted that they enjoyed their "no tech" weeks but often found the stress of implementing and following through on that decision was more difficult than they anticipated. Additionally, they found it difficult to follow through because their oldest son needed access to the Internet and other digital resources for his assignments at the middle school. Technology had become a necessity of their everyday lives.

Mandating time with other activities. To help children find balance between reading and technology, several families in this study mandated their children's involvement with reading. Four of the six participants required their children to read each day. Time requirements varied from 20 minutes to 1 hour a day of required reading. Some families tied this reading time to other rewards or prerequisites for the use of technology and new media. Others had no rewards or consequences for this required reading time.

Dan and Linda as well as Jim and Stacy had weekly routines to visit local libraries. Stacy took her children to the library every Wednesday to select books and do

research on the computer, if needed. To encourage that routine, they maintained a bookcase at their home dedicated for the storage of library books. The bookshelf gave a common space for borrowed library books that might otherwise get lost within their apartment. Similarly, Linda took her children to the local library weekly. During the summer she encouraged her children's involvement in the library's summer reading program. At their home, they also had a dedicated shelf in the living room for the storage of books, both those from the local library as well as those from their children's school library.

Rules concerning where. Another way parents implemented rules and restricted access to technology was by creating rules defining where certain technology may or may not be used. In talking to the parents in this study about where technology and new media could be used in the home, three main classifications of technology devices appeared: (a) stationary technology and associated media such as televisions, DVD players, desktop computers or video game systems; (b) mobile technology such as iPads, handheld video game systems, cell phones, or laptop computers; and (c) nonphysical technology, meaning the Internet. The rules and methods parents used to manage these three different types of technology and new media differed within each family.

Every family in this study had at least one device that could be classified as stationary technology, the most common being a television or desktop computer. The location of televisions and computers were similar in all homes. Each family had computers and televisions in areas that allowed parents to monitor their children's use of the devices. Televisions, for example, were located in a living or entertainment room,

areas that served as the primary gathering and relaxation area for all family members. As such, this allowed parents to easily monitor any television usage, even from adjoining rooms such as a kitchen or dining room. Several parents stated that they used strategic placement of the television and computer as a strategy for monitoring both the amount of time their children spent using these devices as well as what media content that was viewed. Of the three families that had multiple television sets, all extra televisions were located in a parent's bedroom. No children had access to a television or desktop computer in their bedroom.

In discussing rules about where technologies were located or could be used, the most common rules involved access to the Internet. Sam and Greta, as well as Dan and Linda, specifically prohibited computers or televisions in children's bedrooms. Both families shared their concern about possible suggestive, violent, or inappropriate content that might be accessed through the Internet and felt strongly about monitoring their children's use of such technology. Both couples shared that diligent monitoring of the Internet was a primary strategy in regulating the type of content accessed by their children.

Maintaining the no computer in the bedroom rule was difficult given the portability of mobile technology in the home. Not only could devices such as iPods, laptop computers, tablets, and hand held gaming systems be easily moved from location to location, but also the inherent nature of wireless Internet provided unique challenges. Dan and Linda used a password for Internet access on all mobile devices in their home. Their children were required to have one of the parents input a code to allowed online

access. Interestingly, even though Dan and Linda allowed their children to use iPads in bedrooms, laptop computers were restricted to public areas in the home. Dan explained his reasoning when he said the following excerpt from our interview.

> They'll try to go to a bedroom because their siblings bug them and stuff. In general we try to keep it out in the open. We don't want to have computers in bedrooms. "But it's not connected to the Internet dad," they'll say. They try to push it constantly. That's a big rule for us. We just check what they do every once in a while.

It was not clear if wireless Internet was disabled on iPads. Linda described parental control over devices accessing the Internet as "a big rule." They were not the only parents in this study who worried about how to control access to Internet content on mobile devices.

Sue, as well as Jim and Stacy, intentionally provided Internet access for their children only on a desktop computer located in the living room area of their respective apartments. This allowed these parents to constantly monitor the content being accessed by their children. Even though Jim and Susan owned two laptop computers, the children were only allowed to use them when directly supervised by a parent. Jim and Susan kept the network modem in their bedroom, away from the children. As an extra measure of parental monitoring, if they ever left the children alone at home, they simply unplugged the modem and locked their bedroom door. It was a quick and easy solution for them to control Internet access in their home.

An exception: A reading rule. During my interviews, every instance of a rule mentioned by participants dealt with technology, with the exception of one rule that had been created specially to limit reading. As discussed previously, a large majority of rules

implemented by parents were restrictive in their nature, limiting children's use or access to technology and associated media.

Sue, the single mother, obviously loved reading. Pictures of her apartment showed shelf upon shelf of books for both herself and her daughter. She described her bookshelves as the predominant furniture in her home. Sue described her collection as including "all my books from when I was a kid." Additionally she had accumulated a large collection of books for her daughter through free sources such as the local library's summer reading incentive program as well as about "20-30 books she received as Christmas gifts each year." Books were located everywhere, including bookshelves, tables, bedrooms, and floors.

Sue felt her daughter acquired a love of reading from her own love for books. She described many of her daughter's habits such as reading late at night, reading during meals, and reading in the bathtub. These habits had led Sue to wonder if her daughter read too much and needed to spend more time involved in other activities. To alleviate her concerns, Sue created two specific reading rules within her apartment.

In order to keep their home collection organized, Sue implemented a rule that "If she (Amia) has more than five books in her book bag then she can't take more on the bus." The first rule was intended to help her daughter learn organization. As a student, her daughter had her school library privileges revoked early each school year as a result of missing or unreturned books. Unfortunately, Sue's "five-book" rule only limited the number of books her daughter had in her possession at one time. It did not prevent additional books from being lost throughout the year.

Sue allowed her daughter freedom regarding when and where books could be read. As a full time university student, reading during a meal was typical for Sue. Thus, she did not mind that Amia enjoyed reading at the breakfast and dinner table. Sue also admitted that they both enjoyed reading while taking a bath and did so on a regular basis. Unfortunately, the above-mentioned reading locations were prone to books being damaged by food or water. Because Sue's Calvin and Hobbes comic book collection was deteriorating from overuse and water damage, she initiated a rule to, "keep the books clean." Sue did not disclose the specifics of this rule but stated that she hoped it would prevent any further food stains or unfortunate incidents of books being dropped in the bathtub. While Sue said she had other rules, most appeared to be an expectation rather than a defined rule. For instance, while her daughter continued to get in trouble for staying up till "2 am sometimes" to finish reading a book, Sue had not implemented a specific rule for acceptable reading hours. Instead, Sue encouraged Amia to turn off her light whenever she noticed it was past ten or eleven at night.

Seeking balance in rulemaking. In this study, parents shared their feeling about the influence of technology on reading, school, and many other areas. They shared activities they wished their children would be more involved with at home. Parents listed specific expectations and rules within the home environment regarding reading, technology, and new media. Yet, almost without exception, each parent in this study shared feelings of inadequacy or failure in being able to enforce those rules, as reflected in Preeta's statement when she said, "I'm sure there are parents who enforce rules a whole lot better than me."

Parents spent a lot of time discussing the desire to have their children spend more time reading and less time interacting with technology and new media. However, in discussions, parents shared that they relaxed general established expectations in their home based on a belief that their child's interaction with the technology represented an investment in their child's future. They felt that bending the rules would ensure their child's success in future educational or work related endeavors. Even when technology represented a potential risk, parents were willing to allow their children access in order to help them develop skills that may be useful in the future. During my interview with Sue, she referred to many news reports about the dangers of online chat rooms, especially as related to sexual predators and the exploitation of underage youth. As a single mother with a pre-teen daughter, she was not only aware of online dangers faced by her daughter but was also vigilant in helping her daughter learn skills to cope with the world she sees her growing up in. During our interview Sue expressed the following about her daughter's use of the Internet for communication.

> I don't like her to talk to other people on the Internet unless she talks to me about it first and I'm able to come in and see what she and the other people are talking about. I don't think I should completely block her from talking to other people on the Internet because I can't send her off to college without ever having used a chatroom.

Despite her obvious hesitancy about the safety of online chatrooms and the social chat features of many gaming systems, Sue felt that the advantages of learning and using the technology outweighed the dangers.

The parents in this study made an effort to balance management of technology, new media, and reading in their home. As I talked to Sue about a photograph of the living

room of her apartment, we discussed the amount of books spread on bookshelves, chairs, and the floor. Knowing that her daughter was notorious for not putting books away, I asked if Amia got in trouble for leaving books out. It was then that Sue shared that she did not want to discourage Amia's reading by imposing rules, especially when Amia is reading books that Sue enjoyed in her childhood.

Parents created rules to help teach children important habits, skills, or responsibilities. Rules were modified or ignored because the parents expressed the philosophy that the child was more important than the rule.

Question: Parental Perceptions

What are parental perceptions of the influence of digital media and related devices on children's reading habits at home?

Reading and Technology: Finding Balance in Today's Home

As stated previously, parents serve as the primary gatekeeper for their children's exposure to and use of technology (Lenhart et al., 2005). Throughout a child's life, parents play an important role in helping make meaningful choices about the use of media and anticipating the consequences of those choices. For the parents in this study, the choices regarding reading and technology in the home were often ones that involved finding balance, especially regarding the types and amount of technology allowed. Greta summarized the general sentiment of participants when she said, "I think it's important for (our children) to be familiar with technology and keep up on things but I think it's

good to be balanced…. There are so many great things." She went on to share how one of her sisters who loves technology was encouraging Sam and her to get an iPad. Her sister felt it was a good way to leverage the children's excitement about technology to encourage reading in the form of eBooks and audiobooks. Greta, however, expressed that "there is something about buying books for me. I know you can read it the same way (as on an iPad). I just like buying books." Her husband, Sam, felt that reading on a computer or iPad causes the eyes to get more tired than when reading a physical book. The family enjoyed visits to the local chain bookstores to browse and choose books to purchase.

David and Preeta felt that a good blend between technology and reading was vital in their home. Preeta described the wealth of information on the Internet as a "necessary evil." She described how, with textbooks and other print-based educational materials, it is easy to purchase something at a specific grade level, knowing that the content and reading level will be appropriate for her child. However, she found it difficult to find material online that she felt was not only accurate but also at an appropriate reading level for her children. She expressed this frustration when she shared the following example about trying to find materials online to supplement what her children were learning at school.

> Try looking to see what the core curriculum is? Even the UEN (Utah Education Network) website which is trying to tell you what the core curriculum is, is taking you everywhere. If the definition of the curriculum is taking you everywhere, where is the actually curriculum taking you? I think it is so fluid. I think children need more structure. I think that darn website need more structure. Cybertext (Utah State Office of Education). I love it. That's the only thing I do in science because it says "7th grade Science" or 8th grade science. If you are looking up a topic… learning about rocks and minerals, you can do your PhD in rocks and minerals with what you find online. Where do you decipher what is appropriate for this age? I have not found such clear limits anywhere on the Internet. So I just

don't know how to guide the kids. It's endless.

Her husband, who preferred print-based reading, shared that he felt his children's education must be a blend between print and electronic materials, both focused on what his children are supposed to be learning at specific levels.

