Sixth-, Seventh-, and Eighth-Grade Students' Experiences with the Internet and Their Internet Safety Knowledge.

Tonya Berrier
East Tennessee State University

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Sixth-, Seventh-, and Eighth-Grade Students' Experiences
With the Internet and Their Internet Safety Knowledge

A dissertation
presented to
the faculty of the Department of Educational Leadership and Policy Analysis
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Doctor of Education

by
Tonya Berrier

December 2007

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Keywords: Online Safety, Social Networking, Blogs, Internet Use Studies, Cyberbullying, Privacy, Child Pornography, Predators, Cyber Safety, Security, Ethics
ABSTRACT

Sixth-, Seventh-, and Eighth-Grade Students' Experiences
With the Internet and Their Internet Safety Knowledge

by

Tonya Berrier

According to a 2002 National Center for Education Statistics report, 98% of schools in 2001 were connected to the Internet and 63% of public classrooms had Internet connections. According to a 2003 United States Census Bureau report, 68.3% of homes with children subscribed to the Internet. These statistics reveal the scope of access children have to the Internet. This study focused on the children’s voice by investigating the children’s report of their online activities and their awareness of cyber security, ethics, and safety issues. The purpose of this study was to gain insight into the specific reported online activities and Internet safety knowledge of children aged 10-14 years along with their report of parental supervision of their Internet use. The study included data gathered from 446 self-administered surveys completed by 6th-, 7th-, and 8th-grade students in a rural school district in East Tennessee.

An analysis of the research confirmed that as children mature, they increase their use of the Internet and their participation in unsafe online practices. The findings indicated that the most common online practices reported by the middle-grade students included emailing, social networking (MySpace), instant messaging, publishing and sharing information about their favorite sports and activities, and using secret codes while messaging with friends. The results of this study indicated significant relationships between the household placement of the computer and the frequency of unsafe online practices; students with computers in private locations reported unsafe online practices with twice the frequency of those with computers that
could be monitored. The findings reflected that, in general, students were knowledgeable about unsafe Internet practices and engaged primarily in safe practices; however, many did report practices that could potentially place them at risk. The results from this study demonstrate a need for Internet safety programs to educate parents about the dangers their children face online and how to minimize those risks and to help children to gain the knowledge, decision-making skills, and motivation necessary to make safe and responsible choices when they are using the Internet.
DEDICATION

I dedicate my work to the people most important to me- my family.

To my husband, Roy A. Berrier, Jr., for loving me when I was at my worst and most stressed. Your kindness and patience never went unnoticed. I am thankful for your love, friendship, and confidence in me.

To my daughter, Olivia June Berrier, for patiently accompanying me to class on Monday afternoons and quietly devouring entirely too many Happy Meals before being rescued by Aunt Katy. I pray that you may also be motivated and encouraged to reach your dreams.

To my son, Austin Grant Berrier: Yes, honey Mommy is going to finally come out of her office! And, now we can play baseball to your heart's content.

To my father, Edward Arnold Allen, for your unconditional love and instilling in me the inspiration to set high goals and the confidence to achieve them. Through you I learned about hard work, persistence, and personal sacrifices. Your constant encouragement helped me to finally consume “the elephant.” I will forever be grateful to you for providing the resources to promote my education.

To my mother, Kathryn Anne Travis: Thank you for your support and love and for always giving me choices.

To the loving memory of my Grandmother, June Brogan Allen: It is through you that I learned the meaning of unconditional love.

To the loving memory of my Grandfather, Paul Benton Travis: Because of you and your example, all of your grandchildren have impeccable manners (at least we should and you tried).

To my aunt, “Nen Nen”: Thank you for loving my children as if they were your own grandchildren and for all the care you provided while I worked on this project.

To each of you, I thank you for lovingly enabling me to pursue my goal and encouraging me every step of the way. Each of you has helped to make my dream come true.
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CHAPTER 1
INTRODUCTION

"The world is a dangerous place to live, not because of the people who are evil, but because of the people who don't do anything about it."

Albert Einstein

(Brainy Quote, 2006)

There are many safeguards across America designed to protect children. Those who teach children about the consequences of drugs and alcohol have the Just Say No to Drugs program. Parents who believe their children have been abducted or run away have the Amber Alert system. Mothers whose children have been victims of drunk drivers have MADD. Americans who have been victims of natural disasters have FEMA. Infants and children who are occupants of passenger vehicles have the Child Passenger Safety Program. Tennesseans have the Tennessee Nonsmokers Protection Act to protect them from the risks of second-hand smoke. Children who access the Internet have nothing, at least from a national initiative, to ensure their safety and protection (Cyber Security Industry Alliance, 2005).

Parents have eagerly embraced the promise that computers hold for enhancing the education of their children. The hopes were so high for the promise of computers and the Internet’s ability to enhance student learning that President Clinton in 1996 challenged educational leaders by saying, “Every classroom in America must be connected to the information superhighway with computers, good software, and well trained teachers” (as cited in Shibly, 2001, p. 62). This challenge resulted in a federal mandate for all schools in the United States to have Internet access by the year 2000 (Healy, 1998). Currently, American schools already have surpassed Internet availability in homes. According to a 2002 National Center for Education Statistics report, 98% of schools in 2001 were connected to the Internet and 63% of public classrooms had Internet connections. According to a 2003 United States Census Bureau report, 68.3% of homes with children subscribed to the Internet. These statistics reveal the scope
of access children have to the Internet. Many of today’s youth have 24/7 Internet access. According to a Harrison Group (2006) *Teen Trend* study, today’s youth spent in excess of 72 hours a week using electronic media—“defined as the Internet, cell phones, television, music, and video games” (p. 1).

Most parents are eager to keep their children safe. Before children cross the street alone, they teach them to look both ways. Parents equip their children with protective gear for riding bicycles and playing contact sports and buckle them securely in automobiles. Parents know the names and phone numbers of their children’s friends and their parents. They talk to their children about dangers and encourage to make safe choices. However, many parents fail to emphasize these important safeguards when allowing their children to go online. According to Taylor (2001), many children are left unsupervised on the information superhighway and are granted access to the Internet without the proper knowledge and training necessary to ensure their online safety.

President George W. Bush, in his *National Strategy to Secure Cyberspace*, encouraged Americans to secure the portions of the Internet that they could control or influence (National Infrastructure Advisory Council, 2003). However, the Bush Administration has yet to establish a national coordination for increasing cyber safety awareness and ensuring the protection of America's children. The Internet has become one digital tool that everyone, especially children, is eager to access. In an effort to fully comprehend the importance of providing cyber safety awareness programs to increase students’ knowledge of online safety, it is important to be aware of what children report doing online.

According to Montgomery (2000), “Generation Y--the nearly 60 million children born after 1979--is the first to grow up in a world saturated with networks of information, digital devices, and the promise of perpetual connectivity” (p. 147). Furthermore, they are among the first generation to grow up “fully wired and technologically fluent” (Hempel, 2005, p. 87). According to Hempel, “They live online. They buy online. They play online. Their power is growing” (p. 86). The lives of today’s youth are surrounded by and much of their time is
consumed with computers, video games, camera phones, ipods, MP3 players, and other tools and toys indigenous to the digital age. Easy access to digital media is changing the way children learn and live. Adolescents are “using media to help define the world around them” (as cited in LaFerle, Edwards, & Lee, 2000, p. 57). LaFerle et al. maintained that entertainment, education, communication, coping, and identity formation were among the many purposes for which adolescents interacted with media.

Freeh (2006) from the Federal Bureau of Investigation reported that young people spent more time than ever using media to investigate life. The Bureau identified the Internet as being one of children's most frequently used forms of media and it emphasized that the Internet was not regulated by a government or private entity and could leave those who accessed the Internet vulnerable to its dangers (Freeh). The world is becoming increasingly interactive and children are embracing its power.

**Background of the Problem**

Before parents, teachers, and policymakers can fully comprehend the importance of providing Internet awareness programs to increase students’ knowledge of online safety, they must be aware of what children report doing online. Although there is extensive literature concerning Internet accessibility and parental perspectives of how children use the Internet and there are abundant resources for teaching children how to be safe while online, the majority of research involving gathering information about children has been drawn from adults' perspectives. Research taken from the child’s perspective is almost nonexistent. A review of the current literature revealed that children’s online learning activities in school settings have been studied on a large scale. However, limited research has been conducted about children’s Internet use in the home setting and their knowledge of safe online practices. For Americans to realize the full potential of the Internet, they must also understand how to best protect their children from the dangers they can encounter while online. The federal government is responsible for familiarizing nearly 100 million kindergarten- through 12-grade children with the online world in
their challenge to wire every classroom (Shibly, 2001). The near saturation of the Internet's presence in American schools means that children are going online faster in schools than in their homes; this situation places the responsibility on schools to ensure that children return home with safe and responsible online behaviors. Extant literature is abundant documenting children’s online learning activities in school settings; however, limited research has been conducted about children’s Internet use in the home setting and children’s awareness of cyber security, ethics, and safety.

**Purpose of the Study**

Who better to provide accurate accounts of children’s uses of the Internet than the children themselves? Cappella (2000) pointed out, “Amidst the research, policy, and advocacy regarding children’s use of technology, children’s own thoughts about the role computers play in their lives are often neglected” (p. 186). Largely missing are studies describing children’s uses of technology based on information actually collected from children. Parents are often the sole source of information regarding the online behaviors of children. Although parents can provide valuable information on children’s home Internet use, their input may not provide an accurate picture. This study focused on the children’s voice by investigating the children’s report of their online activities and their awareness of cyber security, ethics, and safety issues.

The purpose of this study was to examine, from the child’s perspective, the use of the Internet by students in sixth, seventh, and eighth grades and the extent to which they place themselves at risk. I also explored the types of parental supervision and monitoring of children’s Internet activities parents adopt as well as students' perceptions of the safety of specific online behaviors. In an effort to clarify some of the terms used within this study, a list of definitions has been included.
Definitions of Terms

1. **Sexual Solicitation and Approach**: A request to engage in sexual activities or sexual talk or give sexual information that is unwanted (Mitchell, Finkelhor, & Wolak, 2001).

2. **Unwanted Exposure to Sexual Material**: without seeking or expecting sexual material when doing online searches, (Mitchell, Finkelhor, & Wolak, 2003)

3. **Regular Internet Use**: for the purpose of this study, regular Internet use is defined as using the Internet at least once a week for the past 6 months at home, school, library, or some other place.

4. **Child Pornography**: Under federal law, child pornography is defined as a visual depiction of any kind including a drawing, cartoon, sculpture, painting, photograph, film, video, or computer-generated image or picture, whether made or produced by electronic, mechanical, or other means of sexually explicit conduct where it: depicts a minor engaging in sexually explicit conduct and is obscene or depicts an image that is, or appears to be, of a minor engaging in graphic bestiality, sadistic, or masochistic abuse; sexual intercourse, including genital-genital, oral-genital, anal-genital, or oral-anal, whether between persons of the same or opposite sex and such depiction lacks serious literary, artistic, political, or scientific value (18 U.S.C. § 2256, 2005)

5. **Peer-to Peer (File-sharing Networks)**: online networks that allow users to share and download files without charge via software that is downloaded from the Internet (Perkel, 2006).

6. **Cyberbullying**: sending or posting harmful or cruel text or images using the Internet or other digital communication devices (Center for Safe and Responsible Internet Use, 2000).

7. **Cyber Security**: protecting a user's PC and personal information (Cyber Security Industry Alliance, 2005).

8. **Cyber Ethics**: proper modes of behavior online (Cyber Security Industry Alliance).
9. *Cyber Safety*: protecting Internet users from deceitful people who initiate contact online (Cyber Security Industry Alliance).

**Research Questions**

The following research questions were formulated to guide the study:

1. What are the self-reported online activities of children in sixth, seventh, and eighth grades?
2. What types of parental supervision and monitoring of their Internet use do sixth-, seventh-, and eighth-grade students report?
3. What are students’ perceptions of the safety of certain types of online behaviors?
4. Are there differences in children’s reported unsafe online activities based on (a) gender, (b) grade in school, and (c) household placement of the computer?
5. To what extent, if any, are there relationships between children’s knowledge of unsafe Internet practices and their actual Internet practices?

**Significance of the Study**

The findings of this study should have significant implications for educators, policymakers, parents, and, most importantly, children. This study might assist in understanding how children use the Internet in home environments from the child’s perspective. Parents and professional educators might be able to discover possible strategies for protecting their children from dangers associated with the Internet. The results of the study could also encourage educational faculty to realize the importance of developing and implementing an educational program on Internet safety designed to keep students safe and smart on the Internet. The study could have the potential to promote a community-wide awareness of Internet safety issues, to encourage a national coordination of cyber security programs, and to offer policy considerations for a national policy on teaching cyber security and ethics to the nation’s school children. Ultimately, and most importantly, this study might have the potential to be a catalyst for helping
young people gain the knowledge, decision-making skills, and motivation necessary to make safe and responsible choices when using the Internet.

Limitations and Delimitations

The results of this study should be interpreted in view of the following limitations:

1. The study explored relationships among variables; therefore, the analysis cannot establish cause and effect relationships.
2. There might exist unexamined factors affecting the relationship between Internet practices of children and their Internet safety knowledge that are not accounted for in the methodology.
3. All information in the survey is self-reported. The information provided was based exclusively on the perceptions of the participants.

The results of this study should be interpreted in view of the following delimitations:

1. The sample was restricted to sixth-, seventh-, and eighth-grade students in public East Tennessee schools who had direct access to the Internet.
2. The sample size was limited to one school system and might not be generalized to other populations.

Overview of the Study

This study is organized into five chapters. Chapter 1 includes an introduction, background of the problem, purpose of the study, definitions, research questions, significance of the study, and limitations and delimitations. Chapter 2 presents a review of literature and includes the following sections: introduction, personal computers, history of the Internet, Internet access, Internet risks, invasion of privacy, online pornography-child pornography, victimization, file-sharing programs, social networking, blogs, cyberbullying, Internet tools, parental mediation, Internet safety, filtering software, the role of parents, the role of schools, and a summary. Chapter 3 details the research methodology, research design, participants,
instrumentation, and data collection. Chapter 4 includes the data analysis and Chapter 5 provides a summary from the findings along with conclusions and recommendations for practice and further research.
CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

“Technology has been growing aggressively since the 1980s” (Wang, 2003, p. 271). The 1990s saw the explosion of the Internet and the World Wide Web. From 1993 to 1999, in just 6 years, the number of Americans online increased by 77 million people (Montgomery, 2000). Furthermore, according to Montgomery, “Families with children represent one of the fastest growing segments of the population using the Internet” (p. 147). Along with the Internet came instant communication capabilities. Increasingly, the world has become more interactive. Digital tools such as instant messaging, e-mail, chat rooms, and blogs have changed the way children communicate. “Chat rooms and newsgroups have replaced the traditional face-to-face conversation between adolescents” (LaFerle et al., 2000, p. 57). The entire world has become, correspondingly, only a click away.

Tapscott (1999) estimated that the Internet attracts 10 million new users every month. Estimates from the Pew Internet and American Life Project and the U. S. Annenberg’s Digital Future joint survey indicated that approximately 70% of Americans in 2005 had Internet access (Hitlin & Rainie, 2005). The number of children (ages 2-17) using the Internet has been growing at an astonishing rate (Loechner, 2003). According to Nielsen/Netratings (2002), during the month of August 2002, one out of five American children and teens between the ages of 2 and 17 accessed the Internet from home. As broadband connectivity becomes more widely available and affordable, so will Internet access.

Since President Clinton’s plan for every American public school to have Internet access, children’s access to the Internet has exploded. They access the Internet at school, at home, at friends’ homes, and at public libraries. Prensky (2001), an internationally acclaimed speaker, writer, consultant, and designer of education and learning, has dubbed today’s generation of young people as “digital natives” (p. 1) who are living, learning, and communicating in new
ways with digital media. Prensky maintained that the rest of us were merely “digital immigrants” trying to learn to speak the language of the natives (p. 9).

Lin and Thornburgh (2002) wrote that the Internet was both a source of promise and a source of concern for children. The promise lies in the vast educational resources and information available on the Internet along with its ability to promote collaboration. The concern lies in the vulnerability to harm through exposure to sexually explicit materials, cyber predators, and the exploitation children might experience while online. If Americans are to realize the full potential of the Internet, they must also understand how to best protect their children from the dangers they can encounter while online.

Blackwell (2003) warned that as new Internet temptations and dangers spring up, it has become more and more difficult to keep children safe online. He stated:

Any parent who doesn’t have his head stuck in the sand knows by now that the Internet can be a dangerous place--hard-core porn, hate literature, bomb recipes, and worse, sexual predators who can reach right into our homes through Web chat rooms. It’s scary stuff to be sure. So what do you do? Panic? Ban the Net? Good luck. The Internet is here to stay, and the best thing you can do is arm yourself and your children. First piece of advice: Don’t be complacent--at least some of the scare stories are true. (¶ 2)

Bross (2005) theorized that as ubiquitous access to the Internet increased for children around the world, especially where children had unsupervised access, it was likely that both the positive and negative effects of this accessibility would become more evident. Today’s generation of working families has led to an increase in the lack of parental involvement and supervision of the daily activities of children’s lives. This has been especially true with children and Internet access. Although children spend a great deal of time online, many parents do not have the experience, expertise, or time to supervise properly their children’s online activities. Unlike television, where parents and children are equally skilled in using the technology, the Internet presents new challenges to parents because their children often know more than they do about the medium. Literature supports the fact that discrepancies exist between how parents see their children using the Internet and what their children are, in fact, doing online (Tein, Roosa, & Michaels, 1994; Wang, Bianchi, & Raley, 2005). According to Taylor (2001), 64% of online
teens reported that they had more knowledge about the Internet than their parents did, and 66% of their parents agreed. The result is that we are rearing a generation of children who have had greater immediate unsupervised access to the world than at any other time in our history. Children literally have the world at their fingertips—the good, the bad, and the ugly invading their homes at a shocking rate.

Even though the Internet has become a much used tool in countless schools and homes, it is possible that many children have not fully developed the concepts of appropriate online behaviors. As going online becomes the favorite pastime for millions of young people, teachers and parents need to be vigilant in ensuring that children become skilled at recognizing safe and unsafe situations and evaluating the consequences of their actions. Empowering young people with the knowledge, skills, and motivation to make the right choices in their behavior could protect our nation’s children from potential dangers. The focus of cyber safety needs to be on helping children recognize online dangers and learning appropriate ways to respond to these dangers. Willard (2000) urged that children must develop the skill of making the right choices even when they are not being watched; they should act appropriately outside of regular school hours and beyond their formal education. Willard (2000) declared:

A youngster encouraged to develop a strong, value based character who can function independently and properly now will have a greater, more positive effect of influencing peers and raising the next generation than any outside control… Educating our children is the best method of protecting them. (¶ 16)

*Personal Computers*

“There is a profound social revolution taking place before our eyes . . . It is the home computer revolution, of course” (Home Computer and Family Empowerment, 1984, p. 8). Personal home computers became affordable in the early 1980s to a small number of families. Industry experts greedily saw American homes with children as a billion dollar market for purchasing educational software (Home Computer and Family Empowerment). Nearly 20 years later, 61.8% of households possessed computers (U. S. Department of Commerce, 2004).
Parents, educators, visionaries, and marketing experts marveled at the possibilities computers held for transforming lives and they eagerly embraced the promise computers held for enhancing academics for children (Page, 1999).

**History of the Internet**

The Internet at its inception in 1969, when only one organization in the world was connected to a network, was an experimental project designed to link the military, defense contractors, and university laboratories conducting defense-related studies (Leiner et al., 2003). Over time, additional networks developed to link universities, businesses, research facilities, and individuals around the world. As more computers were added and linked to existing networks, the magnitude of the Internet grew to its current dynamic state.

The World Wide Web, sometimes incorrectly referred to synonymously with the Internet, is actually a service that operates over the Internet, just like e-mail. The Web is simply a way of accessing information shared via the Internet (Leiner et al., 2003). It is important to be mindful that the current state of the Internet is relevant to the moment. New websites and networks are added to the Internet daily. The Internet, as described by the Supreme Court of the United States (1997), represents “a vast library including millions of readily available and indexed publications” containing content “as diverse as human thought” (18 U.S.C. § 2256. 2005, ¶7).

Most web sites contain informative and positive content and provide a gateway to information that most would never be able to retrieve without Internet access. However, because literally anyone with a computer and an Internet Service Provider (ISP) can post content to the web, not all content on the Internet has proven to be enriching.

**Internet Access**

Tapscott (1999) estimated that the Internet attracts 10 million new users every month. Cole (2000) wrote:
The Internet has become the fastest growing electronic technology in world history. In the United States, for example, after electricity became publicly available, 46 years passed before 30% of American homes were wired; 38 years passed before the telephone reached 30% of U.S. households, and 17 years for television. The Internet required only 7 years to reach 30% of American households. (p. 5)

According to the U. S. Department of Commerce (2004) National Telecommunications and Information Administrations report entitled “A Nation Online: Entering the Broadband Age,” 54.6% of U. S. households had Internet access by 2003 and it estimated that in 2005 as many as 70% of American households would be connected to the World Wide Web. This prediction was accurate as documented by Hitlin and Rainie (2005). These numbers were expected to increase exponentially as the Internet doubled in size during the 3-year period from 2003-2006 (Netcraft, 2006). As broadband (high speed) connectivity becomes more widely available and affordable so will Internet access (Nielsen/Netratings, 2004).

The number of children (ages 2-17) using the Internet has grown at an astonishing rate. From 2001 to 2003, the number of children accessing the Internet from home tripled (Loechner, 2003). During the month of August 2002, one of five American children and teens between the age of 2 and 17 accessed the Internet from home (Nielsen/Netratings, 2002).

According to Williamson (2005), children and teens represented the age group with the highest percentage of Internet users. “Already, nearly three-quarters of teens ages 12-17 and 39% of children’ ages 3-11 use the Internet” (Williamson, ¶ 7). Roberts, Foehr, and Rideout (2005) reported that teens spent an average of 48 minutes per day online.

Internet Risks

The Internet has a multitude of uses. The Internet is a powerful learning tool riddled with ups and downs and positives and negatives (Soloway et al., 2000). Turow (1999) described the Internet as presenting a Jekyll and Hyde effect and pointed out, “American parents are conflicted about the Web” (p. 6). Whereas parents want to ensure they have all the advantages necessary to educate their children, and they see the Internet as one of those advantages, they are fearful of the Web’s negative influence on their children (Turow). Wang (2003) concurred with Page
(1999) that parents connected their home computers to the Internet for its educational value; this was the same reason they provided computers to their children. According to Wang, the majority of parents truly believed in the benefits the Internet could offer their children academically. Wang warned they should also be aware that as access to the Internet increases so does the realization of the danger that goes along with it.

Cho and Cheon (2005) agreed with Turow (1999) and asserted that the Internet had a “double-edged sword characteristic for children” (p. 488). Cho and Cheon further suggested that the Internet provided many opportunities for learning while potentially exposing children to unwanted inappropriate content. Lin and Thornburgh (2002) wrote that the Internet was both a source of promise and a source of concern for children. The promise lies in the vast educational resources and information available on the Internet along with its ability to promote collaboration. The concern lies in the vulnerability to harm through exposure to sexually explicit materials, cyber predators, and exploitation children could experience while online.

Roberts (2000) conducted a study in an effort to describe American youth’s access and exposure to available media. He concluded, “American youth devote more time to media than any other waking activity” (p. 8). His study also revealed that the majority of youth’s media exposure occurred while they were alone and out of parental sight.

Research related to negative Internet content revealed that Internet access potentially exposes children to violence, pornography, hate sites, isolation, predators, and commercialism (National School Boards Foundation, 2003). Although everyone accessing the Internet can be faced with harmful or inappropriate material, children are particularly at risk because they often go online unsupervised and are more likely to take part in risky behaviors (Magid, 1998).

The risk factors associated with Internet use for children are plentiful. Minors’ exposure to inappropriate adult material that is sexual or violent in nature has been a great concern (Magid, 1998). The opportunities the Internet offers for social interaction exposes children to additional dangers such as harassment, bullying, violation of privacy, and cyber predators. Media have reported how innocently and readily children give out personal information online
Commercialism entices children to provide personal information that could have both legal and financial ramifications. Children, without training, often do not understand the extent of off-line harassment via mail and telephone contacts that can result from providing personal information by filling out forms online.

The ubiquitous availability of the Internet along with the social nature of children has resulted in the Internet becoming a powerful socialization agent (Cho & Cheon, 2005). Components of the World Wide Web: e-mail, instant messaging, chat rooms, and blogs are of special concern to parents. Children can be exposed to pornographic material and can be solicited via any one of these communication tools without ever surfing the Internet. Chat rooms and instant messaging are activities parents should be particularly concerned about their children accessing. “Children can communicate online in real-time with adult strangers who may not have their best interests at heart” (Consortium for School Networking, 2001). Berson (2000) pointed out that the computer “can’t see you blush” and the anonymous nature of the Internet makes it easy for users to conceal their true identities (p. 158).

**Invasion of Privacy**

Invasion of privacy was reportedly one of the most annoying aspects associated with Internet use. According to LaFerle et al. (2000), marketing analysts have begun to realize the buying power of children and to target young consumers. This is likely because of the rapidly increasing numbers of children accessing the Internet coupled with the disposable income adolescents possess. Large portions of web sites are now dedicated solely to children and many others have links to kid-friendly pages (LaFerle et al.). Many of these sites solicit personally identifiable information from children that infringes on privacy and security issues. As reported by Magid (1999a), in an effort to help protect the nation’s children, the federal government enacted the Children’s Online Privacy Protection Act of 1998 (COPPA). This act requires web sites to obtain parental consent before collecting any information from children under age 13 (Magid, 1999a). Nevertheless, it remains almost impossible to guarantee that children receive
parental permission prior to revealing personal information online. According to Taylor (2001), 30% of young Canadians reported they had signed up for free e-mail accounts using their real names and addresses for registration.

**Online Pornography and Child Pornography**

Unfortunately, the same advances in computer and telecommunication technologies that allow our children to reach out to new sources of knowledge and cultural experiences have also left them vulnerable to exploitation and harm (Freeh, 2006). There are many Internet sites that are inappropriate for children and a number of things available online that minors would be better off not seeing. For many parents, the biggest worry about their children accessing the Internet has been their exposure to pornography and other inappropriate material (Taylor, 2001).

A debate rages over exactly what percentage of web sites actually contain content deemed inappropriate for children. According to Netcraft (2006), an Internet Services Company based in England, there were more than 80 million web sites on the Internet as of April 2006. Some conservative advocates maintain that as many as 72,000 to 100,000 sites contain pornographic material whereas other widely published studies report that only 1.7% of all web sites contain such material (Consortium for School Networking, 2001).

According to Aftab (2005), the problem has been growing so rapidly and uncontrollably that the Internet lawyer, executive director and founder of Wired Kids’.org, has shifted her focus from locating and reporting child pornography available on the Internet to public education and awareness of this appalling phenomenon. According to Foley (2005), Aftab reported that she became so frustrated by scouring the web for pornography and reporting her findings to law enforcement officials only for nothing to be done, that she was now dedicated to public education and teaching good cybecitizenship. Foley's reported statistics authenticated Aftab’s concern.

The National Center for Missing and Exploited Children’s (2004) CyberTipline logged a 39% increase in reports of possession, creation, or distribution of child pornography. This
percentage represented a 7-year trend in rising reports of child pornography.

Producers of “porn sites” are notorious for including a wide range of key words in their Meta tags (key words) so that search engines retrieve their sites and increase their exposure. Taylor (2001) suggested that pornography site developers often linked to sites they knew would be accessed by adolescent boys such as game sites or sites where they might access cheat codes for video games. Using a dot com vs. a dot org domain has been another trick reportedly used by web developers of tasteless sites. Simply changing the domain of a popular site might lead Internet users to unsolicited offensive material as evidenced by the distinctively different content Internet users receive when typing .com rather than .gov after the URL for the United States government White House website.

Foley (2005) described the growing concern among cyber safety experts that the “public is becoming desensitized to the issue of child pornography” (p. 2). Evidence for this concern can be seen while viewing the suggestive photos teens routinely post on their MySpace site and other social networking sites. Many of these photos are sexually explicit and fit the description of child pornography (Foley). Loechner (2003) estimated that 2 million American children ages 6-17 had personal websites. This figure represented 10% of the 23 million children who had Internet access in 2003.

Victimization

For children online, the threat of being targeted by cyber predators or approached for sexual solicitation was perhaps the most frightening result of Internet use. In June 2000, a survey of youth ages 10 to 17 that used the Internet regularly revealed that one in five received a sexual solicitation over the Internet (Finkelhor, Mitchell, & Wolak, 2000). This same report also provided some disturbing statistics about other dangers lurking on the information superhighway such as:

1. one in four youths reported accidental exposure to pornography;
2. one in 17 youths have been threatened or harassed online;
3. only one quarter of the youth who encountered situations that made them uncomfortable shared the experience with a parent;
4. only 17% of the survey participants were aware that agencies existed where Internet crimes could be reported; and
5. only one third of parents in households with Internet access reported using any type of parental control to protect children from unwanted or inappropriate materials. (p. 9)

The survey revealed a great deal about the frequency of the real dangers lurking on the cyber streets that youth cruise each day. It also provided alarming information about the extent to which children failed to report distressing and unsolicited episodes.

Although the perils of the Internet are many, the potential for victimization is perhaps among the most dangerous threat to youth online. According to a report released in 2000 by the National Center for Missing and Exploited Children entitled "Online Victimization: A Report on the Nation’s Youth," one in five children have been approached by perpetrators and one in four have been unwillingly exposed to pornography (Finkelhor et al., 2000). Unwilling exposure takes place when Internet users search for general topics such as toys. Not only will search engine results include legitimate children’s toy stores, they also often include links to adult toys or other sexually explicit sites. Children can unknowingly click on these adult-oriented links and be innocently exposed to inappropriate material, specifically pornography (Strikeforce, 2006).

Mitchell et al. (2001) conducted a survey in an attempt to ascertain the risk factors for and the impact of online sexual solicitation of youth. One risk factor the authors investigated was how the variable of being labeled “troubled” impacted a teen’s likelihood of being solicited. The report found although the risk factor for being solicited was higher for troubled youth, 75% of the sexually solicited youth were not troubled. Their report also revealed that girls and older youth (14-17 years) were more likely to be solicited. Mitchell et al. (2001) acknowledged that although the numbers of reported sexual solicitations of youth were high, reports of actual assaults were a small number. Albeit, a single report of an assault linked to Internet usage
should be enough to trigger a vigilant campaign to protect the youth around the globe.

**File-Sharing Programs**

File sharing, also known as peer-to-peer technology, allows users to search for and copy files from other Internet users' computers. The most common use of this technology has been to swap digital music files or MP3s. Children have welcomed this technology and routinely downloaded music rather than purchase it in the form of CDs from music stores. Taylor (2001) reported that 65% of students in grades 4 to 11 downloaded music daily.

Napster, one of the first peer-to-peer file-sharing networks and a favorite music web site used by 70 million at its peak (U.S. House of Representatives, 2001), received massive media attention and criticism from the music industry. Music industry officials screamed about Napster and its infringement on copyright laws. Music sales reportedly decreased as a result of Napster's popularity because music lovers (teens in particular) could freely download and create their own CDs comprised of their favorite artists, thus, halting their need to purchase music in stores (U.S. House of Representatives).

The record industry's successful efforts to stop Napster only spawned the birth of a new generation of file-swapping sites. Today, the popularity of Internet file-sharing programs has experienced an explosive growth (U.S. House of Representatives, 2001). Peer-to-peer file sharing networks are no longer limited to music files but can also be used to share any type of file, including video files. Taylor (2001) warned that the use of file-sharing programs allowed access to pornographic material that could not be blocked by filtering programs. He further cautioned that using this technology exposed users to “spyware” or “thiefware.” Once installed on computers, spyware programs automatically create their own links sending users involuntarily to advertising sites--and in some cases, pornography sites.