Sue spent a significant amount of time during our interview describing the challenge of helping her daughter access what she describes as "an incredible amount of information available from society." Sue expressed that "the more information that is available to everybody, including kids, is a positive thing. It makes us better citizens. It makes us more informed, more educated." She described technology as, "a positive thing," with her daughter able to access a large quantity of up-to-date information from books, the Internet, and other sources.

Sue's largest concern was helping Amia make good decisions about how to access information and use her time wisely. In addition to a heavy emphasis on reading, Sue felt the Internet was a valuable tool for access to current information and provided good opportunities to problem solve while finding information, something she felt Amia struggled with at times. She had chosen not to have a television in their apartment because she felt it had a lot of messages to which she did not want Amia exposed. Because of the amount of control over technology access in the home, Sue was not able to list any negative impacts of technology on reading, only saying that "it would take something very huge to have on impact." Sue did wish she were more aware of technology that would help Amia improve her information processing speed as well as special and auditory processing skills. However, with her limited time as a working

student and single mother, she had not pursued this further.

new literacy: Skills for the Future

Parents see the purchase and use of technology and new media as an investment in their child's future. They hope the availability of the newest tools will ensure their children's success in future endeavors of work, education, and income earning potential (Livingstone, 2002; McPherson, 2008; Sefton-Green & Buckingham, 1996). In essence, parents allow access to the technology and new media despite their overwhelming concerns because they hope the advantages of such exposure outweigh present fears.

Parents in this study were often conflicted over how to best help their children obtain these new literacy skills while still maintaining the connection to the traditional literacy skills found through reading printed books. Sam and Greta described reading as the preferred activity for their children. Even though their girls watch very little television, Sam and Greta felt that time would be better spent reading. When asked about the value of reading eBooks or other text on electronic devices, Greta went as far as to describe meaningful reading as "old school media…a tangible, actual book." The following dialogue provided insight into the uncertainty they feel about the changing nature of reading, technology, and literacy skills.

> Sam: I think most of it is more visual, relax your brain, sit back type of media that they're going to be exposed to. I'm afraid that could take the place of reading.
>
> Greta: I think, too, they need to be challenged. I worry that, maybe, even now, they won't understand the parts of speech. Because when a lot of people write email or send text messages, we just kind of rush through it. In the past, we would write a letter and it would include the parts of speech. It would be well written. I think that's related to reading as well. Writing and reading are related.
> Researcher: The way communication is changing?

> Greta: I think it's more acceptable for people to be poor writers. Hopefully that doesn't influence how kids read or write but I'm sure it will.

Despite their strong statements about the value of reading in their home, Sam and Greta expressed that it was important for their children to be familiar with technology and to "keep up on things" as well as be familiar with a computer and how to use it appropriately. They described how they felt technology interaction was important in order for their girls to interact with the technology-based society in which they were growing up.

Jim and Stacy, neither of whom attended college, spoke passionately about the need for new literacy and technology based skills in the current job market. Both had worked entry-level jobs since high school, and they wanted their children to be prepared with appropriate skills for a more technology based job market. Stacy expressed her feelings about the need for computer skills in the following dialogue.

> With the way technology is becoming so vastly important in the job market, meaning being computer literate. All jobs, even working for Burger King, you need some basic computer skills even to run the cash register. I personally think that it will really be a very important skill for them by the time they are 18, 22 and out of college and what not. Going into the job market, it's going to be a 'have to have' skill by then. And how many jobs are out there where you need computer skills? When I worked at the Hampton Inn as the head housekeeper, I had to have computer skills. I had to be trained on the computer to know which rooms were empty, occupied, or out of order. I just think about that now. I know they are going to need to have technological skills once they are ready to go into the workforce. Just the way technology has become such a crucial part of everyday living.

Jim worked as a machinist at a local company and was responsible for all tool and dye making. He felt his job was "completely technologically-based." He also felt his future employment was dependent on his ability to keep up with changing information and

technology. However, his biggest fear about technology was that his children might lose, as he described, “critical thinking skills of finding information.” He actively encouraged his children to read, evaluate information, and be critical thinkers. Both he and Stacy felt that despite the need for computer and new literacy skills, their children also needed traditional information gathering skills such as acquiring knowledge using the Dewey Decimal system at the local library and face-to-face social skills.

Summary

This chapter explored each of the three primary research questions addressed in this study. Data were collected and analyzed from six participants through the use of interviews, surveys, journals, and photographs. When exploring the formation of reading patterns within participant’s homes, three factors were found to have significant influence: (a) parental history or the attitudes and environments parents in this study experienced during their childhood years, (b) the influence of technology and media within participant’s homes as well as how those influences were managed by parents, and (c) the roles assumed by each family member.

Interviews, journals, a survey, and photographs taken by participants helped clarify spatial arrangements in each home. Participants discussed items in the home in two distinct sets of terms, objects and spaces. When describing items as objects, participants listed, discussed, or photographed specific items related to reading or technology within the home. When describing objects as spaces, participants listed, discussed, or photographed locations within the home in which reading or technology

related activities took place.

Routines and rules found within each home were based on parental attitudes and expectations. As with reading patterns within the home, the attitudes and environments parents experienced during their childhood years had significant influence on the determination of family rules. Parents described most rules as being understood, not making any formal, written lists within the home. Most participants used differentiated rules, based on the maturity level and perceived needs of each child with several categories of rules common among participants: (a) rules regarding when or where technology could be used, (b) rules either permitting or restricting time with technology, and (c) rules mandating children to spend time in nontechnology-related activities.

Overall, participants struggled to determine an acceptable balance between reading and technology within their homes. They discussed the perceived need for their children to have technology related skills in order to compete for jobs in a technology-saturated society. However, they also held concerns about the influence of technology on skills and attitudes of their children regarding reading. They also were concerned that the influx of technology was having a negative influence on social and communication skills.

CHAPTER V

THEORETICAL IMPLICATIONS AND CONCLUSIONS

Ecological Systems Theory

This study sought to gain a more comprehensive view of technology's influence on home reading habits by better understanding the prevalent biological, psychological, or social factors within the lives of the study participants. I choose to analyze and frame this study in terms of Ecological Systems Theory as presented by Urie Bronfenbrenner in his book, book, *The Ecology of Human Development: Experiments by Nature and Design* (1979). Bronfenbrenner described "the most unorthodox feature" of Ecological Systems Theory as its conception of development, as described in this excerpt.

> The emphasis…is not on the traditional processes of perception, motivation, thinking, and learning, but on their content—what is perceived, desired, feared, thought about, or acquired as knowledge, and how the nature of this psychological material changes as a function of a person's exposure to and interaction with the environment. (p. 9)

In the same manner, this study focuses on how participants perceive, think about, and make decisions concerning the interaction of reading and technology within the home environment. As an educator, I was aware that a child's development was influenced by many factors including biological, psychological, and social influences.

The complexity of Bronfrenbrenner's work goes far beyond the scope of this research project and cannot be properly represented in one research study. I recognized that, as stated by Bronfenbrenner (1979), it was not possible nor necessary to "meet all the criteria for ecological research within a single investigation" (p. 14). Not all of

concepts from Ecological System's Theory can or should be used in this study. However, the concepts outlined below help better understand the primary questions of this study, mainly, how parents perceive the influence or technology on children's home reading habits. Below I explain the ways I have come to understand these concepts and how they apply to this study.

Systems

For purposes of this research, a system is defined as a combination of activities, people, and patterns of behavior that occur within a specific setting. As stated earlier, Bronfenbrenner's (1979) original theory defined four specific systems, or concentric levels of influence that affect a children's development: (a) microsystem, (b) mesosystem, (c) exosystem, and (d) macrosystem. Each of Bronfenbrenner's systems is described below.

Microsystem. The microsystem, the first level, includes the child and environmental areas directly influencing the child such the home environment. Bronfenbrenner (1979) defined the microsystem as, "a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics" (p. 22). The microsystem was the primary consideration of this study and was generally considered to be the home environment of each participant.

Mesosystem. Bronfenbrenner (1979) defined the mesosystem, the second level, as "the interrelations among two of more settings in which the developing person actively participates (such as, for a child, the relations among home, school, and neighborhood

peer group…)" (p. 25). For instance, a child may be actively involved at home and school. Both settings have significant influence on the child's development. The interaction of home and school can be defined as a mesosytem. The mesosystem is thus an interaction of microsystems that is formed when a child enters into a new setting that has a direct influence on that child's development. Mesosystems may include interaction between home and other common settings including school, church, neighborhood, extracurricular activities, or workspaces. The developing child is influenced directly by each of these spaces or settings. Within this study, consideration of how mesosytems influence reading and technology within the microsystem of the home are considered.

Exosystem. The third level, the exosystem, is an extension of mesosystems that includes formal and informal social structures that influence mesosystems and microsystems. By definition, they do not involve the developing child as a direct participant. However, these exosystems will have a secondary influence on the developing child by virtue of their relationship to that child's meso and microsystems. Examples of an exosystem may include the parent's workplace, local government, a school attended by an older child, local industry, decisions made by a local school board, or a parent's involvement in political or social groups. This study considered the influence of exosystems on the lives of the parents involved in the study, and, consequently, the influence those exosystems had on the establishment of the environment, rules, and patterns established in each home regarding reading and technology.

Macrosystem. The final system, the macrosystem, is used to describe the

overarching culture that includes social, economic, educational and political structures that define the boundaries of a culture. Specifically, Bronfenbrenner (1979) referred to it as "consistencies, in the form and content of lower-order systems (micro, and exo) that exist, or could exist, at the level of the subculture of the culture as a whole, along with any belief systems or ideology underlying such consistencies" (p. 26). The macrosystem could be used, for example, to explain differences in schooling systems for different cultures as explained by Bronfenbrenner in the following scenario.

> Within a given society—say France—one crèche, school classroom, park playground, café, or post office looks and functions much like another, but they are all different from their counterparts in the United States. It is as if in each county the various settings had been constructed form the same set of blueprints. An analogous difference in form appears at levels beyond the microsystem. Thus the relations between home and school are rather different in France than in our own country. But there are also consistent patterns of differentiation within each of these societies. In both worlds, homes, day care centers, neighborhoods, work settings, and the relations between them are not the same for well-to-do families as for the poor. Such intrasocietal contrasts also represent macrosystem phenomena. The systems blueprints differ for various socioeconomic ethnic, religious, and other subcultural groups, reflecting contrasting belief systems and lifestyles, which in turn help to perpetuate the ecological environments specific to each group. (p. 26)

While the influence of macrosystems is not a primary concern of this study, macrosystems must be considered when they influence the values and importance within a family towards reading, reading materials, technological devices, and accepted technology use within the social, economic, and political cultures of each participant.

Settings

As defined by Bronfenbrenner (1979), a setting is a physical space or location where people engage in face-to-face interaction. It may be represented as a home, school,

neighborhood park, or day care center. Settings may also be described as environmental areas or locations such as a neighborhood.

Parents described the ecological settings in which reading and technology took place as distinct locations within their home. Participants usually differentiated the space as either a reading or technology setting based on the primary activities that took place within the setting as well as the physical items that were contained within that environment.

Reading settings described by participants included family rooms, bedrooms, reading nooks, and the kitchen. Items commonly found in these areas included bookshelves, couches, beds, chairs, and tables. When describing the setting for technology, participants most commonly named the family room or computer desk. Items commonly found in these areas included televisions, entertainment centers, couches, radios, computers, and mobile computing devices.

The same location sometimes was described as a setting for both reading and technology related activities. The living room, for example, was a common setting where both reading and technology based activities occurred. When designating the living room as a setting for reading, participants described the primary activities as reading, family discussions, or "quiet time." As such, participants talked more about the books contained within the room as well as the locations where members of their family liked to sit when reading, such as the couch. When describing the same space as a setting for technology, participants described the primary activities as watching television, playing video games, or hanging out while surfing the Internet. In this scenario, participants listed televisions,

video gaming systems, computers, and other electronic devices used in these spaces.

To better understand participants' activities and how they related to reading or technology, three basic elements of the setting were considered: roles, molar activities, and interpersonal structures. These basic elements were used to better understand a setting or activities that took across two or more settings. Each of these basic elements is unique and provided specific context for this study.

Roles

Bronfenbrenner (1979) defined a role as "a set of activities and relations expected of a person occupying a particular position in society, and of others in relation to that person" (p. 85). Roles often define the expectations, boundaries, and authority in which a person may act. Formal roles include titles such as doctor, lawyer, police officer, teacher, or business owner. This study focused on informal roles found within the home environment such as father, mother, child, knowledge expert, or authority figure. While informal roles are often associated with specific expectations or authority, the defining fundamentals of a role may be vague or hold different meanings for each member of a family.

Some participants in this study held roles that were clearly defined, namely the roles of father, mother, and child. Each of these roles assumed specific expectations of behavior and could be characterized as expectations about specific activities, relations, and functions within the home. Bronfrenbrenner's ninth hypothesis (1979) stated:

> The placement of a person in a role tends to evoke perceptions, activities, and patterns of interpersonal relation consistent with expectations associated with that role as they pertain to the behavior both of the person occupying the role and of

> others with respect to that person. (p. 92)

With such specific expectations of behavior, it was easy to define, at a rudimentary level, the anticipated role of each participant in this study, especially when those roles dealt with activities related to reading. For example, when a parent acting in the authoritarian role of a parent defined a rule, it was expected that the child would comply with that rule.

As noted earlier in this study, parents' primary role in regards to reading was to establish special arrangements and rules conducive to the expectations they held for reading within the home. Parents in this study were comfortable, confident, and decisive in this role, implementing rules and expressing expectation for reading and technology use in the home. For example, all parents established specific spaces for the storage of and access to books, with bookshelves in a living room area being the most common location. Some parents held a strong belief that their children needed access to a large quantity of reading materials. These parents made significant efforts to provide books in the home. Sue purchased a large quantity of books for her daughter each Christmas. Greg and Tara, Sam and Greta, and Dan and Linda all made regular trips to the local library with their children. David and Preeta solicited advice from their children's teachers for appropriate reading and study material.

Bronfrenbrenner (1979) attributed this comfort level to a "tendency for the role occupant to exercise and exploit the power and for those in subordinate positions to respond by increased submission, dependency, and lack of initiative" (p. 92). Each participant established rules regarding reading within the home. David and Preeta expected a set amount of reading time each day during the summer. Because she felt her

daughter spent too much time reading, Sue established limitations to get her daughter involved in more non-reading activities. Dan and Linda established "no technology" weeks to encourage their children to spend more time reading.

Participants expressed concerns about adequately filling expectations in an authoritarian role when dealing with technology. They wanted to limit access for their children while, at the same time, expressing concerns that by limiting access their children would not be prepared for a technology-based job market of the future. Dan and Linda wondered if the increased exposure to technology has negatively influenced their children's ability to socialize face to face and "think and work deeper." Sam and Greta felt it was good for their girls to be familiar with the computer yet expressed concern that computer use could be addicting, even for learning purposes. Jim and Stacy shared how beneficial it was to connect with extended family using Facebook. However, they also conveyed how social media was "a diving board for other hateful things" and how they feel it disconnected people from each other, took away human contact, and provided easy access for child predators.

Molar Activities

The simplest definition of a molar activity is an activity engaged in by a person that that has meaning and intent. Molar activities are defined by specific actions an individual has chosen to incorporate into their development. They often are manifestations of conscious decisions a person has made. Bronfenbrenner (1979) stated that these molar activities "constitute both the internal mechanisms and the external manifestations of psychological growth" (p. 6). For example, an infant learns to talk first

by imitating sounds. As language acquisition develops the infant begins to combine sounds to form words and phrases that have both meaning and intent. This meaningful speech can be defined as a molar activity.

In this study, the phrase molar activity is used to describe meaningful actions, activities, or habits in which participants engaged with specific intent. An example of a molar activity shared by Sam and Greta was reading at bedtime, an activity described by Greta as "just part of that bedtime routine." Since their girls were infants they had actively chosen to read at bedtime activity as a way to promote the importance of reading and help settle the girls down when. This meaningful activity instigated by Sam and Greta had become a predictable activity within the microsystem of Sam and Greta's home.

Interpersonal Structures

Dyad. A dyad is used to define the smallest level of an ecological system. It is defined a two-person system. In a dyad, each person assumes and functions within a specific role. While developmental psychology references dyads as structures characterized by reciprocal relationships, Ecological Systems Theory recognizes that the understanding the relationship between the persons in a dyad is fundamental to understanding systemic influence on developmental change. For purposes of this study, a dyad refers to the relationship and dynamics between a two-person system such as a mother and child, father and child, father and mother, or between two siblings.

Within this study, each parent's relationship with a child can be defined as a dyad. In this relationship, parents serve in an authoritative role, determining the rules and

regulation that govern reading and technology use in the home. These expectations are expressed in the rules, both formal and informal, implemented in the home. In this study, dyads formed by the father and the mother held similar expectations for a child. For instance, Preeta formed the primary dyad that governs after-school homework expectations and rules for her three children. The rules, expectations, and goals expressed by David to the children mirror the expectations given by Preeta.

The relationship between David and Preeta's children and their babysitter formed another dyad. However, the authoritarian role held by the babysitter was weaker than that found in a parent-child dyad. The babysitter was given power and authority to enforce rules and expectations with the children. However, because those rules, expectations, and goals came from David and Preeta, the authority held by the babysitter was lessened. The children were required to watch an educational documentary each day before watching shows of their choice because of an expectation that came from their parents. The babysitter was only there to enforce that rule.

N + 2 system. Similar to dyads, N + 2 systems also exist at the innermost level of ecological systems. However, an N + 2 system is used to define the relationship and dynamics between three or more people. In this study, N + 2 systems were most often used to define the dynamics between parents and their children in the home environment. However, N + 2 systems may also include the relationship between participants and extended family, neighbors, or friends. Jim and Stacy created an N + 2 system when they allowed a nephew to live with them for a few years in order to help supervise children when Jim and Stacy were at work. They felt that N + 2 system had a negative influence

on their own children as their nephew would pay little to no attention to the children, instead playing video games for most of the day.

Transitions

A transition is broadly defined by Merriam-Webster (2005) as a "passage from one state, stage, subject, or place to another." Ecological Systems Theory utilized the concepts of transitions to help define not only physical movements from one setting to another but also the changes that occur within dyads and N + 2 systems. Bronfenbrenner (1979) defined two distinct types of transitions, as described below.

Setting transitions. Transitions that have the primary purpose of introducing a person from one microsystem into a new microsystem environment are termed setting transitions. Bronfenbrenner (1979) stated that these setting transitions established the existence of mesosystems and were "the most critical direct link between two settings" (p. 210). A common example of such a transition is when a child begins school for the first time. The child transitions from their primary microsystem, the home, to a secondary microsystem, the school. Thus, a new mesosystem is created.

Although this study focused primarily on the microsystem of the home, David and Preeta provided an example of how the setting transition their children made to school impacted reading habits at home. During our interview, Preeta talked often about how the curriculum topics at school influenced the types of reading materials she tried to provide in the home. In the following conversation, Preeta shared how she relied on the school to obtain appropriate reading material for her children.

I've always been borrowing books. I always start the school year by getting

> textbooks from the teachers whenever I can. I keep it for the year. I've done that even with Namdev with Math, Grammar, History…because I am not very familiar with how to decipher on the Internet what's appropriate for that age level or not. So I really need the book to help me with that.

The transition her children made between the two microsystems, home and school, had significant impact on the choices Preeta made when selecting reading materials for home use.

Ecological transitions. Often, significant events or people cause shifts in a person's role or setting and may happen often over the lifetime of a person. These shifts are called ecological transitions. Because of changing roles that occur within ecological transitions, they are characterized by disruption and include examples such as marriage, birth of a sibling, divorce, starting at a new school, moving, and changing jobs. These changes disrupt established routines within an environment. They can also create new dyad or N + 2 system relationships or shift a person's role within an existing relationship.

One participant talked about significant ecological transitions during childhood that shaped and defined views of reading during adulthood. Stacy shared that she always had troubles with reading. Following her parents' divorce when she was four, Stacy remembered moving regularly as her mother looked for steady employment. Because of these moves, Stacy attended many different schools. This defined a very confined dyad between Stacy and her mother. Since her mother had very little time or interest in reading, Stacy had little interest in school, completing only four credits and dropping out of two high schools by the end of her sophomore year. She eventually created a larger, supportive N + 2 system when she enrolled in an alternative high school where she felt other students "understood what I was going through." During her senior year Stacy was

diagnosed with dyslexia and a stigmatism that helped explain some of her dislike and challenges with reading.

As an adult, Stacy had learned to love reading, despite the challenges of her dyslexia and astigmatism. She said that she didn't enjoy reading until she was married and credited her husband, Jim, as the main reason she started reading. However, she listed the ecological transitions caused by her parents' divorce as the largest influence in how she choose to create a reading environment in the home for her children, as discussed in the following conversation.

> I look back to my childhood and I don't remember ever seeing my mom read or having very many books in the house. I know my mom was a single mom so she didn't have a lot of time at home. She worked a lot. Anytime she could get overtime she would jump on it because we needed the money. That's one thing I make sure the kids see when it comes to Larry and I. We read in front of the kids. They see us read. They see us enjoying it. They see us turn the TV off and pick up a book instead. I think the number 1 thing is leading by example. Anytime I finish a book is tell Larry, "That was a great book. I loved that book!" I think that in itself has made a big impact on the kids. If it's not something that they see other people truly enjoying reading a book, they're going to look at it as work. That's how I viewed it.

Stacy wanted her own children to have positive attitudes towards reading and understood the importance of positive ecological transitions, dyads, and N + 2 systems in their home that would help facilitate those attitudes. As such, Jim and Stacy had made the decision for her to quit her job so she could be a stay at home mother as her oldest child was entering the transitional middle school years. Additionally, Stacy had made it a habit to take the children to the local library weekly to check out books and other material.

Links

When entering a new microsystem, the potential strength of a bond may increase

when in the company of others with whom a person is already familiar. These interactions are described as links. These links help form new N + 2 systems. In the following example, Bronfenbrenner (1979) defined four main categories of links and describes the relative strength of each.