Representative Waxman and Representative Largent, in a report prepared for the Special Investigations Division of the minority staff of the Committee on Government Reform, shared information detailing how file-sharing programs were being used to transfer pornographic...
material (U.S. House of Representatives, 2001). The report summarized other damaging issues associated with using file sharing programs such as the vulnerability of swapping viruses, exposing minors to undesirable chat rooms, and encouraging copyright law violation by sharing copyright-protected music. File-sharing programs make access to sexually explicit and pornographic materials free and easy to obtain. Accessing graphic content such as X-rated videos is primarily available on commercial sites that require payment via a credit card. File-sharing programs alleviate the need for credit cards because all content is free--providing children with easy access (U.S. House of Representatives).

Social Networking

Reportedly, a relatively new phenomenon taking off across the Internet is social networking. Sites such as MySpace.com, Facebook.com, Classface.com, and Xanga.com are all examples of social networking sites that provide free forums for Internet users to electronically communicate with millions of other Internet users. According to Hempel (2005), teens are flocking to these sites as a way to establish their social identities. Safford (2006) of MSNBC news described social networking sites as a “cyber combination of a yearbook, personal diary, and social club” (p. 1).

Launched in 2004, MySpace.com has become one of the most visited social networking sites on the Internet today receiving more hits (access) than Yahoo, Facebook, Craigslist, and LiveJournal (Staats, 2006). Originally introduced as a no-cost way for musicians to promote their music, MySpace has grown into a global social communication web site. MySpace.com provides a forum for members to create personal web pages and fill them with content such as pictures, music, poetry, art work, video clips, and blogs [online diaries] (Trotter, 2006).

MySpace.com has boasted 55 million users since its January 2004 launch and has gained up to 180,000 new members daily (Staats, 2006). Duffy (2006) reported that MySpace.com was the number two most trafficked spot on the Internet. The exploding popularity of MySpace has triggered fear among parents, law enforcement officers, school officials, and cyber safety experts
Whereas some argue that these social sites offer a great platform for users to showcase writings and other forms of self-expression, others are concerned with the potential dangers that could arise from the information members post to these types of sites (Trotter, 2006).

Cyber safety experts have reported that many teenagers were posting personally identifiable information on their MySpace sites, making them possible targets for sexual exploitation, harassment, cyberbullying, and other dangers (Wolak, Mitchell, & Finkelhor, 2003). A 2003 national survey revealed that 25% of Internet users ages 10-17 had formed causal online friendships as a result of social networking (Wolak et al., 2003). The Crimes Against Children Research Center reported, in a 2001 survey, that one in five children using the Internet had received an unwanted sexual solicitation during the past 12 months (Finkelhor & Hashima, 2001). These surprising numbers should be alarming—especially to parents. Almost daily, news reporters have detailed incidences of dangerous and sometimes tragic situations that have occurred as a result of relationships formed or because too much information was posted on MySpace or other social networking sites.

Dyril (2006) warned young people about their online activity not only as it related to their safety but also their academic and professional lives. According to Dyril, college officials and employers reported searching the web for content posted by potential students or employees to discover more about individuals and their integrity.

**Blogs**

Places to write down one's feelings, to share the good things that have happened throughout the day, to vent frustrations about life, to record one's most intimate feelings and experiences, and to share hopes and dreams for the future are now called blogs. At one time, that place was a personal diary or journal; now, at least among today’s teens, that place is a blog—open for the world to see and read. Blogs, hosted free of charge, are journals posted on the Internet and can be authored by anyone, about anything, and at anytime (i-safe America, 2006).

According to a Pew Internet and American Family Life Project survey, approximately
four million children between the ages of 12 to 17 kept a blog and twice this number read them (Lenhart, Simon, & Graziano, 2001). What sets blogging apart from traditional diaries and journals--beyond the fact that they are no longer kept privately under lock and key--is the format they take on the web. Blogs are posted in reverse chronological order with space for comments from the readers (i-Safe America, 2006). This format provides opportunities for readers to continue ongoing dialogues--clearly appealing to teenagers who are by nature social creatures. According to i-Safe America, blogging has become the favorite teen pastime.

Sullivan (2005) maintained, “Blogs and community sites are a great source of entertainment and networking for teenagers” (¶ 6). In fact, according to Richardson (2006), blogging advocates defend the power and potential these online communication tools have to support learning and encourage global collaboration (Richardson). A small number of educators have used the power of blogs to create online forums for classroom discussions and to build students' skills in writing and expression. According to Richardson, blogs motivate students, encourage active engagement in reading, and promote higher quality work.

Although blogging could nurture important social skills by providing teens with an opportunity to make friends and form relationships with people throughout the world and motivate them academically, it is not without dangers. Teens often post personal information while blogging that sexual predators can then use to create a profile of the author (i-Safe America, 2006). Simple details such as those posted about hobbies, hangouts, and friends could be enough information for a sexual predator to locate the author of a blog. When adolescents innocently share the type of sport and position they play along with their team name and number, they have provided all the information a predator might need to create a profile and locate the poster. It is important for teens to understand the large-scale exposure of blogging and social networking and learn to use these online tools cautiously.

Cyberbullying

Cyberspace has become the latest place to torment victims or to cyberbully (Shariff,
Cyberbullying and harassment have become issues associated with blogging and teenagers. The Center for Safe and Responsible Internet Use (2000) classified cyberbullying as sending or posting harmful or cruel text or images using the Internet or other digital communication devices. According to Shariff, “Cyberbullying has emerged as a form of harassment that is a product of technological change” (p. 223).

Schools across the nation have reported incidences where students have used blogs and personal web sites to bully and harass fellow students (Blair, 2003). Bullying itself is not new. Blair contended that cyberbullying was much more damaging than other bullying tactics that have traditionally occurred in isolation in the hallways and on the playgrounds of school campuses. According to Blair, cyberbullying can take on several forms. He explained:

One student sends a threatening e-mail to another, and then forwards it to additional people; several students log onto America Online’s Instant Messenger simultaneously and “slam” another; bullies set up derogatory web sites dedicated to one or more victims. In the case of instant messaging, subscribers can have a real-time conversation. (p. 6)

Cyberbullying potentially involves millions of individuals--anyone and everyone with Internet access. As cited in Ascione (2005), Ted Feinberg, the assistant executive director of the National Association of School Psychologists, remarked that cyberbullying was unrelenting and that the very nature of technology allowed it to go on continuously.

Paulson (2006) wrote about a Chicago high school student who used a blog site to make violent threats against a teacher. The author pointed out another situation where other Chicago high schools students used blogging to malign African Americans and homosexuals.

Schools in particular have little recourse when it comes to punishing those who engage in harassment or cyberbullying if the acts do not disrupt the educational process. School administrators have reported that most cyberbullying exchanges occur in the privacy of homes, making it difficult for school officials to monitor (Blair, 2003). Multiple reports were available where extreme incidences of cyberbullying have forced students to change schools or worse--students were being physically assaulted as the bullying progressed (Staats, 2006).

Anonymity appears to be the appeal for cyberbullies and those who harass and lurk...
online for victims. In an *eSchool Newsonline* article, Ascione (2005) wrote, “Cyberbullies are much more likely to do or say things online that they normally wouldn’t in person, because electronic means of communication provide invisibility” (p. 1). The bullying might be worse in the virtual world because the bully is often not able to see the actual effects of his or her cruel words on others (Ascione). Although the anonymity of online communication can be a positive thing by providing equality and certain freedom for children with disabilities or low self-esteem, it can be difficult for children to understand that they do not “really” know with whom they are communicating (Taylor, 2001). Communicating via the Internet makes it easy for predators to hide behind their monitors and keyboards and to pose as friends. According to Shaw (2002), this anonymity has the effect of dehumanizing the participants and reducing them to a “string of text on the screen” (p. 36).

*Internet Tools*

The Internet has changed the way one communicates through the digital tools it offers. The digital world has broken down the barriers that used to inhibit collaboration and communication (Fryer, 2005). Communication software such as instant messaging provides free and unlimited text-based communication through a wide range of electronic devices. Anyone with a computer or cell phone can instantly send a text message to anyone in the world at any time. No longer does one have to travel to communicate with someone in person, mail letters and wait days for a reply, or pay for long distance phone charges. Anyone with Internet access can e-mail, text message, and send instant messages or communicate via voice transmission over the Internet. Internet-based telephone software and services *Skype* and *Talk Google* have extended communication to voice transmission allowing users to chat via a microphone and a computer and avoid long distance phone charges. Things that seemed impossible a decade ago are realities today.

Today’s generation of children is immersed in a digital world. According to Greenspan (2003), a study conducted by America Online/Digital Marketing Services found that students
from ages 7 to 12 reported favorite online activities such as: (a) playing games 87%; (b) homework and conducting research for school 60%; (c) sending e-mails 53%; (d) watching videos, movies, or cartoons 36%; (e) listening to music 63%; (f) instant messaging 33%; (g) reading about celebrity and music group information 27%; and (h) reading about movies and TV shows 27% (Greenspan).

Email

Email is reported to be the most widely-used service provided by the Internet (ParentLink, 2006). Email enables an individual to send an electronic message--generally akin to a note or letter--to another individual or to a group of addressees at a much faster pace than traditional postal delivery system. Of teenagers surveyed, 92% from ages 12 to 17 sent or read e-mail (Lenhart, Rainie, & Lewis, 2001).

Instant Messaging

Instant messaging, or IM as it is known, has become a popular technology embraced by today’s digital natives as evidenced by the percentage of teens who use the technology. According to a 2001 Pew Internet and American Life Project study, Teenage Life Online, 74% of teens used instant messaging as a primary form of communication and 69% used instant messaging several times a week (Lenhart, Rainie, et al., 2001). Instant messaging provides an opportunity for users to simultaneously communicate electronically with multiple users across a network connection. It provides a way for children to communicate with all their friends at once. “A fifth of online teens said that instant messaging was the main way they dealt with friends” (Lenhart, Rainie, et al.).

The young generation of today is immersed in a digital lifestyle and has eagerly taken advantage of all that the digital world has to offer by mastering multi-tasking. Indeed, this "instant-message generation" has given new meaning to multi-tasking. Farmer (2005) depicted a common scenario of a teen immersed in multi-tasking:
While working on their homework, members of this younger generation are likely to have their computer on and be connected to IM with one or more chat conversations active, have an MP3 player with earplugs attached to their head, be eating a snack, and oh yes, have the cell phone nearby (set to vibrate, since they would not hear the ring over the volume of the MP3 player (p. 52).

*Chat Rooms*

The Teenage Life *Online* survey also revealed additional data regarding what activities teens have participated in while online. According to the survey, 55% of teens from ages 12 to 17 visited chat rooms; of these, 68% got news and 53% downloaded music (Lenhart, Rainie, et al., 2001).

According to Allen (2004), the high percentage of children who visit chat rooms should be of particular concern to parents, educators, and law enforcement officials. Many reports of abductions of teens and preteens have been traced back to an initial contact with the abductor in an Internet chat room. According to the Internet Crimes Against Children Task Force, computer chat rooms or newsgroups offer an online hunting ground on which to solicit children for sexual activity (Mitchell et al., 2003). Magid (1999b) reported that chat rooms, newsgroups, and e-mail programs were among the most dangerous places for children on the Internet. Young people who stay away from chat rooms and are cautious about corresponding with strangers on the Internet appear to be solicited at lower rates (Mitchell et al., 2003).

*Adult Supervision*

“A child or teenager having unsupervised access to the Internet is open to a world of harmful risks that can be both psychologically damaging and physically abusive” (Shoniregun & Anderson, 2003, p. 2). Extensive research has shown that dangerous incidents stemming from children interacting with the Internet and chat rooms usually involved unsupervised access. News reports of abduction or murder of children, solicitation of children for sexual acts, and a recent plot planned by five Kansas teenagers to recreate the tragedy of Columbine High School massacre have awakened society to the realities of the dangerous incidents that are taking place
Taylor (2001) revealed that 71% of Canadian parents thought they knew a “great deal or a fair bit” about their child’s Internet use whereas 70% of the children reported that their parents knew very little or nothing about their online use. This same study revealed that 30% of 9- to 10- year-olds reported visiting private and adult-only chat rooms and 72% of 15- to 17-year-olds admitted the same. Of those surveyed, 85% admitted that such activities usually occurred at home and while they were unsupervised. According to Taylor, 81% of the adolescents had e-mail accounts with 44% having e-mail accounts their parents were not aware existed.

**Parental Mediation**

Families play an important role in helping children process the information they contact while interacting with media. “Literature on adult mediation has repeatedly shown that children’s learning from media can be facilitated, channeled, or counteracted through an adult who offers comments and interpretations of content” (Valkenburg & Soeters, 2001, p. 672). Austin (1993) suggested that active parental mediation affected children’s interpretations of media content. Austin further argued that parents who were actively involved in their children’s interaction with media and spent time communicating values, realities, and concepts with their children were successful in influencing the content their children chose to access through media.

**Teaching Internet Safety**

A fair amount of research regarding efforts to ensure the safety of children while using the Internet has been published (Adelman, 2004; Berson, 2000; Berson, Berson, & Ralston, 1999; Cho & Cheon, 2005; Finkelhor et al., 2000; Wolak et al., 2002, 2003). A quick web search for Internet safety awareness and cyber safety revealed an exhaustive list of organizations that are dedicated to promoting cyber safety awareness.

Although there are a myriad of programs for teaching cyber security, ethics, and safety, there is no national coordination. The Cyber Security Industry Alliance (2005) argued that there
was far too much duplication and dispersion of cyber awareness available with “no clear leaders, so there is no clear place for parents and teachers to learn what they must do” (p. 3). “Too many web sites about cyber awareness are shouting for the attention of teachers, parents, and children” (Cyber Security Industry Alliance, p. 4). The Alliance argued that the problem lies not in the amount of information available but in the waste in resources owing to the lack of national collaboration.

**Filtering Software**

The software market is flooded with filtering software designed to block access to inappropriate web sites. Mitchell et al. (2005) reported that twice as many parents did not use “guard” software as those who did use “guard” software and that 5% of parents had discontinued prior use of software designed to protect their children while online.

In contrast, Internet filtering software is very popular in American schools because its use is tied to federal funding. In 1996, Congress introduced a program to help reduce the digital divide and ensure that all schools, regardless of their economic status, had affordable access to advanced telecommunications. The program, Education Rate (E-rate), allowed eligible schools and libraries to receive discounts of 20% to 90% on telecommunication services, Internet access, and internal connections necessary for deploying technology into the classroom (Roberts, 2000). Among the requirements states must have met in order to apply for and receive E-rate funding have been the establishment of an Internet safety policy addressing: (a) restriction of access to inappropriate material by minors; (b) safety and security of minors using e-mail, chat rooms, and other forms of electronic communication; (c) unauthorized access; and (d) unauthorized disclosure of personal information (Thomas, 2000). Many school systems have established policies against allowing children access to school based e-mail accounts, chat rooms, and instant messaging (Meeder, 2005).

In 1998, Congress enacted the *Children’s Internet Protection Act* (CIPA) that focused on the recipients of Internet transmissions (McCarthy, 2004). As a result, schools and public
libraries were required to install filtering software on every Internet capable computer as a condition of receiving federal funding. Filtering software has become the method of choice among education policymakers as a means to protect minors from the perils of the Information Superhighway.

Willard (2000) cautioned parents and schools in particular not to perceive filtering software as the only way to address concerns about safety and responsible use. The author warned that this dependency might lead to a false sense of security and complacency among those responsible for educating children. Willard (2000) observed strategies found in schools that did not have problems with children experiencing the "darkside" of the Internet. These strategies were: (a) establishing good policies and plans; (b) teaching students to engage in safe and responsible behavior; (c) engaging students in quality educational uses of the Internet; (d) placing computer monitors in easily visible locations; and (e) employing supervision, monitoring, and discipline.

According to Foley (2005), Parry Aftab, the executive director of Wiredkids.org, recommended teaching children to use the “filter between their ears” as a way for them to learn good judgment when going online (¶ 1). The method recommended by WiredKids.org was to educate, communicate, and supervise (Wolinsky, 2000).