> If the child goes to school on the first day unaccompanied, and no one else from his home enters the school setting, there exists only a single direct link between the two microsystems. Under these circumstances, the transition and the resulting link that is established are referred to as *solitary.* Should the child be accompanied by his mother or an older brother who enters the school with him and introduces him to the teacher or to other children, the transition and the resultant link are described as *dual.* Of course the mother may not come to the school until a later point, or the teacher may visit the home, in which case the connection becomes dual at that time. A mesosystem in which there is more than one person who is active in both settings is referred to as *multiply linked.* A mesosytem in which the only links, apart from the original link involving the person, are indirect or in which there are no additional links whatsoever is described as *weakly linked.* (p. 211, italics in original)

Home and school are the most commonly connected microsystems with links mentioned by participants in this study being parents, older siblings, and friends who live in the local neighborhood.

Reading links. There also exist links and N + 2 systems that connect reading to the home setting. These links and N + 2 systems help children establish molar activities, attitudes, habits, and actions that determine interaction with reading throughout the developmental reading ages of four to twelve. The most influential reading links and people included in N + 2 systems mentioned by participants in this study were parents and teachers, with peers mentioned when a child entered their middle school years. These links were not surprising because parents and teacher hold an authoritarian role in the home and school environments respectively. Parents served as the primary link and dyad,

introducing their children into a reading environment. They also determined the attitudes and expectations surrounding reading in the home.

The methods parents used to establish reading links were often based on established family history and morals. Most participants in this study established reading routines mimicking the experiences of their own childhood. Sam and Greta had always made a practice of reading to their girls at bedtime because that was what their parents did when they were small children. As a child, Greg's participation with the fantasy role-playing *Dungeon and Dragons* led to an interest in science fiction and fantasy genres. As a parent, he encouraged his boys to have the same interests. Jim remembered his father's interest in reading how-to manuals, general information books, and technical manuals. That interest translated to his own desire for his children to read nonfiction materials and seek answers to their questions by visiting the local library or searching online.

Promoting reading at home was also influenced by negative experiences that participants had with reading as a child. As children, Stacy and Tara both had parents who formed a weak dyad or reading link. This weak reading linked served as a catalyst for Stacy and Tata to serve as a strong reading link for their children. Stacy talked often about the lack of reading within the single family home in which she grew up and talked about this in her interview when she said, "I look back to my childhood and I don't remember ever seeing my mom read or having very many books in the house." This lack of a reading link led her to intentionally serve as a strong link to her own children, purposefully reading in front of her children and setting aside nightly time to read as a family. Additionally, she sought to strengthen and create additional N + 2 systems to

support her children's reading by taking them to the library weekly and participating in community reading programs.

Tara's childhood was similar to Stacy's, growing up with parents who did not form a strong reading link in their home. In this extract from our interview, Tara shared details about the lack of reading during her childhood and how it had influenced her to serve as an advocate for her own children:

> I didn't have books growing up. My parents never encouraged me to read. School wasn't important when I was growing up so I don't remember reading anything growing up…. I knew when I had kids I wanted that to be important. So, we always made sure we had material available for them to read and we still like to make sure…we'll all the time recommend a book to Chris. "Chris, you should read this book. It's a good book. I read this book and loved it. You should try it." So, were trying all the time to make sure they have material to read.

Along with her husband, Tara worked to make sure there were always reading materials available in the home. Greg and Tara began purchasing books for their children as infants and continued providing incentives for reading as the children grew.

To promote and encourage a stronger reading connection in their children's lives, participants in this study formed additional N + 2 systems by linking with teachers and other family members. The addition of other people into the reading dynamic provides a stronger connection and is defined by Bronfenbrenner (1979) as a dual or multiply link. Dan and Linda described links in N + 2 systems as teachers, grandparents, scout leaders, and "all people with good influences."

Dan and Linda stated that they appreciated teachers who recommended books and made specific assignments that required their children to read new genres. They felt the teachers in these N + 2 systems represented someone, in addition to parents, for the child

to look up to as an example of positive reading traits. Dan shared his experience of the positive influence of teachers in the following narrative.

> In 4th grade, we had a teacher who read to us some things. I think it was Greek mythology…spent just a little bit of time a week. And then in Jr. High, which was 8-9th grade, I had an English teacher who, again, took a good portion of the class reading to us. She read all the Edgar Allan Poe stuff. When we finished we would watch the movie. We would read the book then watch the movie. That really introduced me to…. I don't think I would have picked up any of Poe's work. We didn't have any at our house. She didn't just have us read. She made us memorize some of his poems. So, it was all related to reading and learning to love literature.

Sam and Greta felt the additional links in N + 2 systems, especially teachers, had a positive influence throughout a child's developmental years, even into college. They described how the most influential teachers encouraged their children to read, constantly made recommendations about quality literature, and had classrooms filled with "shelves and shelves of books."

Technology links. When considering links that connect children to technology, parents may not always form the most influential dyad or N + 2 system. Participants in this study named friends, other family members, and popular culture as the main technology influences in their children's lives. When asked who influenced their children most in regards to technology, all parents in this study specifically mentioned N + 2 systems that included their children's friends. Greg and Tara shared how their teenage children's wish list of technology was comprised of devices primarily owned by the children's friends. Their children wanted similar technology so they could communicate with their friends via texting and Facebook.

The N + 2 systems formed by the links with friends were not always considered positive by parents. Dan and Linda knew their children's attitudes about reading and

technology were directly influenced by friends, as shared in the following excerpt from our interview:

> Some of Aaron's friends, one of them is into graphic novels and Aaron is like, "I don't read that kind of thing." Another one…I'm not really sure what he's into. I don't think they are deep readers. A couple of others seem to spend more time with entertainment things. So Aaron wants to go play video games with them a lot. That's what they talk about more than they talk about some cool book they've read or something.

David and Preeta expressed the frustration they felt as parents when their children talked about new technology devices or video games. The felt their youngest son had become obsessed with the game *Minecraft*, primarily as a result of the influence of a friend from school. This was not considered to be a positive N + 2 system by either David or Preeta. They were considering not allowing Shray to play at this friend's house in the future in order to encourage Shray to be involved in what they consider more appropriate activities.

Parents felt their authoritative role when dealing with technology was often weaker or reversed due to their perceived lack of expertise. They felt that their children, relative, or teacher often took on authoritarian or expert role. Sam and Greta, as well as Dan and Linda, mentioned that N + 2 systems formed with older cousins within the immediate family served as the primary source of information about new video games, tablets, and smart phones. Preeta relied on the recommendation from N + 2 systems containing teachers at her children's schools to know which online resources would best supplement what was being learned in the classroom.

When roles within a dyad or N + 2 system are reversed, confusion can ensue. This was especially true when the authoritarian role held by the parent was taken over by the

child, as in the case of Greg and Stacy who often turned to their teenage boys to learn how to operate features on the computer or home entertainment system. This change in dynamics put the teenage boys in an authoritarian role and caused a degree of confusion about rules for technology within the home. Greg and Stacy expressed that, while they relied on their children's help to operate some features of the computer, they did not always feel comfortable allowing their children to have "full reign."

Strategies employed by participants to deal with this role reversal with the dyad or N + 2 system often made the technology link unintentionally weaker. The most common strategy participants used to maintain an authoritarian technology role was to limit time or access to technology in the home. Dan and Linda employed filters, firewalls, and other Internet restrictions. Jim and Stacy turned Internet access off when both were out of the home. Greg and Stacy had time limitations on the use of computers and video games. Preeta admitted to being "quite lost" in regards to technology.

Summary

In a simplistic view, this study could be summarized within the basic concepts of Ecological Systems Theory as explained previously (see Figure 1). For example, each participating family (microsystem) consisted of at least one parent and at least on child (dyad or N + 2 system). Each participant lived in a home or apartment where rooms had been designated for a specific function or purpose (settings). Participants described specific activities (molar activities) that take place within the home involving reading and technology use. During interviews, participants discussed the creation and enforcement of rules that govern the use of technology and expectations regarding reading within the

home (roles). They also discussed how feelings, expectations, and actions regarding reading and technology have changed throughout stages of their lives (ecological transitions). The influence of school was often discussed with parents sharing how reading and technology changes as their children move daily between home and school (setting transitions). Parents additionally talked about the influence of family members, friends, and others on the reading and technology habits of their children (N + 2 systems). Each participant described how schools (mesosystem), neighborhoods (mesosystem), the local community (exosystem), and today's culture (macrosystem) have influenced reading and technology in their children's lives as well as the expectations, hopes, and fears they hold for the future of reading and technology.

Revising the Ecological Systems Model

As stated earlier, a setting is a physical space or location where people engage in face-to-face interaction. A single setting in Ecological Systems Theory defines a microsystem. When a person has interactions between two or more settings, a mesosytem is formed. Traditional mesosystems consist of interaction between the microsystem of the home and other common systems including schools, community centers, or neighborhoods. These settings are defined by Bronfenbrenner (1979) as having three basic building blocks or "familiar elements": (a) the molar activities that take place in these settings, (b) the interpersonal structure formed by dyads and N + 2 systems, and (c) the roles people take within each setting.

Virtual Settings

I would suggest that Ecological Systems Theory would benefit from the addition of a new category, what I term "the virtual setting." Today's microsystems and mesosystems are not dependent on a physical setting for face-to-face communication. People now connect with each other via Facebook, Twitter, and Pinterest. Online worlds such as Second Life allow people to explore and connect to others in a virtual world. *Minecraft*, *League of Legends*, and other games allow players to interact and play cooperatively from anywhere in the world. University and other educational institutions offer classes, massive open online courses (MOOCs), and other options that allow students to earn degrees without stepping onto a physical campus. In all these examples, there exists no physical setting other than the fact that participants interact with these virtual environments using computers while sitting on the couches, computer desks, and other locations in their homes.

When formulated, Ecological Systems Theory (Bronfenbrenner, 1979) defined communication between microsystem settings as one-sided or two-way communication in the form of "messages transmitted from one setting to the other with the express intent of providing specific information to persons in the other setting" (p. 210). Communication within virtual settings is not significantly different than traditional settings. Often only the location of the individuals and the means of communication may differ between a traditional and virtual setting.

Traditional methods of communication include face-to-face interactions, telephone conversations, written messages, announcements, or indirect communication

via social network chains. While those same communication methods are available today, many have been replaced by newer technology. For example, methods used to send personalized, written communication have changed over time. Writing tools have changed from the quill to the carbon lead pencil and then the ballpoint pen. While the quill, pencil, and pen are all still available and commonly used, they are now being replaced by word processing programs on the computer with advancing technologies providing a wide range of communication options such as email, text messaging, blogging, micro-blogging, RSS alerts, and online social networks.

Technology has also increased the volume and depth of communication in both one-sided and two-way communication. The history of a written letter provides an appropriate example (Schiller, 2013). During the 1700s, letters were most commonly sent via private delivery service or community established mail systems. Because a horse or other animal was used for transportation of these letters, the speed of delivery was directly related to the distance a written message was required to travel. By the 1800s, the amount of mail dramatically increased due largely to more efficient mail systems and the establishment of national postal systems in many countries. The amount of letters delivered did not dramatically increase due to the prohibitive costs of these systems as well as limited access for the general public. The advancement in computer technology and the Internet in the late 1990s spurred a dramatic increase in the number of written messages delivered through email and web page content. Delivery was accomplished almost instantaneously worldwide. As a result, the volume of messages has increased exponentially, with an estimated 144.8 billion email messages being sent worldwide each

day (Levenstein, 2013). Handwritten letters are now being replaced by email and texting. Conversations that used to take place across a table now take place as a Skype video call on a computer. This new breed of conversation happens in virtual settings. Despite each person being physically located in an environment, the actual interaction takes place in a virtual setting.

Some participants in this study did not feel these virtual settings provided the same opportunities for socialization as more traditional, physical environments. Dan and Linda felt their children's ability to socialize and relate to others had a lot to do with the type of setting in which that socialization occurred and felt a virtual setting was inadequate, as discussed by Dan.

> I think a big thing they're missing out on is finding a bunch of kids in the neighborhood to kick a soccer ball around or play a pickup baseball game. That aspect of socialization. They're socializing this way but not face to face. As far as a personal reading thing, the quiet contemplation without the distractions is really valuable. We need that with a deeper work, deeper thinking. So, we just keep instilling those values, I guess.

Jim and Stacy felt social media disconnected people from each other by taking away human contact and was a "diving board" for hateful speech and antisocial behavior. They also felt that electronic communication allowed people to easily propagate lies and misleading information. Because of this, they chose not to interact with anyone using Facebook other than immediate family members.

Greg and Tara felt the use of cell phones by their children had led to communication at hours they considered inappropriate. They felt their children were more prone to inappropriate conversations when using cell phones and texting than might occur with a face-to-face conversation. They did, however, mention that they valued the

ability cell phones gave them to contact their children at any time of the day.

Linking Virtual Settings

Traditional neighborhood microsystems used to be linked through block parties, community events, and people socializing on the front porches of their homes. These neighborhood microsystems were defined by people living within an immediate vicinity of each other and contained a finite number of people. Similar microsystems now occur through the use of social media such as Facebook, MMOGs, online comment boards, and email lists. These new microsystems are limited not by distance but by available bandwidth. They also may contain a significantly larger number of people than a traditional neighborhood microsystem.

The links to these new microsystems include people with whom a person may have had no physical contact or interaction. For instance, in 2011 Stanford University launched a massive open online course (MOOC) entitled *Introduction Into AI*, instructed by Sebastian Thrun and Peter Norvig (Markoff, 2011). The more than 160,000 students worldwide who signed up for the MOOC never physically interacted with their instructors (Perez-Pena, 2012). Their course experience included streaming Internet videos, online discussion boards, and interactive technologies for quizzes and grading. The instructors, who served as the primary links to the world of artificial intelligence, interacted within a virtual setting to help guide students through the content of the course.

Virtual microsystems become more common as interaction with virtual environments increases. For example, Justin Beiber was discovered in 2008

on YouTube by talent scout, Scooter Braun (Konjicanin, 2010). As one of the most famous stars to come from the virtual environment of YouTube, Justin Beiber benefitted from the volume of exposure provided by that virtual setting, helping him quickly grow into a worldwide pop icon.

Virtual settings also provide opportunities to interact with new microsystems without the physical presence of a person serving as a linking dyad. An example of this can be seen in the form of online social rating systems such as those on Amazon. These rating systems are driven by the interaction of users within a system and can have a powerful influence on purchasing decisions of online shoppers. A 2011 report (Lee, Hee, Park, & Han) showed that the greater the perceived credibility of online reviews among potential shoppers, the more likely those consumers were to make an intended purchase online. In these cases, online reviewers served as linking dyads to the consumer for both the product as well as the site from which the product was being purchased.

When discussing people who influence decisions regarding the purchase of books and other reading materials, participants in this study most often mentioned parents, friends, librarians, and teachers. These influences were the traditional linking dyad to reading for most children because they represented people in the child's life who acted in an authoritarian role. However, several participants in this study mentioned an increasing use of virtual links for reading recommendations such as blogs and social media. Sue used recommendations from blogs posts written by either other parents or children's literature experts when choosing books to purchase for her daughter. Sue also began using Goodreads (http://www.goodreads.com), an online social media site where she was

able to review and get recommendations for books from other online users. These systems are commonly referred to as online recommender systems and are vital features of sites such as Amazon, Netflix, eBay, and other major online retailers. The use of sites such as Goodreads and Biblionasium (https://www.biblionasium.com/) represents a growing acceptance and trust in virtual linking dyads for recommendations of reading materials.

Recommendations

Schools either invite or discourage parental involvement (Vandewater, Park, Huang, & Wartella, 2005). While most parents have a desire to be actively involved in their child's education, multiple studies have documented the frustrations felt by parents when communicating with school and teachers (Chen & Wingfield, 2012; Izzo, Weissberg, Kasprow, & Fendrich, 1999). Current technology allows parents greater access to communication and information about school happenings and students' academic progress than ever before. In addition to traditional paper-based report cards, many schools now use automated grading systems, accessible to parents online or through telephone systems. School wide announcements are posted on web pages, shared via blogs, or sent out over automated phone and email systems. Some schools are even taking advantage of new social networking systems to create online, virtual communities for their parents (Appel, 2006; Terdiman, 2006). The results of these advancements in technology include increased opportunities for schools to partner with parents through better communication. As a result of this study, schools may be better able to

communicate suggestions for the implementation of technology and digital media to improve reading and literacy skills at home.

Below I give three recommendations for topics that schools could address to help parents make more informed decisions about reading and technology at home. By stating these, I do not insinuate that schools are currently not making efforts to partner with parents. In fact, many schools have made parental involvement an integral part of their school community plan. However, I would encourage schools to take a deeper look into the perceptions their parents hold in regards to technology and reading. By so doing, small yet significant changes could be made to leverage the educational power of the home environment for the improvement of reading and technology skills in the school community.

Promote the Educational Use of Technology

As a classroom teacher with 15 years' experience, I knew my students represented the general trends of society. While time spent by youth reading for pleasure has continued on a downward trend, the use of digital media and associated devices increases (Ito et al., 2010). I also knew that the use of digital media, especially audio books, was increasing in the general population (Copulsky, MacNabb, & Rogers, 2009). Research had shown the importance of motivation as a key factor in reading success (Edmunds & Bauserman, 2006; Flowerday, Schraw, & Stevens, 2004; Takeuchi, 2011). My students, indicative of most youth their age, desired to own iPods, cell phones, and other technology gadgets (Thomson & Laing, 2003).

As a teacher, I knew audiobooks and iPods would be motivating for my students, especially those who wanted to read more difficult books but had not yet developed the functional reading skills to do so (O'Day, 2002; Varley, 2002; Wolfson, 2008). Based on this knowledge, I began raising grant money and donations to purchase a class set of iPods along with a collection of over 200 digital audiobooks. Where available in our classroom library, paper copies of these audiobooks were identified by a label on the spine with a picture of an iPod. Thus, students could identify books within our classroom library that could also be listened to on an iPod. Reading time in the classroom began to incorporate the regular use of audiobooks as students curled up with a good book and an iPod. Listening solely to an Audiobook was not allowed. Students were required to follow along with a paper copy of a book. The use of portable iPods combined with audiobooks provided my students the opportunity to listen to high quality readers and be exposed to new vocabulary and complex syntax, thus providing a foundation for improving their own language base (R. C. Clark, 2007; Wolfson, 2008).

In conversations at parent-teacher conferences, I received many questions about how to improve children's reading skills. One of my standard suggestions was to have children listen to audiobooks, especially when riding in the car. One set of parents responded that they had never considered listening to an audiobook on their iPod and wondered if it was possible to load anything other than music on an iPod. This question surprised me because iPods had been used regularly throughout the school year and discussed openly in classroom newsletters and parent meetings. I knew many of my students or their families owned iPods and had access to hundreds of audiobooks in either

CD or digital formats through their local library. I realized I had not done enough as a teacher to leverage the power of new technologies in supporting parents' efforts at home. In further conversation, I came to realize that many parents did not use technology at home for educational purposes because they either feared or did not fully understand the technology located in their homes.

Technology has changed drastically over the last ten years. Apple first introduced the iPod in October 2001, ushering in an era where downloads have replaced cassette tapes and CDs. Blu-ray has replaced DVD and VHS formats. Smart phones are now equipped with web browsers, cameras, and a wide variety of options not available a decade ago. Parents, even those who grew up only a generation ago, find it difficult to keep up with these advances. Parents have concerns about how technology is influencing the academics and reading of their children. A 2002 study printed in the *Archives of Pediatric & Adolescent Medicine* showed that, when compared with nongamers, adolescent gamers spent 30% less time reading and 34% less time doing homework (Cummings & Vanderwater, 2007). The National Endowment for the Arts reported that "the decline in reading correlates with increased participation in a variety of electronic media, including the Internet, video games, and portable digital devices" (Bradshaw & Nichols, 2004, p. xii).

There are few books that offer advice on what role technology should play in their children's lives. There are even fewer educational programs to help parents, as described by Jenkins (2006), "acquire skills and self-confidence to help their children master the new media literacies" (p. 60). Schools can help parents can look for ways these tools can

be used to improve learning at home. Participants in this study indicated a desire to be actively involved in their children's education. While these parents enthusiastically purchased technology devices for their homes, most lacked basic information that would help them make informed decisions about technology and its educational value in the home. Schools can improve and leverage the home environment by making information more readily available to parents through a wide range of approaches: blogs, information meetings, newsletters, workshops, email, or social media feeds. Schools should provide specific instruction to parents on how to use technology to build literacy skills. If such training is provided, parents, even those with limited technology skills, may be able to make good decisions in choosing tools that support learning for their children.

Bridge the Digital Divide

Becoming popular during the 2000 presidential campaign (Basulto, 2004), the term *digital divide* began to describe the gap between individuals and communities with greater and lesser access to technology resources and training. With analogous parallels to the racial divide that still exists in this nation, the digital divide is defined along terms of race and socioeconomic status, both factors that directly relate to children's mesosystems and exosystems.

How deep is the divide? A study conducted by study conducted by Mossberger, Tolbert and Stansbury (2003) showed that computer and Internet use was differentiated based on low- income, geographical, and political factors. Use of technologies was higher among Whites than among Blacks and Hispanics. Children living with more highly educated parents were more likely to use these technologies than those living with less

well educated parents, and those living in households with higher family incomes were more likely to use computers and the Internet than those living in lower income households.

Schools have significant influence to help bridge the digital divide and have been mandated to improve access to technology for students by Title II, Section D, of the No Child Left Behind Act (Boehner, 2001). The stated goal of this section is as follows:

> To assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race ethnicity, gender, family income, geographic location, or disability.

For many disadvantaged children, school is the only location where they have access to the Internet. Among the group of children whose only access the Internet is at school, 60 percent come from families in poverty (DeBell, Chapman, & National Center for Education Statistics, 2006).