Other child-safety experts (Whittle, 2004; Willard, 2000) supported Aftab’s notion about teaching children to protect themselves and avoiding reliance on technology tools for protection. According to Willard (2002), helping children and teenagers learn to use the Internet safely and productively involved: (a) teaching them about potential dangers and how to avoid them, (b) setting standards and expectations for responsible behavior, (c) teaching effective decision-making skills including the ability to recognize dangerous situations and know how to respond appropriately, and (d) motivating them to behave in a safe and responsible manner. Willard (2000) warned that children must be responsible for the choices they make and accountable for what they choose. Whittle recommended monitoring children’s online activities in addition to establishing expectations as an approach to teaching children about online safety.
The Role of the Parent

According to Turow (1999), “American parents are conflicted about the web” (p. 6). Turow pointed out even though parents wanted to ensure that their children had all the advantages necessary for education and they viewed the Internet as one of those advantages, they were also fearful of the Web’s influence on their children (Turow). Parents often lack the technical knowledge necessary to provide controls or rules that can help protect their children from online danger. As reported by Wang (2003), parents originally purchased home computers for educational purposes and they gave the same reason for connecting their home computers to the Internet. According to a Pew Internet and American Life project survey, 55% of parents reported the Internet was essential to their children’s success and 87% of children reported it helped with their homework (Lenhart, Simon, et al., 2001). It is vital for parents to realize that simply providing access to the Internet does not ensure educational benefits for their children. Wang pointed out that providing children with unguided Internet access could undermine their academic achievements by “wasting a vast amount of time and energy their children might otherwise invest in their academic studies” (p. 277).

“While the Internet has presented new issues to sort through and new ground to tread, it surely is here to stay,” reported Peters (2003, p. 17). “Relax- but stay informed!” was the suggestion Peters offered to parents (p. 19). This author maintained that parents must know what their children are doing and be vigilant about monitoring their online activities. Peters recommended several steps parents should take to help keep their children safe while online: (a) know your child’s strengths and weaknesses, (b) set guidelines, (c) use tools such as parental controls and filtering software, (d) introduce educational sites, and (e) co-view or sit down with your child while online.

Parental supervision was among the best strategies reported for protecting children from online dangers. Amato and Fowler (2002) found that high levels of parental monitoring (supervising children’s activities, restricting the amount of television or the types of television programs children watch) combined with other parenting practices were associated with better
grades in school and lower levels of deviance among children and adolescents. Pettit, Laird, Dodge, Bates, and Criss (2001) reported parental monitoring as being associated with fewer delinquent behavior problems in early adolescence.

The Role of the School

Berson and Berson (2003) suggested that children were often naïve about the dangers associated with the Internet and that their parents lacked the familiarity to address the dangers. Furthermore, they suggested that few educators felt prepared to ensure the safety of children when they were accessing the Internet. “Nonetheless, the safety and well-being of children are of paramount importance to schools, and educators have an important role to play in addressing the lapse of preventive intervention” (Berson, Berson, & Berson, 2002, p. 106).

Willard (2000) suggested that schools were “universal locations” where children were learning about and accessing the Internet and that schools "have the ability to partner with parents, libraries, community centers, and other organizations to create a community-wide effort to promote safe and responsible use of the Internet" (p. 3).

The wellbeing of children should be the greatest concern of educators. By providing Internet access, schools are routinely faced with the challenges and legalities of Internet use (Willard, 2002). Many school systems across the nation have written policies and procedures to protect themselves from litigation and to comply with federal requirements for federal subsidies. Countless school policies have been written to address issues such as: (a) illegal copying and file-sharing, (b) freedom of speech and privacy, (c) web site appropriateness, (d) network security, and (e) virus contamination. These concerns must be addressed while looking out for the educational interests of students (Berson & Berson, 2006).

Educators, perhaps, are in the best position to teach students how to use the Internet in a safe and responsible manner because of the extended daily contact they have with young people and the influences they have on families. Parents play an equally important role in educating and monitoring their children’s online behavior. Much of the literature published by Internet safety
programs emphasized the need to communicate safety issues with parents and to involve parents in the teaching of Internet safety with their children (Aftab, 2005; Magid, 1998; Whittle, 2004; Willard, 2000). Schools are in a position to partner with parents, libraries, community centers, and other organizations to promote a community-wide Internet safety awareness program.

The National School Boards Foundation (2003) outlined several ideas for schools to keep students safe and smart online while expanding educational opportunities. These suggestions included ensuring that all stakeholders be involved in the decision-making process, taking a balanced approach to the Internet (set rules and limits and guide to good content), implementing Internet safety campaigns, training teachers and parents about effective use of the Internet, maximizing the communication potential of the Internet, and engaging the community. “School leaders must consider the major roles that parents, families, and even peers play in children’s use of the Internet…To be most effective, policies and practices need to be developed in collaboration with parents” (National School Boards Foundation, p. 4).

**Summary**

Access to the Internet is growing by 10 million users each month (Guy, 2006). It has been estimated that there are more than 80 million web sites on the Internet and that approximately 972 million people are accessing them at any given time (Guy). Access to the Internet provides unlimited opportunities for users “to engage in a variety of cognitive, intellectual, and social activities” (Wang, 2003, p. 272). The Internet provides today’s students with “an explosion of resources ranging from the sublime to the ridiculous to the downright dangerous” (Owens, 1999, ¶ 1).

If Americans are to realize the full potential of the Internet, they must also understand how to best protect their children from the dangers they can encounter while online. Parents have a major role to play in protecting their children from the perils of the Internet. Teaching children to be their own guardians can be an effective approach to protecting them from harm. Parents can surf together with their children, model appropriate use of the Internet,
and discuss with their children responsible uses of the Internet. Parents need to consult with
teachers to find out what children learn in school so that home Internet activities can support
their academic achievements. Providing children with Internet access requires a long-term
commitment with parents actively involved in their children’s online activities.

Educational institutions also play a major role in protecting children and educating them
about recognizing potential dangers they might face online and motivating them to behave
responsibly. Schools can form an alliance with parents in protecting children against the fear of
crime and from becoming victims of crime while online. Schools can provide advice to parents
about Internet safety, references to educational web sites, information about the academic
activities of children at school, and collaborate with parents to ensure that children are making
safe and responsible choices when engaging in online activities.

By understanding children’s reported online behaviors, increasing awareness of the
potential dangers in the virtual world, and educating parents, students, teachers, and communities
about Internet safety, great strides can be made toward realizing the potential of the Internet to
positively and uniquely support learning for all users. Today’s digital-world children need to
understand the issues of right and wrong as related to the Internet world. It is the responsibility
of the adults who care about children to help them learn how to identify dangerous situations and
how to behave appropriately.
CHAPTER 3
RESEARCH METHODOLOGY

This chapter describes the research methodology and procedures that were used in this study to examine, from the child’s perspective, the uses of the Internet by students in sixth, seventh, and eighth grades based on gender, grade in school, and household placement of the computer. It also describes the methodology used to identify the types of parental supervision and monitoring of children’s Internet experiences parents employ and to gain insight into children’s perceptions of unsafe Internet practices. This chapter is organized into the following sections: research design, population, instrumentation, data collection, data analysis, research questions, hypotheses for crosstabulated tables, and a summary.

Research Design

A quantitative research design was used in the study and survey research was conducted to identify the online behaviors and Internet safety knowledge of children in sixth, seventh, and eighth grades. A survey method was chosen as quantitative data were used to describe the “trends, attitudes, and opinions of a population” (Creswell, 2003, p. 153). The instrument used in this study was a self-administered online survey that collected data on middle school students’ (aged 10-14) reported online behaviors and Internet safety knowledge as well as parental supervision and monitoring patterns (see Appendix A).

Permission was sought from the director of schools, parents, and students to participate in the research study (see Appendices B, C, & D). With permission, implementation of the student questionnaires took place in computer labs at each middle school site.

Population and Sample

The population of the study consisted of all sixth-, seventh-, and eighth-grade students in a rural school system in East Tennessee who had home Internet access. A total of 3,100 students
were enrolled in the sixth, seventh, and eighth grades in the school system. In order to accrue a sample estimate of plus or minus 5%, with a 95% level of confidence (Sawyer, 1982), a sample of 342 participants was suggested.

A combination of purposeful and cluster sampling was employed to select a sample size of 814 sixth-, seventh-, and eighth-grade student participants. The population was derived from those students who had home Internet access and who used the Internet at least twice weekly. With the intent of increasing the return rate of questionnaires, cluster sampling was used rather than randomization as school principals were asked to identify two intact classroom groups from each of the sixth, seventh, and eighth grades at each school to participate in the study. To ensure a high rate of return, each student who returned a consent form was provided with a piece of Laffy Taffy candy. Eight hundred fourteen consent forms were distributed to students in grades six, seven, and eight in the selected school system. Four hundred forty-six consent forms were returned, which exceeded the minimum requirement of 342 participants in addressing the 95% level of confidence. All 446 students who returned parental consent forms participated in the study by completing the study questionnaire. This figure represents a 55% rate of return.

The ages of the students were chosen based on developmental theories and current research. At the end of middle childhood, social identity, peer interactions, and relationships become increasingly important (Durkin, as cited in Valkenburg & Soeters, 2001). According to Seigler (1991), children in this age group (10-14 years) increase their ability to think in much more abstract terms. As a consequence of their maturity, children become more interested in the communication purposes of the Internet, such as e-mail, chat, and instant messaging (Valkenburg & Soeters, p. 655). According to the Pew Internet and American Life "Teens and Technology Report," the number of students using the Internet “surges at the seventh grade mark” (Hitlin & Rainie 2005, ¶ 8). “While about 60% of sixth graders use the Internet, by seventh grade the number jumps to 82%" (Hitlin & Rainie, ¶ 8). Being cognizant of these statistics, the choice was made to include students in the sixth- to eighth-grade range.
**Instrumentation**

The instrument used in this study was a self-administered online questionnaire addressing four main issues: Internet usage, knowledge of Internet safety, unsafe practices, and parental supervision and monitoring (see Appendix A). The survey was a modified paper-based instrument previously used by Wells (2005) at the University of New Hampshire. The researcher contacted Dr. Wells and requested permission to use and modify the instrument, and she agreed. The questionnaire contained 56 questions divided into four sections: there were 8 yes or no questions that elicited student opinions on each statement; 22 questions measured on a frequency rating scale: daily, once or twice a week, once or twice a month, almost never, and never; 2 demographic questions regarding gender and grade in school; 10 closed-form multiple-choice format questions; and 14 questions measured on a Likert-type scale: safe, sometimes safe, and never safe.

Questions 1 and 2 of the study questionnaire asked for basic demographic information. Questions 3 and 4 pertained to where the home computer was located and the frequency in which the Internet was used. Questions 5-8 elicited information about student’s use of e-mail, personal websites, and screen names. Rules and parental monitoring and supervision were addressed in questions 9 and 33-36. Questions 10-32 identified the frequency in which students participated in specific online activities. The participants' perceptions of safe online practices were addressed in questions 36-50.

Two panels of experts, one adult panel and one child panel, critiqued the questionnaire to evaluate any weaknesses and to offer suggestions concerning the instrument’s content validity (Gall, Borg, & Gall, 1996). The adult panel of experts consisted of adults selected on the basis of their expertise and interest in endorsing Internet safety education to students. Five of the adult experts were seasoned educators who represented various roles in educating young people and with an expertise in information technology and a commitment to educating and protecting children. Three members of the adult panel were parents of children in middle grades (one sixth, one seventh, and one eighth). The child panel was comprised of middle-school aged students.
The adult panel of experts served as peer reviewers and helped to ensure clarity, content validity, and reliability of the survey instrument. Minor modifications were made to the questionnaire following the review by the adult panel. Once the adult panel reviewed and accepted the survey instrument, the child panel of experts was asked to review the instrument for clarity, content, validity, and reliability. No changes were made as a result of the child panel review.

Data Collection

Before the study was initiated, approval was obtained from the Institutional Review Board, the director of schools, and principals in each of the participating schools. A packet of information was delivered to each teacher identified by the school principal that explained the study's procedures and included all the necessary consent forms and student incentives.

Classroom teachers distributed consent forms containing the study's information to all sixth-, seventh-, and eighth-grade parents whose children reported having home Internet access (see Appendix C). Students who returned parental consent forms were then given the opportunity to participate in the study by also signing consent forms (see Appendix D) and completing the online questionnaire. Parents' and students' consent forms, distributed in advance, were collected prior to students completing the survey.

The students, with parental consent, completed the online questionnaires in their school’s computer lab under the supervision of the classroom teacher. Parents and students were assured that all information gathered from responses to the survey would be kept confidential, anonymous, and reported in summary form only. Truthful responses were encouraged by explaining to parents and students the confidential nature of the questionnaires and that there were no right or wrong answers.

By using online surveys, confidentiality and anonymity was addressed. Students completed the surveys using computers connected to the school system's local area network (LAN) that restricted access only to those computers directly connected to the LAN. This
process eliminated the need for e-mail addresses or any other possible identifiers of participants. It also guaranteed anonymity because no one, including the researcher, was able to identity a specific child’s responses to the online survey.

Data Analysis

The findings of the study were analyzed using Statistical Program for Social Sciences (SPSS) that is designed to analyze and display data (Gall et al., 1996). Because of the exploratory nature of this study, several types of analysis were used. Descriptive statistics such as frequency counts and percentages were used to summarize the data from research questions one, two, and three describing the types and frequency of unsafe activities children report participating in online and the types of parental supervision and monitoring of children’s Internet use that parents employ. Demographic data were collected in questions 1-4. Questionnaire items 5-17 and 31 addressed research question one. The information identified in items 33-36 addressed research question two while items 37-50 addressed research question three. The data were placed into tables and charts where trends and percentages could be compared, allowing the researcher to draw conclusions about the research questions.

Chi-square statistics were used to evaluate the null hypotheses in research question four and question five examining the differences and relationships between the different variables identified in the survey. The variables included gender, grade, household placement of the computer, children’s knowledge of Internet safety practices, and their actual Internet practices. Questionnaire items 18-30 and 32 addressed research question four and research question five was addressed in items 18-30, 32, and 37-50.

The following research questions and corresponding null hypotheses were formulated to guide the study:

Research Question #1: What are the self-reported online activities of children in sixth, seventh, and eighth grades?
Research Question # 2: What types of parental supervision and monitoring of their Internet use do sixth-, seventh-, and eighth-grade students report?

Research Question # 3: What are students’ perceptions of the safety of certain types of online behaviors?

Research Question # 4: Are there differences in children’s reported unsafe online activities based on (a) gender, (b) grade in school, and (c) household placement of the computer?

Hypotheses 4.1-4.2: There are no differences in the frequency of the reported unsafe online activities based on (a) gender, (b) grade in school, and (c) household placement of the computer.

Research Question # 5: To what extent, if any, are there relationships between children’s knowledge of unsafe Internet practices and their actual Internet practices?

Hypotheses 5.1-5.14: There is no relationship between children’s knowledge of unsafe Internet practices and their actual Internet practices based on gender and grade in school.

Summary

The study’s results were derived from quantitative data obtained from the survey instrument that examined the experiences of children of ages 10 to 14 years with the Internet. Both descriptive and inferential statistics were used to analyze the data. Results from the analysis are presented in Chapter 4.
CHAPTER 4
ANALYSIS OF DATA

The purpose of this study was to examine, from the child’s perspective, the use of the Internet by students in sixth, seventh, and eighth grades and the extent to which they place themselves at risk. I also explored the types of parental supervision and monitoring of children’s Internet activities parents adopt as well as student perceptions of the safety of specific online behaviors. This study was guided by five research questions presented in Chapter 1 and the corresponding null hypotheses introduced in Chapter 3. The research questions and the null hypotheses are addressed in this chapter.

Demographics

The research instrument included a demographic component collecting information about the participants' gender, grade, and household placement of the computer. The population consisted of 48.9% (218) males and 51.1% (228) females. Of the participants, 35.4% (158) were in the sixth grade, 28.7% (128) were in the seventh grade, and 35.9% (160) were in the eighth grade. Of the 446 participants, 68.2% (304) indicated that the computer they used most often was located in a room where their parents or guardian could see what they were doing. Alternatively, 30% (134) reported that the household computer was in a room where they could close the door and use the computer in private. Eight participants (1.8%) did not answer the question regarding household location of the computer.