It is the school's responsibility to consider what technology may be available within the home environments of children. Some schools have begun employing Bring Your Own Device (BYOD) programs, encouraging children to bring and use cell phones, tablets, and other portable devices from home. BYOD programs cannot help bridge the digital divide created by socioeconomic disparities. Such programs only benefit children who have access to devices at home. Some schools have begun active campaigns to solicit donations of used technology that might be adapted to the classroom. However, many early donation initiatives resulted in donations of equipment that was either too old or not in good working order, practices that were found to be counterproductive for both donors and recipients (Baer & Farnsworth, 1997). Other schools have implemented

creative funding of technology, including the creation of 1:1 technology programs that provide children an Internet connected device for use at both home and school (Livingston, 2007). These and other programs represent creative ways schools allocate limited budgets in an attempt to help bridge the digital divide.

Eliminate Print Deserts

As stated earlier, access to reading material at home is an important factor contributing to children's vocabulary and reading growth (Krashen, 2004; McQuillan & Au, 2001; Padak & Rasinski, 2007). Additionally, the availability of print in a neighborhood can either provide a stimulus or act as a barrier to reading development (McTavish, 2007). A study by Sin (2011) showed that public libraries in lower-income neighborhoods offered fewer resources due to lack of funding when compared to libraries nationally. This lack of print based material is not limited to books. Neuman and Celano (2001) documented that low-income neighborhoods had not only fewer instances of signage but also that color, quality, and script used for those signs were in poorer condition when compared to more affluent neighborhoods. Public spaces such as building and parks in low-income neighborhoods also were shown to have fewer areas conducive to reading. In the same way a desert denotes an environment lacking water, I use the phrase "print deserts" to denote micro, meso, and exosystems that lack print and print based materials. Schools need to make efforts to identify and help eliminate print deserts that may exist within their school community.

Technology, specifically the Internet, now provides access to a wide variety of free reading materials meant to help eliminate print deserts. The Bill and Melinda Gates

Foundation (2006) funds programs to expand information access by providing technology in public libraries that serve low-income and disadvantaged communities. Project Gutenberg (http://www.gutenberg.org/) has over 42,000 titles of great literature in the public domain (e.g., books whose copyrights have expired, like *Huck Finn* or *Journey to the Center of the Earth*). Each title can be read online or downloaded in a variety of file formats such as epub, Kindle, or PDF. The CK12 Foundation (http://www.ck12.org/) has built an online library of free online textbooks, videos, and flashcards covering a wide variety of topics. Schools, parents, or students are able to print, download, or view online any of their premade FlexBooks. Additionally, users can customize FlexBooks, managing and arranging content to produce a customized book to meet individualized needs.

As access to free, online reading materials increase, the cost of such materials decreases. Wiley and Green (2012), innovators in the field of Open Education Resources, illustrated the decreasing cost of reading material in the following scenario.

> The Internet is frequently compared to the printing press, which in turn is frequently compared to the process of writing books by hand. Today the cost of having a 250-page book transcribed by hand is about $250. The cost of printing that same book with a print-on-demand service is about $5. The cost of copying an online version of that same book is about $0.0008. The cost of shipping either the handwritten or printed book is about $5. The cost of distributing an electronic copy of the book over the Internet, however, is approximately $0.0007. (p. 82)

The reduced cost of resources provides greater access to materials, especially for those who are economically disadvantaged. Additionally, when schools utilize such resources, they are able to transfer the cost savings to purchase print materials and technology in support of further reading development.

Part of the reluctance to utilize technology resources with literacy comes from

perceived conflict between traditional literacy and new literacy. Teachers and parents often feel confused about the value or effectiveness of technology and default to their childhood, believing that the same methods that worked for their educational experience will work today. However, today's children are used to instant communication, instant information, and instant entertainment (Williams, 2005). They have grown up knowing and communicating with strangers across the globe as well as friends across the neighborhood (Ito et al., 2008). Today's learners want to be engaged. Schools need to do more to utilize technology to engage students and provide more access to materials through the use of that technology. Additionally, they need to provide better training, ideas, and guidelines to help parents better understand how to utilize these resources at home.

Participants in this study described their uncertainty about how to find appropriated print- and technology-based resources. Sam and Greta lamented the closing of the local Borders store, leaving them limited options for bookstores in their community. David and Preeta described their lack of knowledge about where to find appropriate materials to supplement what their children are learning at school in the following conversation from our interview.

> Preeta: I really wish the school would be able to tell the parents, "OK, we are doing rocks and minerals. This is what they need to know at this age." I wish they would still use textbooks so I can look ahead a few chapters, see what's coming. I need a better definition of what is to be learned. We rely on the school for that.
> David: There is a huge body of information about the circulation of the body. The question is how to access the right website. Something that curriculum should help is with is defining for this age group, they can go to this web site.

David and Preeta went on to express the fact that they felt very comfortable reviewing

books for use by their children. However, they were quite uncomfortable and hesitant when looking for online resources to supplement topics at school. They felt the Internet was oversaturated with content, and they did not feel capable of finding what Preeta described as, "useful information that matches what they are doing at school and is on their reading level."

In helping to eliminate print deserts, schools need to find ways to introduce resources to parents and help them feel comfortable selecting technology-based resources. Some schools list appropriate links to online content on their school webpage. Some states provide resources through a statewide initiative. The Utah Education Network (UEN) began in 1956 with experimental use of closed circuit TV for educational purposes. Today UEN provides Internet access for all Utah school districts, schools, and higher education institutions. Additionally, UEN maintains an extensive website (http://www.uen.org/) where access to resources, including weblinks, databases, and other online services are available for teachers, students, and parents. Any parent of a public school student in Utah has access to these resources, many of which are categorized by grade level and correlated to core curriculum. If schools can find ways to better inform and help parents access these materials, print deserts will be reduced. By doing so, schools will better leverage the power of the home environment to provide more access to reading materials and encourage higher levels of literacy.

Future Research

Future research could provide additional depth regarding topics covered in this

study. However, as the primary designer and researcher, defining future research has been synonymous with identifying weaknesses within this study, an uncomfortable realization I discovered while gathering and analyzing data. As I began seeing these weaknesses, I more fully understood that the qualitative research I was involved in was a complex process filled with self-doubt. During these moments of doubt, I was comforted by what Scheper-Hughes (1992) called the practice of "good enough ethnography," an understanding that any qualitative research will be incomplete and filled with weaknesses (p. 28). Each bit of qualitative research contributes to the larger body of knowledge. The weaknesses I discovered led me to insight about opportunities for future research.

A large number of national reports, surveys, and studies provide information about the quantities of technology devices found in homes and schools. Additionally, a significant number of studies have tracked patterns of technology use by youth and families. Each had a specific focus. Some were limited to reporting the numbers of devices in a home or the amount of time spent with technology (Friedmann, 2007; Neumayr & Monaghan, 2007). Some looked specifically at the interaction of technology between home and school (Takeuchi, 2011) or the influence of the Internet on family spending habits (Thomson & Laing, 2003). Others looked at how children spend their leisure time (Bradshaw & Nichols, 2004; Hughes-Hassell & Rodge, 2007; Sinek & Sparkman, 2010). Information and numbers from these studies get reported in media on a regular basis with headlines such as, "Tablets a hit with kids; experts say time limits a must" (Fowler, 2013). What many of these reports, surveys, and studies lack is an understanding of the complexities of human interaction, as described by Glesne (2006) in

the following statement.

> Qualitative research investigates poorly understood territories of human interaction. Like scientists who seek to identify and understand biological and geological processes that create the patterns of a physical landscape, qualitative researchers seek to describe and understand processes that create the patterns of the human terrain. (p. 211)

As mentioned earlier, I chose to pursue a qualitative approach to answer the questions posed by this study primarily based on the subjective nature of parental perceptions. I knew my beliefs on the questions of this study did not represent a truth but rather presented insight into a complex issue with many perspectives and variables.

Educational Rationale for the Purchase of Reading Material and Technology Devices Used in the Home Environment

Thus, my first suggestion for further research would be a more narrowed focus of some of the areas approached in this study. Specifically, I think noteworthy insights would emerge from research on educational rationales used by parents for purchasing or borrowing of reading material and technology devices. The marketing field has long looked at the influence the Internet has had on consumer purchases. During the relatively early days of online retailing, Thomson and Laing (2003) looked at family purchasing behavior. They explored the influence of the Internet on families' decisions to purchase products as well as how the new concept of online shopping influenced family purchases. The families in this study spoke often about the books purchased for their children, the home libraries that provided reading materials for their children, and the use of local resources such as the school, public library, and local retailers. It would be useful to families and those who support literacy efforts at home to better understand the rationale

used in reading material and technology acquisitions.

Understanding the Influence of Childhood Memories

The rules, regulations, and patterns of childhood do have an influence as a person grows. A study by Strommen and Mates (2004) showed that teens who considered themselves readers were often read to by parents at bedtime when infants. Those same teens felt it was vital to continue the ritual of bedtime reading as they grew up. Parents in this study often made a connection between the rules, regulations, and pattern of behavior they tried to implement as parents and the experiences they had in their childhood homes. Often childhood memories carried feelings of fondness that were reflected in comments such as Dan's when he said, "I remember, especially in fourth and fifth grade, really enjoying the library, getting into the *Hardy Boys* and *Choose Your Own Adventure*." Conversely, some parents such as Stacy did not have fond reading memories during childhood. Because of this, Stacy made extra efforts to help her children love reading, get books from the library, and enjoy the things she felt she had missed as a child.

Based on the abundance of my participants' unsolicited comments about childhood memories, further investigation is warranted of how childhood memories influence parental decisions regarding reading rules, regulations, and patterns. Additionally, since technology is rapidly changing, the technology landscape of childhood is radically different by the time a person reaches parenthood. It is known that parents are led by fears and anxieties about new technologies that were not a part of their own childhood and that they do not fully understand (Jenkins et al., 2006). With the

continued advancement of technology and the changes it brings, it would be interesting to investigate how parents adapt the experiences of their childhood when making decisions about technology use for their own children.

Effective Communication Between Home and School

A final area for study relates to the types and content of communication between school and home regarding technology practice. A study by Risko and Walker-Dalhouse (2009) showed how the increased communication between home and school can have a positive impact on a child's achievement at school. They also found that when parents felt they were working cooperatively with their child's school, parents held their children to higher academic expectations at home, thus having a positive impact on the school community as a whole. Similarly, Preeta expressed her feelings about the importance of communication between home and school.

> I certainly want to do what the teacher is doing. Sometimes, I go on a website the best I can. I'm teaching them something and its completely different from what the school is trying to teach. Then they are all upset at me because that is not the way. I would like to be on the same page so I can reinforce what the school is doing. For that, I need to know what the teacher is doing. When your child comes home with nothing, it's like, "so, what do I teach you? What do I reinforce at home"? It's very hard to us to know how to reinforce what the child has learned.

This study revealed that parents sometimes lack knowledge about technology use or reading practice at home. Often schools have that knowledge but may not effectively communicate about it with parents.

Further research could help identify the most effective types of communication to help build a positive relationship between the home and school. Of special interest is the

effectiveness of the use of social media such as Facebook, Twitter, and YouTube as means to strengthening the home-school bond. With the increased use of social media, determining the best delivery systems for communication would also increase the strength between home and school.

Conclusion

A Personal Note

In my 20-plus-year educational career, I have had a wide variety of roles and responsibilities. I have been a teacher in classrooms of all grades, 3-8 as well as spent time teaching university courses in a variety of topics. I have served as a district curriculum, inservice, and technology specialist. I have mentored high school students, been elected as the president of a local teacher's association, and worked on committees studying a diverse range of issues at the school, district, state, and national levels. I helped plan, organize, and start a virtual online high school. A wide range of educational topics interest me including open educational resources, teacher assessments, placed-based learning, integrated instruction, textbook reform, and project-based learning. I have presented at conferences on science, technology, math, reading, school leadership, laboratory schools, and student achievement. I have been honored to receive state and national awards for my use of technology and innovative teaching techniques. I currently work as a technology director at a university laboratory elementary school where I am given autonomy to investigate innovative ways of supporting instruction and learning through the use of technology.

Most people I work with see me as an educational technologist, a teacher who uses technology regularly in the classroom and can fix a computer problem as needed. For me, being classifying as a "tech guy" has always been frustrating. I do have an innate ability to understand and use technology. However, I consider myself first and foremost a classroom teacher who is effective in helping students learn. Many people have mistakenly assumed my Ph.D. program was in instructional technology. They have been surprised to find that I intentionally choose an emphasis in curriculum and instruction to avoid the stigma of being a technologist. Why is this? I strongly feel that quality teaching is the most important attribute for any educator. I also feel there has been a false assumption in the educational field for many years that the use of technology automatically leads to better instruction.

Technology is a tool, not a topic. Teachers are presented with a wide variety of technology options to use with their students, including interactive white boards, blogs, wikis, Google Docs, video projectors, video cameras, GPS units, PowerPoint, iPods, and many others. However, many teachers struggle to effectively integrate technology into instructional practice. Why? Callister and Dunne (1992) suggested, "If the teacher does not know what to make of the tool, or fears it, or misconstrues its uses, it will be used badly or not at all" (p. 325). Teachers who implement technology projects that align more closely with their personal pedagogical beliefs are much more likely to be successful in their efforts. Additionally, student involvement in these learning experiences increases (Zhao, Pugh, Byers, & Sheldon, 2002). Too often teachers use technology out of obligation, feeling the need to use technology with their students for a variety of reasons.

One example of this obligatory thinking happens regularly when a teacher replaces a traditional research paper with a PowerPoint research project. Many educators have justified the use of PowerPoint for presenting research by stating that it will help students learn to use technology. This is a travesty. If a project is meant to help student learn and utilize research skills, the method used to report results should support the research objectives. Often, teachers have not considered the best tool for the learning objective at hand. They do not stop to consider if the most appropriate presentation method for their students would be a written paper, oral presentation, informational poster, web page, video, or one of a thousand other methods.

Student learning should be the impetus that drives the use or non-use of technology in today's classrooms. To determine which tool should be used, a teacher should take into consideration many elements including student learning styles, teacher preparation time, available equipment, depth of learning, and curriculum objectives. Often, teachers will find effective technology tools that can be implemented. Other times, traditional instructional methods can provide results that are the same or better than when technology is used.

Summary

This study offered a brief look at role that parents play in the interaction between technology, digital media, and reading in the home environment. The findings from this study demonstrate the conflicted feelings parents have about how to promote reading at home in a society inundated with technology and digital media. This study shows that, while many parents enthusiastically make these technologies available at home, most lack

basic information that would help them better understand and make informed decisions about technology use in the home. It is important to realize that parents have technology and digital media available to them but may need encouragement and instruction from school to help them utilize these new tools in an educational way.

Schools have the opportunity to partner with parents to implement educational uses of technology and digital media to develop reading and literacy skills at home. As schools implement new educational uses of technology and digital media, it is vital to consider the role parents play in the development of reading and literacy skills at home and how technology and digital media can support those skills. Children will continue to utilize technology in ways that did not exist a decade ago. The implications of technology on today's youth are just beginning to be understood. How technology will continue to change is not as important as how parents manage and utilize technology and digital media. Working together, parents and schools can find ways to utilize the ever-increasing amounts of technology and digital media to support and enhance reading at home.

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APPENDICES

Appendix A

Interview Question

Interview 1

Questions

- What materials does your child typically read at home?
- How does your child typically select material to read at home?
- What do you view as motivating factors for your student to read at home? What are not?
- What activities/things compete with your child's reading at home?
- How do you view your child's reading habits at home differently than when you were young?
- What technology and digital media is available in your home?
- How do you view the influence of technology and digital media on your child's reading?
- In what ways do you feel technology and digital media influences your child? Positively? Negatively?
- What rules do you have at home regarding use of technology and digital media?
- In what ways has your family utilized audio books?
- How has the use of technology and digital media at school influenced your child's attitude/desire to use technology at home?
- What influence has the use of technology and digital media at school had on your child's reading habits at home?
- What do you think about these influences overall?

Appendix B

Instructions for Photographs

Photographs: Reading and Technology

Instructions

As a participant in this study, you have been asked to take pictures of your child's home reading environment and available technology. If needed, a digital camera, along with instructions for its use, may be provided.

Please take between 10-20 photographs to help me better understand how your student's reading habits at home are influenced by technology. Specifically, take photographs of your home that show:

1. Your student's reading environment.
   AND
2. Technology that influences your student that is found in the home.

"**Reading Environment**" may include places your student likes to read, materials they use, or anything else that plays a part in your student's reading at home.

"**Technology**" may include any electronic device that your student interacts with at home. Make sure to include devices that you feel play a part in your student's reading, either posative or negative.

Please do not include people in your photographs. I will not be able to use them in this research project.

I will use your photographs to help me better understand how you feel your student's reading habits at home are influenced by technology. We will discuss the pictures you take at our follow up interview.

Before I consider using any photograph in a publication of this research, I will ensure that no personal, identifiable information is included; I will also confirm that you give permission for particular photos to be used in any publications that result from this project.

If you have any questions or need further clarification, please don't hesitate to contact me.

Thank you,

Kurt Johnson (435) 797-3085
(435) 752-3801
kurt.johnson@usu.edu

Appendix C

Media in the Home Survey

Media in the Home

Survey

How many of the following items are found in your home? Include only working devices in your answers.

	Tv's		Computer (desktop)
	VCR or DVD players		Computers (laptop)
	Digital TV recorder (TiVo, ReplayTV, Sonic Blue, etc.)		Handheld device that connects to the internet (Blackberry, iPad, Smartphone)
	CD or tape players		Video game players that hook to a television
	iPod or MP3 players		Video game players (handheld)
	Radios		eBook readers (Kindle, iPad, Nook, etc.)

Thinking about an AVERAGE day. Estimate how many minutes your student spends each day doing the following.

	Reading print books		Watching television (broadcast)
	Reading magazines		Watching videos or DVDs on the TV
	Reading newspapers		Watching movies on other devices (computer, iPod, cell phone, etc.)
	Reading other (specify):		Listening to music on a radio
	Playing video games on a systems hooked up to a TV		Listening to music on a CD
	Playing video games on a handheld system		Listening to music on a cell phone
	Playing video games on the computer		Listening to music on an iPod or MP3 player
	Using the computer (general use)		Listening to music on a computer (iTunes, Grooveshark, Pandora, etc.)
	Other (specify):		Other (specify):

VITA

KURT W. JOHNSON

Education

Ph.D., Curriculum and Instruction
Utah State University, 2014
Dissertation Title: Parental Perceptions of the Influence of Digital Media and Technology on Children's Reading Habits at Home

M.S. Instructional Technology
Utah State University, 1993
Emphasis: Instructional Design in Education

B.S. Elementary Education
Utah State University, 1991
Minor: Music Teaching

Certification and Licenses

Professional Educator License: Elementary Education (1-8)
Endorsements: Educational Technology, Library Media (K-12)
State of Utah
Exp: 06/30/2015

Current Position

Technology Director
Edith Bowen Laboratory School, Utah State University, Logan, Utah
July 2011 to present

- Responsible for the development of innovative educational practices for the use of technology within classrooms.
- Responsible for developing integration strategies for potential, cutting-edge technologies.
- Implement, research, and present at regional and national conferences on the use of both traditional and cutting-edge technologies.

Professional Experience

Teacher, 4th grade

Edith Bowen Laboratory School, Utah State University, Logan, Utah
August 2008 to June 2011

- Responsible for curriculum development, instruction, and assessment of a self-contained classroom.
- Responsible to build capable, life-long learners through developmentally appropriate education, applied research, and innovative educational practices.
- Facilitated the development of quality practicum experiences for pre-service educators at all levels attending Utah State University.
- Developed innovated educational practices in the areas of technology integration, problem-based learning, and integrated studies.
- Developed educational research projects in the areas of technology integration and home literacy practices.
- Served as team leader for teacher, grades 3-5, facilitating the implementation of school wide decision-making processes.

Assistant Director

Center for Open & Sustainable Learning, Utah State University, Logan, Utah
July 2007 to July 2008

Responsible for center operations and administration, including:

- Oversaw day-to-day operations of the Center. Including purchasing and travel.
- Stood in for Center Manager for human resources, payroll and other personnel issues. Also stood in for the Center Manager on accounting and financial issues, especially those related to travel and purchasing.
- Wrote, set and implemented Center policies.
- Supervised student assistant(s) to perform reception, travel, purchasing and reimbursement duties.
- Represented the Center at on- and off-campus events. Stood in for the Director and Associate Director when he/she was unavailable.
- Served on University committees as appropriate.

Responsible for K-12 Outreach Coordination, including:

- Development, planning and implementation of a K-12 Outreach program.
- Project manager for K-12 outreach programs.
- Developed partnerships both on- and off-campus to extend Center projects
- Identified potential new projects.
- Collaborated with peer individuals and organizations around the world with a specific focus on K-12 projects.

Member

Founding Board, Open High School of Utah Virtual Charter School
http://www.openhighschool.org/

2007-2008

- Primary author, charter application section detailing the OHSU library plan that focused on the utilization of open educational resources.
- Ensured that the OHSU application complied with state policy
- Primary author, charter application section detailing the OHSU curriculum

Center Manager
Center for Open & Sustainable Learning (COSL), Utah State University, Logan, Utah
July 2006 to July 2007
Responsible for center operations and administration, including:

- Oversaw day-to-day operations of the Center. Including purchasing and travel.
- Stood in for Center Manager for human resources, payroll and other personnel issues. Also stood in for the Center Manager on accounting and financial issues, especially those related to travel and purchasing.

Systems Administrator
Department of Instructional Technology, Utah State University, Logan, Utah
April 2004 to June 2006

- Responsible for the evaluation, recommendation, implementation, and maintenance of technology within the department.
- Maintained a Windows lab, a Macintosh lab, video production, and other technically related labs student use.
- Responsible for keeping technology updated in the department.
- Maintained 17 financial accounts within University guidelines.
- Hired and supervised student employees that aid in the process of serving other students and faculty members in the department.
- Maintained and updated the department website.