Analysis of Research Questions

Both descriptive statistics and inferential statistics were used to analyze the data gathered from the study. Following is a summary of the demographics of the study's participants along with an analysis of each research question.
Research Question #1

What are the self-reported online activities of children in sixth, seventh, and eighth grades?

Descriptive statistics such as frequency counts and percentages were used to present a summary of the characteristics of the data for this research question.

Of the total, 15.9% of respondents calculated spending more than 2 hours per day on the Internet. Twenty-six percent (116) of the students admitted spending 1 to 2 hours per day on the Internet, while 25.1% (112) reported spending 30 minutes to 1 hour per day on the Internet. Spending less than 30 minutes per day online was reported by 30.7% (137) students. Ten participants failed to respond to this question.

More than half (62.6%) of the respondents’ reported having their own email address. Of those who had their own email address, 21.5% reported having an email address their parents did not know about and 60.2% reported at least one unsafe practice associated with their email address. Table 1 shows students with their own email address reported that 38.4% use either their first or last name, 15.8% list their favorite sport or activity, and 13.6% use their date of birth as part of their email address.

Table 1

<table>
<thead>
<tr>
<th>Included in E-Mail Address</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>My first or last name</td>
<td>107</td>
<td>38.4</td>
</tr>
<tr>
<td>My favorite sport or activity</td>
<td>44</td>
<td>15.8</td>
</tr>
<tr>
<td>My date of birth</td>
<td>38</td>
<td>13.6</td>
</tr>
<tr>
<td>My gender</td>
<td>18</td>
<td>6.5</td>
</tr>
<tr>
<td>My age</td>
<td>17</td>
<td>6.1</td>
</tr>
</tbody>
</table>
Slightly less than half (46.4%) of the study's participants reported having their own website on a site such as MySpace or Facebook. Of these, only 9.9% reported their parents regularly visit their website with 22.6% reporting that their parents do not visit their website and 12.3% who said they were not sure if their parents regularly visited their website. Of the 207 students who reported having a personal website, 97.6% indicated at least one unsafe practice in existence on their site and 58.5% checked five or more unsafe practices in use on their website. Revealing their first and last name, favorite sports and activities, and their date of birth on their website were among the most frequently used unsafe practices reported by the students. Table 2 displays the list of practices categorized as unsafe along with the counts and percentages of each practice that students reported on their websites.

Table 1 (continued)

<table>
<thead>
<tr>
<th>Included in E-Mail Address</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>My favorite celebrity</td>
<td>12</td>
<td>4.3</td>
</tr>
<tr>
<td>My home address</td>
<td>6</td>
<td>2.2</td>
</tr>
<tr>
<td>My school name</td>
<td>6</td>
<td>2.2</td>
</tr>
<tr>
<td>My phone number</td>
<td>5</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Table 2

*Multiple Response Table for Unsafe Practices with Student Websites*

<table>
<thead>
<tr>
<th>Characteristic of Web Site</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture(s) of me</td>
<td>140</td>
<td>67.6</td>
</tr>
<tr>
<td>My likes or dislikes</td>
<td>138</td>
<td>66.7</td>
</tr>
<tr>
<td>My favorite sport or activity</td>
<td>137</td>
<td>66.2</td>
</tr>
</tbody>
</table>
Table 2 (continued)

<table>
<thead>
<tr>
<th>Characteristic of Web Site</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>My first or last name</td>
<td>128</td>
<td>61.8</td>
</tr>
<tr>
<td>My screen name</td>
<td>123</td>
<td>59.4</td>
</tr>
<tr>
<td>Picture(s) and names of my friends</td>
<td>106</td>
<td>51.2</td>
</tr>
<tr>
<td>My date of birth</td>
<td>89</td>
<td>43.0</td>
</tr>
<tr>
<td>My e-mail address</td>
<td>70</td>
<td>33.8</td>
</tr>
<tr>
<td>My school name or its location</td>
<td>42</td>
<td>20.3</td>
</tr>
<tr>
<td>My telephone number</td>
<td>13</td>
<td>6.3</td>
</tr>
<tr>
<td>My address</td>
<td>11</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Of the 446 students in the study, 60.8% reported having a screen name. Of those, 54.6% reported using at least one unsafe practice in their screen name. The most common unsafe practices reported in screen names were using first or last name (35.8%), a favorite sport or activity (16.6%), and birth date (12.5%). Table 3 displays the list of unsafe practices and the counts and percentages students reported they included in their screen names.

Table 3

Multiple Response Table for Unsafe Practices in Screen Names

<table>
<thead>
<tr>
<th>Screen Name Characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>My first or last name</td>
<td>97</td>
<td>35.8</td>
</tr>
<tr>
<td>My favorite sport or activity</td>
<td>45</td>
<td>16.6</td>
</tr>
<tr>
<td>My date of birth</td>
<td>34</td>
<td>12.5</td>
</tr>
<tr>
<td>My gender</td>
<td>29</td>
<td>10.7</td>
</tr>
<tr>
<td>My age</td>
<td>21</td>
<td>7.7</td>
</tr>
</tbody>
</table>
Table 3 (continued)

<table>
<thead>
<tr>
<th>Screen Name Characteristics</th>
<th>$n$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>My favorite celebrity</td>
<td>18</td>
<td>6.6</td>
</tr>
<tr>
<td>My school name or location</td>
<td>8</td>
<td>3.0</td>
</tr>
<tr>
<td>My phone number</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>My home address</td>
<td>2</td>
<td>.07</td>
</tr>
</tbody>
</table>

In addition to the types of online activities children reported, the study addressed the frequency in which children participated in specific online activities. The data revealed that 37.3% of the students reported erasing the history on their computer to conceal the sites they have visited with 13.8% doing so at a rate of once a month or more. Nearly 20% of the students reported using secret codes on a daily basis so their parents would not know what they or their friends were saying. More than half (51.8%) had visited MySpace and 30% reported doing so daily. Emailing someone they did not know was reported by 33.3% of the students. Daily instant messaging was reported by 26.1% of the students, while 37.5% reported sending or receiving email on a daily basis. Of the total, 89.6% reported never being seriously threatened online and 83.3% reportedly never went in chat rooms for people over 18 (see Appendix E).

Research Question #2

What types of parental supervision and monitoring of their Internet use do sixth-, seventh-, and eighth-grade students report?

Descriptive statistics such as frequency counts and percentages were used to present a summary of the characteristics of the data for this research question.

To answer this research question, the survey instrument included four questions addressing parental supervision and monitoring. The four questions related to Internet safety education, filtering or blocking software, rules imposed by parents, and parental supervision and
monitoring. Notably, only 3.8% of the students responded that no one had discussed with them strategies for staying safe while online. Parents (77.8%) and teachers (61.4%) were listed as the individuals who most often discussed Internet safety with the students. Table 4 presents the frequency distribution of individuals who provided the study's participants with Internet safety education.

Table 4

<table>
<thead>
<tr>
<th>Individual</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>17</td>
<td>3.8</td>
</tr>
<tr>
<td>Parent or guardian</td>
<td>347</td>
<td>77.8</td>
</tr>
<tr>
<td>Other adult relative</td>
<td>190</td>
<td>42.6</td>
</tr>
<tr>
<td>Teacher(s)</td>
<td>274</td>
<td>61.4</td>
</tr>
<tr>
<td>Friend</td>
<td>132</td>
<td>29.6</td>
</tr>
<tr>
<td>Other</td>
<td>121</td>
<td>27.1</td>
</tr>
</tbody>
</table>

Of the 446 students in the study, 36.3% stated that their home computer did not have any type of filtering or blocking software installed. An equal percentage (36.9%) did not know if their home computer had any type of filtering or blocking software, and 26.7% stated that their home computer did indeed have filtering or blocking software. Amid the students with filtering or blocking software on the computers they used most often, 61.3% considered the software did a good job of keeping them from visiting prohibited sites whereas 10.9% admitted that they could “get around” the software restrictions.

The types of rules parents set for their children when they were online were identified by the study. As shown in Table 5, the most universal rules parents set for their children's Internet
use were not to give out personal information (76%) and limiting access to certain types of sites (68.2%). Half (50%) of the children were prohibited from going into chat rooms. Only 21.5% of the students reported being restricted to Internet use when a parent or guardian was home.

Table 5

*Frequency Distribution Identifying Rules Parents Set for Children’s Internet Use*

<table>
<thead>
<tr>
<th>Rules</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t give out any personal information</td>
<td>339</td>
<td>76.0</td>
</tr>
<tr>
<td>Don’t visit certain types of sites</td>
<td>304</td>
<td>68.2</td>
</tr>
<tr>
<td>Tell my parents if I find something on the Internet that makes me feel uncomfortable</td>
<td>195</td>
<td>43.7</td>
</tr>
<tr>
<td>Don’t say insulting things on the Internet</td>
<td>186</td>
<td>41.7</td>
</tr>
<tr>
<td>Only use the computer when a parent or guardian is home</td>
<td>96</td>
<td>21.5</td>
</tr>
<tr>
<td>Only be online for a set amount of time each day</td>
<td>128</td>
<td>28.7</td>
</tr>
<tr>
<td>Don’t go in chat rooms</td>
<td>223</td>
<td>50.0</td>
</tr>
</tbody>
</table>

With regard to parental monitoring of Internet use, the majority of the students (65.5%) perceived their parents as knowledgeable about their online activities. A small percentage (7.7%) reported their parents previewed websites before they were allowed to visit them. Only 5.6% stated that their parents or guardians only think they know what their children do online whereas nearly 10% claimed that they can prevent their parents from knowing what they do online. Of the total, 11.4% of the students said they believed their parents did not care what they did while online. Seventeen of the 446 participants failed to respond to this question.
Research Question #3

What are students’ perceptions of the safety of certain types of online behaviors?

Descriptive statistics such as frequency counts and percentages were used to present a summary of the characteristics of the data for this research question.

Revealing their first or last name, home address, favorite hangouts, and sending pictures to strangers were the types of online behaviors most repeatedly categorized as never safe by the students who participated in this study. The majority of students perceived distributing their home address online either by telling a stranger (92.6%) or publishing it on websites, blogs, or chat rooms (90.5%) as never safe. Revealing favorite hangouts online received a high percentage of responses in the never safe category (82.2%). Slightly more students perceived that telling information to a stranger (82.2%) was a more unsafe practice than publishing it (79.5%).

Sharing favorite sports and activities online was perceived as safe or sometimes safe by 68% of the students. Publishing pictures of themselves or friends (46.3%) and publishing their school's name (34.5%) were the types of online behaviors most frequently perceived as safe by the study's participants. Surprisingly, 33.5% of the students perceived meeting someone in person they met only online as safe or sometimes safe. More students’ perceived meeting a stranger face-to-face as being safer than emailing, sending a picture to a stranger, or even sharing their real name online (see Appendix F).

Research Question #4

Are there differences in children’s reported unsafe online activities based on (a) gender, (b) grade in school, and (c) household placement of the computer?

Forty-two crosstabulated tables and chi-square were used to examine the differences between 14 unsafe online activities and the independent variables: gender, grade, and household placement of the computer.

Hypotheses 4₁-4₂: There are no differences in the frequency of the 14 reported unsafe
online activities based on (a) gender, (b) grade in school, and (c) household placement of the computer.

In the first analysis, students’ gender was analyzed in relation to the frequency of the reported unsafe online activities. There was a significant difference between males and females who published their real name on websites, blogs, or in chat rooms, $X^2 (2, N = 442) = 11.16, p < .01$. Hypothesis 4_1 was rejected. Of the students who published their real name on websites, blogs, or in chat rooms, 44.3% were female compared to 29% male. Of males, 71% never published this information whereas, as shown in Table 6, 55.7% of females never published their real names on websites, blogs, or in chat rooms.

There was no significant difference between males and females who told people they have met only online their real name, $X^2 (2, N = 436) = 2.27, p = .32$; therefore, hypothesis 4_2 was retained. As shown in Table 6, there was little difference in the percentage of males and females who indicated they never share their real names with strangers. However, the number of females (12.4%) who shared this information at least once a month or more was noticeably higher than was the number of males (8.5%).

The crosstabulated tables for examining the difference between males and females who told their home address to people whom they have met only online and who published their home address on websites, blogs, and chat rooms revealed violations of the assumptions of chi-square. Therefore, chi-square was not used to test the hypotheses 4_3 and 4_4. As shown in Table 6, the data revealed an equally high percentage of males (93.0%) and females (96.4%) never share their home address with people whom they have met only online. Likewise, a high percentage of males (89.8%) and females (93.8%) never published their home address online.

There was no significant difference between males and females who published their school name on websites, blogs, or in chat rooms, $X^2 (2, N = 438) = 1.34, p = .51$. Therefore, hypothesis 4_5 was retained. Table 6 shows 77.3% of males and 73% of females never published their school’s name online. Whereas the difference was not significant, a higher percentage of females reported publishing their school name online than did males.
There was not a significant difference between males and females who told their school name to someone they have only met online, $X^2 (2, N = 442) = 4.16, p = .13$. Therefore, hypothesis 46 was retained. With the exception of one category, almost never, Table 6 shows minimal differences between males and females.

There was a significant difference between males and females who published pictures of themselves or friends on websites, blogs, or in chat rooms, $X^2 (2, N = 441) = 13.29, p < .01$. Hypothesis 47 was rejected. Among males, 63.3% never published pictures online, whereas 47.3% of females never published pictures on websites, blogs, or in chat rooms (see Table 6). Females published pictures online more frequently than did males; 52.6% compared to 36.7%.

There was no significant difference between males and females who send pictures to someone they met only online, $X^2 (2, N = 438) = .63, p = .73$. Therefore, hypothesis 48 was retained. Table 6 shows that 18.6% of males and 18.3% of females reported sending pictures to someone they met only online. In contrast, 81.3% of males and 81.7% of females have never done so.

There was no significant difference between males and females who told people they met only online about their favorite hangouts, $X^2 (2, N = 437) = 4.43, p = .11$. Therefore, hypothesis 49 was retained. Although not significant, females (20.8%) more frequently shared their favorite hangouts with someone they met only online did than males (14.2%) (see Table 6).

There was no significant difference between males and females who published their favorite hangouts online, $X^2 (2, N = 442) = 3.79, p = .15$. Therefore, hypothesis 410 was retained. Of the total, 74% of the students never published their favorite hangouts online. Females (29.9%) published this information slightly more frequently than did males (21.9%). As shown in Table 6, the percentages for both males and females in each frequency category were similar with female percentages slightly higher among those who reported publishing their favorite hangouts online.

There was a significant difference between males and females who published their favorite sports and activities on websites, blogs, or in chat rooms, $X^2 (2, N = 443) = 6.12, p = .05$. 
Hypothesis $4_{11}$ was rejected. As shown in Table 6, 24% of males and 20% of females never published their favorite sports and activities on websites, blogs, or in chat rooms. Females published their favorite sports and activities online more frequently than did males.

There was no significant difference between males and females who told people they met only online about their favorite sports or activities, $X^2 (2, N = 443) = .11, p = .95$. Therefore, hypothesis $4_{12}$ was retained. Table 6 shows the percentages for females were nominally similar to males in each of the three frequency categories.

There was a significant difference between males and females who replied to emails from someone they did not know, $X^2 (2, N = 442) = 6.39, p = .04$. Therefore, hypothesis $4_{13}$ was rejected. An 11.2 percentage point difference emerged between males and females who reported replying to strangers’ emails with females reporting this practice more frequently than did males. Of the total, 38.7% of females replied to strangers' emails whereas 27.5% of males reported ever doing this.