Teacher, 3/4th grade multiage classroom
Edith Bowen Laboratory School, Utah State University, Logan, Utah
June 1998 to April 2004

- Responsible for curriculum development, instruction, and assessment of a self-contained, multiage classroom.
- Responsible to build capable, life-long learners through developmentally appropriate education, applied research, and innovative educational practices.
- Facilitated the development of quality practicum experiences for pre-service educators at all levels attending Utah State University.
- Developed innovated educational practices in the areas of technology integration, problem-based learning, and integrated studies.
- Developed educational research projects in the areas of technology integration, media literacy skills, and economics education.

Teacher Specialist
Morgan County School District, Morgan, Utah
July 1996 to July 1998

- Served as a Master Teacher, working with students and teacher in curriculum and instructional improvement in all K-12 classrooms.
- Plan, facilitate, and coordinate school level professional staff improvement opportunities; curriculum articulation and alignment; technology implementation and coordination
- Develop, revise, manage, and submit the Morgan School District Five Year Strategic Technology Plan to the Utah State Office of Education.

Teacher, 6th grade
Morgan County School District, Morgan, Utah
July 1993 to July 1996

- Responsible for curriculum development, instruction, and assessment of a self-contained classroom.
- Responsible to build capable, life-long learners through developmentally appropriate education practices.
- Developed innovated educational practices in the areas of technology integration, problem-based learning, and integrated studies.

Graduate Assistant
Adele & Dale Young Education Technology Center, Utah State University, Logan, Utah
January 1992 to July 1993

- Provided help to student and faculty on the effective uses of technology to enhance the teaching/learning process.
- Developed training resources for use of materials and services provided within the Center.
- Maintained circulations and patron services for print and non-print curriculum resources

Consultant, Educational Technology
Edith Bowen Laboratory School, Utah State University, Logan, Utah
September 1991 to July 1993

- Facilitated integration of EBLS Technology Enhanced Model of Schooling.
- Assisted in the establishment of the EBLS Technology Demonstration and Training Center.
- Wrote and began implementation of a school-wide technology education plan.

Instructional Design Consultant
MediaShare Corporation, Carlsbad, California
May 1992 to September 1992

- Designed video scripts for use in a nationally published math curriculum

- Designed and developed print and computer based lessons for use in a nationally published multimedia math curriculum

Utah State University Teaching Assignments

Fall 2012 Spring 2013 & 2014	ELED 4050	Teaching Social Studies and Practicum Level III
Spring 2011, 2012, & 2013	SCED 6270	Introduction to Methods, Planning, Assessment, & Technology
Summer 2008	INST5205/6205	Computer Application for Instruction and Training
All Semesters 2004 to 2008	INST4010	Principles and Practices of Technology for Elementary Teachers
Summer 2004	INST5400	Macintosh Applications for Instruction and Training
All Quarters 1991 to 1993	INST 445	Technology and the Classroom Teacher (teaching assistant)

Awards/Honors

Apple Distinguished Educator
Apple Computer Inc.
February 1998 to Present

Livescribe Education Ambassador
Livescribe, Inc
August 2001 to Present

2009-2010 Outstanding Alumni K-12 Teacher Award
Emma Eccles Jones College of Education and Human Services
Utah State University

Blue Light Honoree
Utah State University, President Kermit Hall
November 25, 2002

Grand Prize Winner "Very Best Teacher" in the USA contest
Nestle Ice Cream
October 2002

Participant
Japan Fulbright Memorial Fund Teacher Program
November 2001

Utah Technology Educator of the Year
Utah Coalition for Educational Technology
March 2001

Utah Educational Television Teacher of the Year
National Teacher Training Institute
March 2001
Excellence in Economic Education, second Place, Elementary Division
Utah Council on Economic Education, Utah State Wasatch Front Economic Forum
June 1999

Participant
Reach for the Sky "Math and Science, Telecommunications for Teaching and Learning"
August 1995 to July 1996

Recipient
Utah Career Teaching Scholarship
1986-1991

Service

Member, Founding Board, Open High School of Utah Virtual Charter School, 2007-2008
Treasurer, Utah Coalition for Educational Technology, March 1995 to July 1999
President, Morgan Education Association, May 1996 to July 1997
Vice President, Morgan Education Association, May 1995 to May 1996
Senator, ASUSU College of Education, 1991-1992
Member, USU Executive Student Council, 1991-1992
Member, USU Council on Teacher Education, 1991-1992
Member, USU Children's House Advisory Board, 1991-1992

Presentations

Johnson, K. & Shunn-Mitchell, M. (2014, April) *Science Journals: Using technology to expand collaboration and sharing*. Presentation at the annual conference of the National Science Teachers Association, Boston, MA.

Johnson, K. & Shunn-Mitchell, M. (2014, April) *Science Journals: Using technology to expand collaboration and sharing*. Poster Presentation at the annual conference of the International Association of Laboratory Schools, New York City, NY.

Johnson, K., (2014, March). *Technology and Literacy; The Past, The Present, and the Future, Oh, My!* Invited workshop presented for the Ben Lomond Council of the Utah Council of the International Reading Association. Ogden, UT

Johnson, K. & Johnson, D. (2013, March) *Constructing a School-wide Infrastructure for Student Success.* Concurrent Panel Discussion at the annual conference of the International Association of Laboratory Schools, Baton Rouge, LA.

Johnson, K. & Wallin, M. (2013, March) *Building a School-wide, Hands-on STEM Program.* Roundtable Discussion Session at the annual conference of the International Association of Laboratory Schools, Baton Rouge, LA.

Johnson, K., (2013, February). *Effective Use of iPads in the Middle School Math Classroom*. Invited workshop presented for Cache County School District Middle School Math Faculty Professional Development Seminar, Hyde Park, UT.

Johnson, K., (2013, February). *Effective Use of iPads in the Elementary Classroom*. Invited workshop presented for Lincoln Elementary School Faculty Professional Development Seminar, Hyrum, UT.

Johnson, K., (2012, September). *Technology and Literacy; The Past, The Present, and the Future, Oh, My!* Invited concurrent session at the annual conference of the Utah Council of the International Reading Association. Ogden, UT

Johnson, K., (2012, September). *Technology's Influence on Home Reading Habits: Understanding What Parent Think.* Invited concurrent session at the annual conference of the Utah Council of the International Reading Association. Ogden, UT

Johnson, K., (2012, September). *Effective Use of iPads in the Elementary Classroom*. Invited workshop presented for Mountainview Elementary School Faculty Professional Development Seminar, Mendon, UT.

Johnson, K., (2012, June). *Today's Students; Implications for Learning at the Teton Science School Programs.* Invited workshop presented for the Administrative Council Team of the Teton Science Schools. Jackson Hole, WY

Johnson, K., Dobson, D., & Jensen, A., (2011, June) *Teaching Methodology & Technology Integration in History Instruction.* Workshops presented at the Northern Utah Professional Academy of Teaching History in Schools Seminar, Wellsville, UT.

Johnson, K., (2008, June). *Pedagogical Seminar, Technology and Schools*. Workshop presented at the Bridgerland Professional Academy of Teaching History in Schools Seminar, Wellsville, UT.

Wiley, D. & Johnson, K. (2008, March) *From Cave Drawings to the Kindle, The Advancement of Written Communications.* Poster session at the annual conference of the Utah Educational Library Media Association, Ogden, UT.

Johnson, K. & Wiley, D. (2008, February) *20,000+ Free Books: Resources for your classroom.* Concurrent session at the annual conference of the Utah Coalition for Educational Technology, Salt Lake City, UT.

Johnson, K. & Johnson, T. (2008, February) *Home on the Range: Technology and Field Trips, some ideas.* Concurrent session at the annual conference of the Utah Coalition for Educational Technology, Salt Lake City, UT.

Johnson, K. & Barta, J. (2007, September) *Virtual manipulatives, online math simulations, digital cameras… can technology really help math instruction?* Concurrent session at the Utah Council of Teachers of Mathematics Regional Conference, Logan, UT.

Johnson, K., (2007, March). *Rethinking Global Awareness Curriculum: The World is Getting Flatter*. Concurrent session at the annual conference of the Utah Coalition for Educational Technology, Salt Lake City, UT.

Johnson, K., (2006, March). *Apple iLife '06: What's New*. Concurrent session at the annual conference of the Utah Coalition for Educational Technology, Salt Lake City, UT.

Johnson, K., (2006, March). *Social Software: an introduction & use in the classroom*. Concurrent session at the annual conference of the Utah Coalition for Educational Technology, Salt Lake City, UT.

Johnson, K., (2004, March). *Multimedia Ideas for the Classroom*. Concurrent session at the annual conference of the Utah Coalition for Educational Technology, Salt Lake City, UT.

Johnson, K., (2003, June). *Using the American West Heritage Center, Creative Hands-on Ideas*. Workshop presented at the Bridgerland Professional Academy of Teaching History in Schools Seminar., Wellsville, UT.

Johnson, K., (2002, March). *Managing your Digital Classroom*. Concurrent session at the annual conference of the Utah Coalition for Educational Technology, Salt Lake City, UT.

Johnson, K., (2002, March). *Implementing Technology in Arts Education*. Concurrent session at the annual conference of the National Laboratory School Association, San Juan, Puerto Rico

Johnson, K., (1997, October). *Macintosh for Dummies*. Concurrent workshop presented for the Box Elder School District, Tremonton, UT

Johnson, K., (1996, March) *SimSchool: Using Simulation Games in the Classroom*. Concurrent session at the annual conference of the Utah Coalition for Educational Technology, Salt Lake City, UT.

Publications

Marx, S., Gardner, J., Landon-Hayes, M., Westenskow, A., Johnson, K., Thurgood, L. et al. Theory and educational research: toward critical social explanation. *International Journal of Qualitative Studies in Education, 23*(2), 251-255.

Professional Affiliations

International Reading Association
International Association of Laboratory and University Affiliated Schools
Utah Council of the International Reading Association
Utah Coalition for Educational Technology
Utah Educational Library Media Association
National Council for the Social Studies
National Science Teachers Association

Consulting and Other Contract Work

HB 513 Early Intervention Program RFP review Committee
Utah State Office of Education, Salt Lake City, Utah
May 2013

Educational Strategy Consultant
The Saylor Foundation, Washington, D.C.
June 2012 – October 2012

HB 513 Early Intervention Program RFP review Committee
Utah State Office of Education, Salt Lake City, Utah
June 2012

Teacher Evaluation Tool Work Group
Utah State Office of Education, Salt Lake City, Utah
2012-2013

Exemplary Lesson(s) Recipient
iApp Digital Lifestyle, Apple Education Marketing
Apple Computer Inc.

January 2003

Technology Integration Consultant
Lincoln Elementary School, Hyrum, Utah
May 1999

Project Review Consultant
Hansen Planetarium, Salt Lake City, Utah
September 1995 to December 1995

Computer Consultant
Morgan County News, Morgan, Utah
September 1997 to June 1998

Community Education Internet Instructor
Morgan County School District, Morgan, Utah
October 1995 to June 1998

US West/UtahLink Teacher Network Project
August 1995 to August 1996

National Teacher Training Institute for Math, Science & Technology
January 1995 to January 1996

Life Skills Grant Computer Education Instructor
Morgan County School District, Morgan, Utah
October 1993 to May 1994