Table 6

*Crosstabulated Table for Unsafe Practices by Gender*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never $n$ (%)</td>
<td>Almost Never $n$ (%)</td>
</tr>
<tr>
<td>Publish real name</td>
<td>152 (71.0)</td>
<td>33 (15.4)</td>
</tr>
<tr>
<td>Share real name</td>
<td>162 (76.8)</td>
<td>31 (14.7)</td>
</tr>
<tr>
<td>Publish home address</td>
<td>194 (89.8)</td>
<td>16 (7.4)</td>
</tr>
</tbody>
</table>
Table 6 (continued)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
<td>Almost</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>n (%)</td>
</tr>
<tr>
<td>Share home address</td>
<td>200</td>
<td>(93.0)</td>
</tr>
<tr>
<td></td>
<td>(93.0)</td>
<td></td>
</tr>
<tr>
<td>Share school name</td>
<td>161</td>
<td>(74.5)</td>
</tr>
<tr>
<td></td>
<td>(74.5)</td>
<td></td>
</tr>
<tr>
<td>Publish pictures</td>
<td>136</td>
<td>(63.3)</td>
</tr>
<tr>
<td></td>
<td>(63.3)</td>
<td></td>
</tr>
<tr>
<td>Share pictures</td>
<td>174</td>
<td>(81.3)</td>
</tr>
<tr>
<td></td>
<td>(81.3)</td>
<td></td>
</tr>
<tr>
<td>Publish favorite hangouts</td>
<td>168</td>
<td>(78.1)</td>
</tr>
<tr>
<td></td>
<td>(78.1)</td>
<td></td>
</tr>
<tr>
<td>Share favorite hangouts</td>
<td>181</td>
<td>(85.8)</td>
</tr>
<tr>
<td></td>
<td>(85.8)</td>
<td></td>
</tr>
<tr>
<td>Publish favorite sports or activities</td>
<td>104</td>
<td>(48.1)</td>
</tr>
<tr>
<td>Share favorite sports or activities</td>
<td>109</td>
<td>(50.5)</td>
</tr>
<tr>
<td>Reply to strangers’ emails</td>
<td>156</td>
<td>(72.6)</td>
</tr>
</tbody>
</table>

There was no significant difference between males and females who claimed to have met in person someone they met online, $X^2 (1, N = 444) = .00, p = .95$. Therefore, hypothesis $4_{14}$ was retained. Table 7 shows that 88% of males and 88.2% of females never met in person someone
they met online. Alarmingy, 12% of males and 11.8% of females claimed to have met face-to-face with someone they met online.

Table 7
*Crosstabulated Table for Meeting Someone Met Only Online in Person by Gender*

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td><strong>Met in person:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>190</td>
<td>88.0</td>
<td>201</td>
<td>88.2</td>
</tr>
<tr>
<td>Yes</td>
<td>26</td>
<td>12.0</td>
<td>27</td>
<td>11.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>216</td>
<td>100.0</td>
<td>228</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In the second analysis, students’ grade in school was analyzed in relation to frequency of reported unsafe online activities. There was a significant difference between sixth, seventh, and eighth graders who published their real name on websites, blogs, or in chat rooms, $X^2 (4, N = 442) = 20.48, p < .01$. Therefore, hypothesis 4 was rejected. Participation in these unsafe activities increased with grade in school. Of the students who published their real name on websites, blogs, or in chat rooms, 24% were sixth graders, 28% were seventh graders, and 48% were eighth graders. The percentage of students who never published their real name online declined by 23.3% from grade six to grade eight. Of the total, 25.2% of eighth graders published their real names on websites, blogs, or in chat rooms at least once a month whereas 9.7% of sixth graders did the same.

There was a significant difference between males and females who told people they meet only online their real name, $X^2 (4, N = 436) = 16.88, p < .01$. Hypothesis 4 was rejected. The percentage of eighth graders (35.7%) who told people they meet only online their real name was more than twice the percentage of sixth graders (15.2%). Again, the percentage of students
sharing this information increased with higher grade in school.

The crosstabulated tables for examining the differences among sixth, seventh, and eighth graders who both told their home address to people whom they have met only online and who published their home address on websites, blogs, and chat rooms revealed violations of the assumptions of chi-square. Therefore, chi-square was not used to test hypotheses 4_{17} and 4_{18}. Table 8 shows that an equally high percentage of sixth (92.9%), seventh (92.1%), and eighth graders (90.6%) never published their home address online. As shown in Table 8, fewer than 10% of sixth and seventh graders share their home address with people they only meet online.

Table 8 shows that an equally high percentage of sixth (92.9%), seventh (92.1%), and eighth graders (90.6%) never published their home address online. As shown in Table 8, fewer than 10% of sixth and seventh graders share their home address with people they only meet online.

There was a significant difference among sixth, seventh, and eighth graders who published their school name on websites, blogs, or in chat rooms, \( \chi^2 (4, N = 438) = 14.49, p = .01 \). Hypothesis 4_{19} was rejected. As shown in Table 8, twice as many eighth graders published this information as did sixth graders. Overall, 84.4% of sixth graders, 72.2% of seventh graders, and 68.4% of eighth graders never published their school name on websites, blogs, or in chat room. Of eighth graders, 11.4% published their school name at least once a month.

There were no significant differences among sixth, seventh, and eighth graders who told people they met only online their school name, \( \chi^2 (4, N = 442) = 8.23, p = .08 \). Therefore, hypothesis 4_{20} was retained. Of those who never told strangers the name of their school, 38% were sixth graders, 28% were seventh graders, and 34% were eighth graders. The data revealed that seventh grade students shared their school name more frequently than did sixth or eighth graders. Table 8 shows the frequency counts and percentages of students who shared their school name with strangers for each grade level.

There was a significant difference among sixth, seventh, and eighth graders who published pictures of themselves and friends on websites, blogs, or in chat rooms, \( \chi^2 (4, N = 441) = 23.22, p < .01 \). The hypothesis 4_{21} was rejected. As shown in Table 8, the percentage of eighth graders (46.8%) who published pictures on websites, blogs, or in chat rooms at least once a month was twice that of sixth graders (22.4%). The percentage of sixth-, seventh-, and eighth-grade students who published this information at least once a month or more increased by an
average of 10% with each higher grade level. Table 8 shows that sixth graders comprised the largest population of students that never shared this information.

There were no significant differences among sixth, seventh, and eighth graders who sent pictures to people they met only online, $X^2 (4, N = 438) = 6.75, p = .15$. Therefore, hypothesis $4_{22}$ was retained. Table 8 shows that 12.7% of eighth graders sent pictures at least once a month or more; nearly three times the number of sixth graders. From the 438 responses for never sending pictures to online strangers, 131 were sixth graders, 104 were seventh graders, and 122 were eighth graders.

In both unsafe practices, telling people met only online and publishing favorite hangouts on websites, blogs, or in chat rooms, there was a significant difference between sixth, seventh, and eighth graders, $X^2 (4, N = 437) = 17.96, p < .01$ (told) and $X^2 (4, N = 442) = 20.94, p < .01$ (published). Both hypotheses ($4_{23}$ and $4_{24}$) were rejected. As shown in Table 8, 142 sixth graders never told strangers where they liked to hang out compared to 107 seventh graders and 116 eighth graders. Of the students who shared their favorite hangouts with strangers at least once a month or more, eighth graders did so five times more frequently than did sixth graders.

Sixth graders comprised 40% of the population who never published their favorite hangouts on websites, blogs, or in chat rooms. Of those who published the information at least once a month or more, seventh graders had the highest percentage with 41%; this was nearly three times that of sixth graders. Table 8 shows the frequency counts and percentages of students who shared their favorite hangouts on websites, blogs, or in chat rooms by grade in school.

There were significant differences among sixth, seventh, and eighth graders who published their favorite sports and activities on websites, blogs, or in chat rooms, $X^2 (4, N = 443) = 12.70, p = .01$. The hypothesis $4_{25}$ was rejected. As shown in Table 8, 21.7% of sixth graders and 20.3% of eighth graders almost never published this information whereas 14.1% of seventh graders almost never published their favorite sports and activities on websites, blogs, or in chat room. Of those who published the information at least once a month or more, the percentage of
eighth graders was considerably higher than it was for both sixth and seventh graders.

There were significant differences among sixth, seventh, and eighth graders who told people they met only online their favorite sports and activities, \(X^2(4, N = 443) = 11.95, p = .02\). Therefore, the hypothesis 4_{26} was rejected. Table 8 shows that eighth graders (57.9%) revealed their favorite sports and activities to strangers online more frequently than did seventh (53.9%) and sixth graders (39.7%).

There was a significant difference among sixth, seventh, and eighth graders who replied to emails from people they do not know, \(X^2(4, N = 442) = 39.48, p < .01\). Hypothesis 4_{27} was rejected. As shown in Table 8, 22.8% of eighth graders, 18.8% of seventh graders, and 4.5% of sixth graders replied to strangers' emails at least once a month or more. Eighth graders replied to strangers' emails five times more than did sixth graders.

Table 8

*Crosstabulated Table for Unsafe Activities by Grade in Schools*

| Activity                | Sixth Grade | | | Seventh Grade | | | Eighth Grade | | |
|-------------------------|-------------|-------------|----------------|-------------|-------------|----------------|-------------|-------------|
|                         | Never n (%) | Never n (%) | At least once a month or more n (%) | Never n (%) | Never n (%) | At least once a month or more n (%) | Never n (%) | Never n (%) | At least once a month or more n (%) |
| Publish real name       | 115 (74.2)  | 25 (16.1)   | 15 (9.7)       | 83 (64.8)    | 25 (19.5)   | 20 (15.6)       | 81 (50.9)  | 38 (23.9)   | 40 (25.2)       |
| Share real name         | 128 (84.8)  | 13 (8.6)    | 10 (6.6)       | 93 (72.7)    | 21 (16.4)   | 14 (10.9)       | 101 (64.3) | 34 (21.7)   | 22 (14.0)       |
| Publish home address    | 145 (92.9)  | 7 (4.5)     | 4 (2.6)        | 117 (92.1)   | 9 (7.1)     | 1 (.8)          | 144 (90.6) | 11 (6.9)    | 4 (2.5)         |

65
<table>
<thead>
<tr>
<th>Activity</th>
<th>Sixth Grade</th>
<th></th>
<th></th>
<th>Seventh Grade</th>
<th></th>
<th></th>
<th>Eighth Grade</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never n (%)</td>
<td>Almost Never n (%)</td>
<td>At least once a month or more n (%)</td>
<td>Never n (%)</td>
<td>Almost Never n (%)</td>
<td>At least once a month or more n (%)</td>
<td>Never n (%)</td>
<td>Almost Never n (%)</td>
<td>At least once a month or more n (%)</td>
</tr>
<tr>
<td>Share home address</td>
<td>150 (96.2)</td>
<td>3 (1.9)</td>
<td>3 (1.9)</td>
<td>120 (95.2)</td>
<td>5 (4.0)</td>
<td>1 (0.8)</td>
<td>147 (93.0)</td>
<td>8 (5.1)</td>
<td>3 (1.9)</td>
</tr>
<tr>
<td>Publish school name</td>
<td>130 (84.4)</td>
<td>20 (13.0)</td>
<td>4 (2.6)</td>
<td>91 (72.2)</td>
<td>21 (16.7)</td>
<td>14 (11.1)</td>
<td>108 (68.4)</td>
<td>32 (20.3)</td>
<td>18 (11.4)</td>
</tr>
<tr>
<td>Share school name</td>
<td>131 (84.0)</td>
<td>15 (9.6)</td>
<td>10 (6.4)</td>
<td>96 (75.6)</td>
<td>15 (11.8)</td>
<td>16 (12.6)</td>
<td>114 (71.7)</td>
<td>27 (17.0)</td>
<td>18 (11.3)</td>
</tr>
<tr>
<td>Publish pictures</td>
<td>105 (67.3)</td>
<td>16 (10.3)</td>
<td>35 (22.4)</td>
<td>72 (56.7)</td>
<td>13 (10.2)</td>
<td>42 (33.1)</td>
<td>66 (41.8)</td>
<td>18 (11.4)</td>
<td>74 (46.8)</td>
</tr>
<tr>
<td>Share pictures</td>
<td>131 (85.1)</td>
<td>16 (10.4)</td>
<td>7 (4.5)</td>
<td>104 (82.5)</td>
<td>11 (8.7)</td>
<td>11 (8.7)</td>
<td>122 (77.2)</td>
<td>16 (10.1)</td>
<td>20 (12.7)</td>
</tr>
<tr>
<td>Publish favorite hangouts</td>
<td>132 (84.6)</td>
<td>17 (10.9)</td>
<td>7 (4.5)</td>
<td>90 (70.3)</td>
<td>18 (14.1)</td>
<td>20 (15.6)</td>
<td>105 (66.5)</td>
<td>37 (23.4)</td>
<td>16 (10.1)</td>
</tr>
<tr>
<td>Share favorite hangouts</td>
<td>142 (91.6)</td>
<td>9 (5.8)</td>
<td>4 (2.6)</td>
<td>102 (81.6)</td>
<td>11 (8.8)</td>
<td>12 (9.6)</td>
<td>116 (73.9)</td>
<td>22 (14.0)</td>
<td>19 (12.1)</td>
</tr>
<tr>
<td>Publish favorite sports and activities</td>
<td>77 (49.0)</td>
<td>34 (21.7)</td>
<td>46 (29.3)</td>
<td>61 (47.7)</td>
<td>18 (14.1)</td>
<td>49 (38.3)</td>
<td>54 (34.2)</td>
<td>32 (20.3)</td>
<td>72 (45.6)</td>
</tr>
<tr>
<td>Share favorite sports and activities</td>
<td>94 (60.3)</td>
<td>28 (17.9)</td>
<td>34 (21.8)</td>
<td>59 (46.1)</td>
<td>26 (20.3)</td>
<td>43 (33.6)</td>
<td>67 (42.1)</td>
<td>38 (23.9)</td>
<td>54 (34.0)</td>
</tr>
<tr>
<td>Reply to strangers’ emails</td>
<td>131 (84.0)</td>
<td>18 (11.5)</td>
<td>7 (4.5)</td>
<td>82 (64.1)</td>
<td>22 (17.2)</td>
<td>24 (18.8)</td>
<td>88 (51.9)</td>
<td>40 (25.3)</td>
<td>36 (22.8)</td>
</tr>
</tbody>
</table>
There were no significant differences among sixth, seventh, and eighth graders who have met someone in person whom they only met online, $X^2 (2, N = 444) = 5.25, p = .07$. Therefore, the hypothesis 4\textsubscript{28} was retained. Table 9 shows a difference of five percentage points between sixth and eighth graders who have never met in person a friend made online. Seventh graders represented the highest number of respondents claiming to have met in person a friend made online.

Table 9

*Crosstabulated Table for Meeting Someone in Person by Grade in School*

<table>
<thead>
<tr>
<th></th>
<th>Sixth Grade</th>
<th></th>
<th>Seventh Grade</th>
<th></th>
<th>Eighth Grade</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
<td>%</td>
</tr>
<tr>
<td>Met in person:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>145</td>
<td>92.4</td>
<td>107</td>
<td>83.6</td>
<td>139</td>
<td>87.4</td>
</tr>
<tr>
<td>Yes</td>
<td>12</td>
<td>7.6</td>
<td>21</td>
<td>16.4</td>
<td>20</td>
<td>12.6</td>
</tr>
<tr>
<td>Total</td>
<td>157</td>
<td>100.0</td>
<td>128</td>
<td>100.0</td>
<td>159</td>
<td>100.0</td>
</tr>
</tbody>
</table>

A third analysis, household placement of the computer, was analyzed in relation to frequency of reported unsafe online activities. The independent variables were (a) a room where I can use the computer in private and (b) a room where my parents or guardian can see what I am doing. There was a significant difference between children who published their real name on websites, blogs, or in chat rooms when the computers they use are in private household locations versus computers parents can monitor, $X^2 (2, N = 435) = 15.15, p < .01$. Hypothesis 4\textsubscript{29} was rejected. As shown in Table 10, the percentage of children with computers in private locations published their names on websites, blogs, or in chat rooms at two times the rate of those students who use computers where they are monitored. This statistic represents those who report publishing this information at least once a month or more. Among students who never published
their names online, again, a significant difference emerged between those who use privately placed computers and those who use computers that are monitored.

There was a significant difference between children who told people they met only online their real name and the household placement of the computer, $\chi^2 (2, N = 430) = 30.70, p < .01$. Therefore, hypothesis 430 was rejected. As seen in Table 10, children with computers in private locations told strangers their names on websites, blogs, or in chat rooms at two or three times the rate of those students who used monitored computers. Among students who never told strangers their names online, 77% of the students used computers that could be monitored.

There was no significant difference between where the computer was located and students who published their home address on websites, blogs, or chat rooms, $\chi^2 (2, N = 435) = .91, p = .64$. Therefore, hypothesis 431 was retained. The frequency percentages were similar for both locations. Table 10 shows the frequency counts and percentages of students who published their home address online by household location of the computer.

The crosstabulated table for examining the differences between household placement of the computer and children who gave their home address to people they met only online revealed a violation of the assumptions of chi-square. Therefore, chi-square was not used to test hypotheses 432 and 433. Table 10 shows a higher percentage of children who shared their home address with strangers online when the computer was in a private location. When the computer was in a room where a parent could see what the child was doing, 96.3% never gave their home address to strangers compared to 90.9% when the computer was in a private location.

There was a significant difference between children who published their school's name online and the household placement of the computer, $\chi^2 (2, N = 431) = 16.18, p < .01$. Therefore, hypothesis 434 was rejected. As shown in Table 10, children with computers in private locations published their school's name on websites, blogs, or in chat rooms with twice the frequency of those students who used computers that could be monitored. Among students who never published their school's name online, 74% used computers that could be monitored. Of the students who did publish their school's name online, 46.2% used computers in private
There was a significant difference between children who told people they met only online their school's name online and the household placement of the computer, $X^2 (2, N = 435) = 14.19, p < .01$. Therefore, hypothesis 435 was rejected. Table 10 shows that children with computers in private locations told strangers their school name nearly twice as often as did those students who used monitored computers. Among students who never shared their school's name with strangers online, 74% used computers that could be monitored. When the computer was in a private location, 13.4% of the students shared their school's name online at least once a month or more and 20.9% reported having done so at least once.

There was a significant difference between the household placement of the computer and children who published pictures of themselves or friends on websites, blogs, or in chat rooms, $X^2 (2, N = 434) = 21.58, p < .01$. Hypothesis 436 was rejected. Fifty percent of students published pictures of themselves or friends online once a month or more when their computer was in a private location whereas 28.1% did so when parents could view the computer. The number of students who never published pictures online tripled when the computer they used could be monitored.

There was a significant difference between the household placement of the computer and children who send pictures of themselves or friends to people they met only online, $X^2 (2, N = 431) = 16.87, p < .01$. Hypothesis 437 was rejected. Students reported sending pictures to strangers less frequently than they reported publishing pictures online. However, when the computer was located in a private location, more students (30.4%) sent pictures to strangers than did students with computers where parents could monitor them (13.7%).

There was a significant difference between the household placement of the computer and children who told people they met only online where they like to hang out, $X^2 (2, N = 430) = 24.60, p < .01$ and those who published their favorite hangouts on websites, blogs, or chat rooms, $X^2 (2, N = 435) = 20.52, p < .01$. Therefore, hypothesis 438 was rejected. Again, when the computer was located in a private location, students shared personal information more
frequently. Table 10 illustrates this phenomenon.

There was a significant difference between the household placement of the computer and children who told people they met only online their favorite sports and activities, $X^2 (2, N = 436) = 19.99, p < .01$ and children who post this information online, $X^2 (2, N = 436) = 21.17, p < .01$. As a result, hypotheses 439 and 440 were rejected. When the computer was located in a private location, 52.6% published this information at least once a month or more. Only 27.8% of those with computers in private locations reported never publishing their favorite sports and activities online. Although there was little discrepancy (21.8% versus 20.5%) between the location of the computer and students who almost never told strangers online about their favorite sports, there was a large discrepancy between those who frequently shared this information (43.6% versus 24.1%). Table 10 shows the counts and percentages for students who communicated their favorite sports and activities online.

There was a significant difference between household placement of the computer and children who replied to emails from people they did not know, $X^2 (2, N = 435) = 30.74, p < .01$. Therefore, hypothesis 441 was rejected. As shown in Table 10, students with computers in private locations and who replied once a month or more to stranger’s emails did so three times more frequently than did students with computers supervised by guardians. Of the 302 students with computers in public locations within the home, 73.5% never replied to strangers’ emails. More than half (49.6%) of students with computers in private locations replied to strangers’ emails.
Table 10

*Crosstabulated Table for Unsafe Practices by Household Placement of the Computer*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Room Where I Can Use Computer in Private</th>
<th>Room Where My Parents Can See the Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never (n) (%)</td>
<td>Almost Never (n) (%)</td>
</tr>
<tr>
<td>Publish real name</td>
<td>68 (50.7)</td>
<td>30 (22.4)</td>
</tr>
<tr>
<td>Share real name</td>
<td>74 (56.5)</td>
<td>30 (22.9)</td>
</tr>
<tr>
<td>Publish home address</td>
<td>121 (90.3)</td>
<td>9 (6.7)</td>
</tr>
<tr>
<td>Share home address</td>
<td>120 (90.9)</td>
<td>9 (6.8)</td>
</tr>
<tr>
<td>Publish school name</td>
<td>83 (62.4)</td>
<td>34 (25.6)</td>
</tr>
<tr>
<td>Share school name</td>
<td>88 (65.7)</td>
<td>28 (20.9)</td>
</tr>
<tr>
<td>Publish pictures</td>
<td>51 (38.6)</td>
<td>15 (11.4)</td>
</tr>
<tr>
<td>Share pictures</td>
<td>92 (69.7)</td>
<td>20 (15.2)</td>
</tr>
<tr>
<td>Publish favorite hangouts</td>
<td>78 (59.1)</td>
<td>33 (25.0)</td>
</tr>
<tr>
<td>Share favorite hangouts</td>
<td>88 (68.2)</td>
<td>21 (16.3)</td>
</tr>
</tbody>
</table>
Table 10 (continued)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Room Where I Can Use Computer in Private</th>
<th>Room Where My Parents Can See the Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never $n$ (%)</td>
<td>Almost Never $n$ (%)</td>
</tr>
<tr>
<td>Publish favorite sports and activities</td>
<td>37 (27.8)</td>
<td>26 (19.5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>149 (49.2)</td>
</tr>
<tr>
<td>Share favorite sports and activities</td>
<td>46 (34.6)</td>
<td>29 (21.8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>168 (55.4)</td>
</tr>
<tr>
<td>Reply to strangers’ emails</td>
<td>66 (49.6)</td>
<td>29 (21.8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>222 (73.5)</td>
</tr>
</tbody>
</table>

There was a significant difference between household placement of the computer and children who claimed to have met someone in person that they met online, $\chi^2 (1, N = 437) = 13.94, p < .01$. Therefore, hypothesis 42 was rejected. Of the students who used computers in private locations, 20.9% claimed to have met in person someone they met online. Only 8.3% of students who used computers in a room where their parents could see them claimed to have had a face-to-face meeting with a person they met online. Table 11 shows the difference between household placement of the computer and students’ claims about meeting someone in person they have met online arranged by household placement of the computer.
Table 11

*Crosstabulated Table for Meeting Strangers in Person by Household Placement of the Computer*

<table>
<thead>
<tr>
<th>Room Where I Can Use Computer in Private</th>
<th>Room Where My Parents Can See the Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Met in person:</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>106</td>
</tr>
<tr>
<td>Yes</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
</tr>
</tbody>
</table>

*Research Question #5*

To what extent, if any, are there relationships between children’s knowledge of unsafe Internet practices and their actual Internet practices?

The data for this research question were analyzed using 14 crosstabulated tables and chi-square to examine the relationship between children’s knowledge of 14 unsafe Internet practices and their actual Internet practices.

Hypotheses 5.1-5.14: There is no relationship between children’s knowledge of unsafe Internet practices and their actual Internet practices.

Preliminary analyses of the crosstabulated tables showed 10 violations of the assumptions of chi-square in the 14 crosstabulated tables. Because of the violations of the assumptions of chi-square, unsafe practices were recoded into three categories: (a) never (b) almost never, and (c) at least once a month or more. Knowledge of unsafe practices was recoded into two categories: (a) safe or sometimes safe and (b) never safe. After recoding unsafe practices and knowledge of unsafe practices into these categories, only 2 of the 14 crosstabulated tables had violations of the assumptions of chi-square. The corresponding analysis resulted in 12 significant relationships.

There was a significant relationship between children’s knowledge of unsafe Internet
practices and their actual Internet practice of publishing their real name on websites, blogs, or chat rooms, $X^2 (2, N = 440) = 108.27, p < .01$. Therefore, hypothesis 5, was rejected. Of the students who published their real names online, 39% did so even though they reported it as never safe. Of the total, 32% of middle school students considered it safe or sometimes safe to publish their real name online and 23% have done so. Sixty-seven percent of the study's participants identified publishing real names online as a practice that was never safe and 78.9% of those reported never doing so.

There was a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practice of publishing their real name, $X^2 (2, N = 436) = 84.74, p < .01$. Hypothesis 5 was rejected. As shown in Table 12, of the students who reported that it was never safe to tell strangers online their real names, 16.1% did so anyway. Of the students, 4.5% told their real name to strangers at least once a month or more. Of the respondents, 74% reported never telling their real name to strangers online and 83.9% of those reported that it was never safe to do so.

The crosstabulated table for examining the relationship between children’s knowledge of unsafe Internet practices and their actual Internet practices of giving their home address to people they met only online and publishing their home address online revealed violations of the assumptions of chi-square. Therefore, chi-square was not used to test hypotheses 5 and 5.

Table 12 shows that the majority (86%) of students indicated it was never safe to publish a home address online compared to only 10% who categorized it is safe or sometimes safe. Of the respondents, 26.2% almost never published their home address even though they indicated it was a safe or sometimes safe practice.

Only 32 respondents categorized telling someone met only online their home address as safe or sometimes safe. Of those, 18.8% indicated they share their home address with people they meet online at least once a month or more. Four hundred seven respondents (89%) indicated this was never a safe practice and 96.8% of those never shared their home address with strangers. Only one student reported participating in this unsafe activity who indicated that it
was never safe to do so.

As shown in Table 12, there was a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practice of publishing the name of their school on websites, blogs or chat rooms, $X^2 (2, N = 436) = 91.26, p < .01$. Therefore, hypothesis 5 was rejected. The findings, as shown in Table 12, show that 7 students indicated that it was never safe to publish the name of their school online but do so at least once a month or more and 23 students have at least done this even though they reported it as an unsafe activity. Of the study's participants, 58% indicated publishing their school name online was never safe.

There was a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practice of telling someone they had only met online the name of their school, $X^2 (2, N = 437) = 71.12, p < .01$. Hypothesis 6 was rejected. Of the 437 responses, 72% categorized this activity as never a safe practice. Of those, 14% reportedly shared the name of their school with a stranger online. Of the total, 23% of students shared with someone they met only online the name of their school.

There was a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practice of putting pictures of themselves or their friends on websites, blogs, or chat rooms, $X^2 (2, N = 437) = 88.14, p < .01$. Hypothesis 7 was rejected. Table 12 shows that when respondents reported the practice as safe or sometimes safe, they published pictures online more frequently. There was a 50.2% difference between students who almost never published pictures online and those who published pictures online at least once a month or more when the student classified the activity as safe or sometimes safe. Nearly 79% of the students who view this as a safe activity actually do this activity.

There was a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practice of sending pictures of themselves or their friends to someone they met only online, $X^2 (2, N = 440) = 73.64, p < .01$. Hypothesis 8 was rejected. As with publishing pictures online, the findings suggested that when respondents reported the practice as safe or sometimes safe, they did it more frequently. As shown in Table 12, 53.9% of
the respondents reported sharing pictures with strangers as safe or sometimes safe but have never done so. Only 23.3% of the study's participants indicated that sharing pictures with strangers was safe or sometimes safe; however, 46.2% had actually participated in this activity.

There was a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practices of telling strangers where they like to hang out, $X^2 (2, N = 435) = 106.66, p < .01$. Therefore, hypothesis 59 was rejected. There was also a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practices of publishing online where they like to hang out, $X^2 (2, N = 436) = 86.947, p < .01$. As a result, hypothesis 510 was also rejected. As shown in Table 12, students more frequently published their favorite hangouts online than did those who shared this information with strangers. Of the students, 82% reported that it was never safe to tell a stranger where they liked to hang out and 79% reported that it was never safe to publish the same information. Of the sixth-, seventh-, and eighth-grade students, 26% reported publishing online where they liked to hang out compared to 18% who reported sharing this information with strangers online.

There was a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practice of telling strangers about their favorite sports and activities online, $X^2 (2, N = 440) = 76.75, p < .01$. Therefore, hypothesis 511 was rejected. There was also a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practice of publishing their favorite sports and activities online, $X^2 (2, N = 439) = 95.86, p < .01$. Therefore, hypothesis 512 was also rejected. As shown in Table 12, where students categorized either listing or sharing with online strangers their favorite sports and activities, a high percentage of students reported this as a frequent actual practice. As many as 8.6% of students who reported telling someone they have met only online about their favorite activities at least once a month or more categorized the practice as never safe.

There was a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practice of emailing someone they did not know, $X^2 (2, N = 441) = 105.71, p < .01$. Therefore, hypothesis 513 was rejected. Of the study's participants who
categorized emailing someone they did not know as never safe, 20.2% reported that this was an actual practice. Of the participants, 27% categorized this practice as safe or sometimes safe and 68.9% of those reported it as an actual online practice.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Safe or Sometimes Safe</th>
<th>Never (n) (%)</th>
<th>Almost Never (n) (%)</th>
<th>At least once a month or more (n) (%)</th>
<th>Never (n) (%)</th>
<th>Almost Never (n) (%)</th>
<th>At least once a month or more (n) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publish real name</td>
<td>42 (29.8)</td>
<td>45 (31.9)</td>
<td>54 (38.3)</td>
<td>236 (78.9)</td>
<td>42 (14.4)</td>
<td>20 (6.7)</td>
<td></td>
</tr>
<tr>
<td>Share real name</td>
<td>41 (40.6)</td>
<td>29 (28.7)</td>
<td>31 (30.7)</td>
<td>281 (83.9)</td>
<td>39 (11.6)</td>
<td>15 (4.5)</td>
<td></td>
</tr>
<tr>
<td>Publish home address</td>
<td>27 (64.3)</td>
<td>11 (26.2)</td>
<td>4 (9.5)</td>
<td>377 (94.7)</td>
<td>16 (4.0)</td>
<td>5 (1.3)</td>
<td></td>
</tr>
<tr>
<td>Share home address</td>
<td>22 (68.8)</td>
<td>4 (12.5)</td>
<td>6 (18.8)</td>
<td>394 (96.8)</td>
<td>12 (2.9)</td>
<td>1 (.2)</td>
<td></td>
</tr>
<tr>
<td>Publish school name</td>
<td>73 (48.3)</td>
<td>49 (32.5)</td>
<td>29 (19.2)</td>
<td>255 (89.5)</td>
<td>23 (8.1)</td>
<td>7 (2.5)</td>
<td></td>
</tr>
<tr>
<td>Share school name</td>
<td>64 (52.9)</td>
<td>23 (19.0)</td>
<td>34 (28.1)</td>
<td>272 (86.4)</td>
<td>34 (10.8)</td>
<td>10 (3.2)</td>
<td></td>
</tr>
<tr>
<td>Publish pictures</td>
<td>43 (21.2)</td>
<td>29 (14.3)</td>
<td>131 (64.5)</td>
<td>199 (85.0)</td>
<td>17 (7.3)</td>
<td>18 (7.7)</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Safe or Sometimes Safe</td>
<td>Never n (%)</td>
<td>Almost Never n (%)</td>
<td>At least once a month or more n (%)</td>
<td>Never Safe</td>
<td>Almost Never n (%)</td>
<td>At least once a month or more n (%)</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------------</td>
<td>-------------</td>
<td>--------------------</td>
<td>-------------------------------------</td>
<td>------------</td>
<td>--------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Share pictures</td>
<td></td>
<td>55 (53.9)</td>
<td>20 (19.6)</td>
<td>27 (26.5)</td>
<td>301 (89.9)</td>
<td>23 (6.9)</td>
<td>11 (3.3)</td>
</tr>
<tr>
<td>Publish favorite sports and activities</td>
<td></td>
<td>85 (28.4)</td>
<td>62 (20.7)</td>
<td>152 (50.8)</td>
<td>106 (75.7)</td>
<td>22 (15.7)</td>
<td>12 (8.6)</td>
</tr>
<tr>
<td>Share favorite sports and activities</td>
<td></td>
<td>94 (33.7)</td>
<td>71 (25.4)</td>
<td>114 (40.9)</td>
<td>123 (76.4)</td>
<td>21 (13.0)</td>
<td>17 (10.6)</td>
</tr>
<tr>
<td>Publish favorite hangouts</td>
<td></td>
<td>33 (36.7)</td>
<td>31 (34.4)</td>
<td>26 (28.9)</td>
<td>290 (83.8)</td>
<td>39 (11.3)</td>
<td>17 (4.9)</td>
</tr>
<tr>
<td>Share favorite hangouts</td>
<td></td>
<td>34 (43.6)</td>
<td>19 (24.4)</td>
<td>25 (32.1)</td>
<td>324 (90.8)</td>
<td>23 (6.4)</td>
<td>10 (2.8)</td>
</tr>
<tr>
<td>Reply to strangers’ emails</td>
<td></td>
<td>37 (31.1)</td>
<td>35 (29.4)</td>
<td>47 (39.5)</td>
<td>257 (79.8)</td>
<td>45 (14.0)</td>
<td>20 (6.2)</td>
</tr>
</tbody>
</table>

There was a significant relationship between children’s knowledge of unsafe Internet practices and their actual Internet practice of meeting someone in person that they met only online, $X^2 (1, N = 444) = 47.42, p < .01$. Therefore, hypothesis 5.14 was rejected. As shown in Table 13, the data revealed a 22.4 percentage point gap among the respondents who had never met in person someone who they met online and those who categorized the safety of this practice as safe or sometimes safe versus never safe. Among those who claimed to have met in person a friend they made online, 26.8% designated it as a safe or sometimes safe practice.
Table 13

Crosstabulated Table of the Relationship Between Actual Internet Practice and Knowledge of Internet Safety for Meeting Someone in Person Only Met Online

<table>
<thead>
<tr>
<th></th>
<th>Safe or Sometimes Safe</th>
<th>Never Safe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>109</td>
<td>73.2</td>
</tr>
<tr>
<td>Yes</td>
<td>40</td>
<td>26.8</td>
</tr>
<tr>
<td>Total</td>
<td>149</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Summary

This chapter included descriptive and inferential statistics to evaluate five research questions and included an analysis of data. Chapter 5 provides a summary of the findings, conclusions, and recommendations for practice and further research.
CHAPTER 5
SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

With nearly three-quarters of teens from ages 12 to 17 and 39% of children from ages 3 to 11 using the Internet (Williamson, 2005), it is imperative that children be taught to make wise choices about what they view and what they participate in while online. In order to ensure that children have access to the vast amount of reliable, accurate information that is available on the Internet and that their Internet experience is safe, it is essential that parents, teachers, and policymakers accurately understand what children report doing while online. The purpose of this study was to examine, from the child’s perspective, the use of the Internet by students in sixth, seventh, and eighth grades and the extent to which they place themselves at risk. I also explored the types of parental supervision and monitoring of children’s Internet activities parents adopt as well as student perceptions of the safety of specific online behaviors. The research instrument was a student questionnaire designed to gain insight into children’s Internet usage, safety knowledge, actual Internet practices, and their perceptions of parental supervision and monitoring. The findings of the study were primarily descriptive in nature; however, using analytical procedures, comparisons were made to identify any relationships between the different variables associated with the study.

The data were initially analyzed using frequency and crosstabulation tables to identify basic demographic information or patterns. Chi-square was used to examine the relationships between the variables: age, gender, household placement of the computer, children’s knowledge of unsafe Internet practices, and their actual Internet practices.

Summary of Findings

The study was based on five research questions and was analyzed using the Statistical Package for the Social Sciences (SPSS) software program. The sample consisted of 158 sixth-grade students, 138 seventh-grade students, and 160 eighth-grade students equaling 446
participants. Frequency distributions were used to demographically characterize the study’s participants, who were comprised of 48.9% (218) males and 51.1% (228) females. Sixth-grade students accounted for 35.4% of the study participants; 28.7% were seventh-grade students, and the remaining 35.9% of the study's participants were eighth-grade students. The majority of the study's participants (69.4%) reported the household placement of the computer was in a room where parents or guardian could see what was taking place. Based on the results of research conducted by Roberts et al. (2005), it was expected that fewer than 20% of children regularly used computers that were in private locations. In this particular population, 30.6% reported that the household computer was in a room where they could close the door and use the computer in private. Over half (52.3%) of the students in this study reported spending 30 minutes to 2 hours per day online and 16.3% claimed to have spent more than 2 hours per day online; this is similar to the findings of Freeh (2006), the Harrison Group (2006), and Roberts et al.

Research Question #1

What are the self-reported online activities of children in sixth, seventh, and eighth grades?

Descriptive statistics such as frequency counts and percentages were used to present a summary of the characteristics of the data for this research question.

Analogous with the findings of Greenspan (2003), Hempel (2005), Lenhart et al. (2001), and Staats (2006), MySpace (51.8%), email (62.8%), and Instant Messaging (44.2%) were among the activities that sixth-, seventh-, and eighth-grade students most frequently reported engaging in while online. Well over half (62.6%) of the surveyed students reported having an email address with 21.5% of those claiming to have an email address their parents were unaware existed. Contrary to this finding, Taylor (2001) predicted that more than 50% of children had email addresses their parents were unaware existed.

Based on their responses, nearly half (46.4%) of the respondents claimed to have a personal website; this was far above the 10% reported by Loechner in 2003. In Loechner’s
report, he maintained that his 2003 findings represented a threefold increase from 2000. Publishing personally identifiable information on the Internet is an unsafe practice and makes users possible targets for sexual exploitation, harassment, cyberbullying, and other dangers (Wolinsky, 2000). More than half of the middle school students in this study reported having a personal website, an email address, and a screen name. The majority frequently described using unsafe practices associated with this personal information. Of the 207 students with websites, 97.6% indicated at least one unsafe practice whereas, 58.5% indicated five or more unsafe practices in use on their website. Posting pictures of themselves (67.6%), listing likes and dislikes (66.7%), favorite sports and activities (66.2%), first or last names (61.8%), and screen names (59.4%) were among the most frequently reported unsafe practices for students' personal websites.

Of the 279 students who reported having an email address, 60.2% reported having at least one personally identifiable piece of information in their email address; this is a practice considered unsafe. Of the 271 students who reported having a screen name, 54.6% reported having at least one unsafe practice in their screen name. Revealing their first and last name, favorite sports and activities, and their date of birth in their email address and screen name were among the most frequently used unsafe practices reported by the students. These findings support those of Aftab (2005), Finkelhor et al. (2000), Trotter (2006), and Wolak et al. (2003).

Other self-reported online activities included erasing the history on their computer (37.3%), using secret codes on a daily basis so parents would not know what they were saying (19.6%), visiting MySpace (51.8%), emailing a stranger (33.3%), daily instant messaging (26.1%), and sending or receiving email on a daily basis (37.5%). These findings were similar to the reporting of Greenspan (2003), Lenhart et al. (2001), and Roberts et al. (2005). The majority (89.6%) of the study's participants reported never being seriously threatened while online; this differed from the findings of Finkelhor et al. (2000).
Research Question #2

What types of parental supervision and monitoring of their Internet use do sixth-, seventh-, and eighth-grade students report?

Descriptive statistics such as frequency counts and percentages were used to present a summary of the characteristics of the data for this research question.

Internet safety has been a topic of discussion between middle school students and their parents and teachers; parents (77.8%) and teachers (61.4%) were reported to be the most likely individuals to discuss Internet safety with the students involved in this research study. This finding supports the recommendation of Willard (2000) that schools should be universal locations where children can learn about safe and responsible use of the Internet. Only 3.8% of the students reported that no one had discussed Internet safety with them.

The majority (65.5%) of participants in this study perceived their parents as being knowledgeable about their online activities; this contradicted the research findings of Taylor (2001). Taylor found that 70% of children perceived their parents as knowing very little about what they were doing online. According to the participants, parental supervision and monitoring of their Internet use included: do not give out any personal information (76%), do not visit certain types of sites (68.2%), and do not go in chat rooms (50%). Parents who employ these types of rules for keeping children safe while online are following the guidelines identified by Aftab (2005), Amato and Fowler (2002), Peters (2003), Petit et al. (2001), Willard (2000), Willard (2002), and Wolinsky (2000). Interestingly, setting restrictions for using the Internet only under parental supervision was not a common practice as 78.5% of the participants indicated that they received no such limitation.

Researchers found that many households do not use filtering or blocking software (Finkelhor et al., 2000; Mitchell et al., 2005). This research study also confirmed that using filtering and blocking software was uncommon among households as only 26.7% of the students confirmed the presence of the software on the computer they used most often. Another 36.9% of the respondents did not know if filtering or blocking software was installed on their household.
computer and the remaining 36.3% reported that no software was installed on their home computer designed to filter or block Internet sites. This result is slightly lower than the results of the research of Mitchell et al. (2005) who found that 33% of parents use filtering or blocking software. One explanation for why families fail to adopt these tools might be parents’ lack of understanding of computers and comfort with the Internet. Often, a generation divide exists in families about computers and the Internet (Henry J. Kaiser Family Foundation, 2000) and this divide affects families' decisions about Internet safety and security.

Research Question #3

What are students’ perceptions of the safety of certain types of online behaviors?

Again, descriptive statistics such as frequency counts and percentages were used to present a summary of the characteristics of the data for this research question.

Among the types of online behaviors most frequently categorized as never safe by the students who participated in this study were revealing their first or last name, home address, favorite hangouts, and sending pictures to strangers. Sharing personally identifiable information such as telling someone they met only online their home address was reported as never safe by 92.6% of the respondents whereas 90.5% reported that it was never safe to publish this information on the Internet. The majority (91.9%) indicated that they had never provided their home address either on the Internet or to someone they had only met online (94.8%). Slightly more than half (53.7%) reported that it was never safe to put a picture of themselves or their friends on the Internet and 76.6% indicated that it was never safe to send someone they had only met online a picture of themselves or their friends.

The online behaviors most frequently categorized as safe or sometimes safe by the participants in this study were sharing information about favorite sports and activities, publishing pictures online, revealing their school's name, and meeting in person a friend made online. The majority (63.3%) of the respondents indicated that it was safe to tell strangers about their favorite activities or sports and 68% indicated it was safe to publish the information on the Internet.
Nevertheless, 49.7% reported never having told strangers this information and 43.3% reported never having published this information online.

**Research Question #4**

Are there differences in children’s reported unsafe online activities based on (a) gender, (b) grade in school, and (c) household placement of the computer?

Crosstabulated tables and chi-square were used to examine the differences and relationships between the independent variables gender, grade in school, and household placement of the computer and the dependent variables comprised of 14 unsafe online practices.

The results indicated that there were differences in children’s reported unsafe online activities based on gender, grade, and household placement of the computer. Of the 14 unsafe practices examined for gender, 4 indicated significance. Although the National School Boards Foundation (2003) "Safe and Smart" report indicated no statistical significance between the proportion of males and females online, this study indicated that females used the Internet more for socialization than did males. The findings of this study revealed that females were more likely than males to publish their real names online, publish pictures online, list favorite sports and activities online, and reply to emails from people they do not know.

The findings of this study corroborated those of Valkenburg and Soeters (2001) who declared that children become more interested in the communication purposes of the Internet such as e-mail, chat, and instant messaging as they mature. Of the 14 unsafe practices examined for grade in school, 9 were identified as significant. The proportion of eighth graders who revealed personal information online was significantly greater than for both sixth and seventh graders. The data analysis indicated that the percentage of students frequently sharing personally identifiable information online increased with grade in school.

Of the 14 unsafe practices examined for household placement of the computer, all indicated significance. In situations where the household computer was located in a private location in the home, such as a child’s bedroom, children were significantly more likely to share
personal information online. This practice alone places children at risk and vulnerable to the dangers associated with the Internet. An analysis of each unsafe practice disclosed that children who used computers in private locations participated in unsafe online activities more than twice as frequently as students who used computers that could be monitored. This phenomenon was supported by Magid (1998) who declared that children who go online unsupervised are more likely to take part in risky behaviors.

Research Question #5

To what extent, if any, are there relationships between children’s knowledge of unsafe Internet practices and their actual Internet practices?

Crosstabulated tables and chi-square were used to answer this research question. The data were analyzed to identify to what extent, if any, there were relationships between the students’ frequency of participation in specific online activities compared to the students safety rating of the activity. The frequency ratings used were never, almost never, and at least once a month or more and the two safety ratings included safe or sometimes safe and never safe. During an analysis of the safety categorizations and the actual practices, several significant relationships emerged. In each instance, when students categorized a practice as unsafe, the majority also reported their actual practice as never. Sharing home address with a stranger received a frequency rating of never by 96.8% of the 407 participants who reported this practice to be never safe. Other online practices with extremely high proportions of a frequency rating of never and a categorization of never safe included: publishing home address online (94.7%) and telling strangers about favorite hangouts (90.8%).

When students categorized a practice as safe or sometimes safe, the majority reported their frequency of actual practice as at least once a month or more. Publishing pictures online and sharing information about student hobbies were categorized as safe or sometimes safe and received a frequency rating of at least once a month or more by the majority of the students.
Conclusions

Because the majority of research involving gathering information about children’s interaction with the Internet has been drawn from adults' perspectives, this study focused on the children’s voice by investigating the children’s report of their online activities and their awareness of cyber security, ethics, and safety issues. The following conclusions were drawn from the study:

Conclusion #1

Young people tend to use the Internet for socialization. Current literature concludes that young people rely on the Internet to explore social roles, stay connected with friends, and develop their social networks (Freeh, 2006; Hempel, 2005; LaFerle et al., 2000; Taylor, 2001). The findings of this study supported the theories included in the literature. The most common online practices reported by the middle grade students included emailing, MySpace, instant messaging, publishing favorite sports and activities, and using secret codes while messaging with friends; this was similar to the findings of Lenhart et al. (2001).

Conclusion #2

Schools are in the best position to communicate safety issues with parents and to involve parents in the teaching of Internet safety with their children. Peters (2003) maintained that parents must know what their children are doing and be vigilant about monitoring their online activities. This study's data revealed that parents of the middle grade students involved were making an effort to supervise and monitor their children's use of the Internet. More than half (63%) of the students perceived their parents as knowledgeable about what they did online. The students acknowledged the presence of Internet rules governing their online behaviors. Common parental rules identified in the study included not sharing personal information, restrictions on certain types of Internet sites, and informing parents when faced with uncomfortable situations while online. The presence of these rules could directly impact the relationship between
students’ knowledge of online safety and their actual Internet practices. Internet safety programs for parents and children are essential to ensuring that Internet users have a safe and enjoyable surfing experience.

Conclusion #3

This research study supported the research findings of the National School Boards Foundation (2003) that there were few differences between boys and girls who use the Internet. The NSBF study suggested that although girls use the Internet as much as boys, girls use it for socialization whereas boys tend to use it for gaming and entertainment purposes. Although no significant gender differences emerged within this study, girls more often than boys said they participated in online activities associated with socialization.

Conclusion #4

As children mature, they increase their use of the Internet and their participation in unsafe online practices. Findings from current studies support theories of development and Hitlin and Rainie's (2005) theory was that the number of students using the Internet “surges at the seventh grade mark” (¶. 8). Among the students involved in this study, eighth-grade students participated in unsafe online activities significantly more frequently than both sixth or seventh graders and seventh graders did so more frequently than sixth graders.

Online practices considered unsafe were often associated with users revealing too much personal information placing them at risk for victimization. Although a small percentage of students reported publishing personal and identifying information online, the results were more encouraging than expected—as the majority of the study's participants described never or almost never sharing this information on websites, chat rooms, blogs, or with strangers. The data indicated that the majority of the youth involved in this research study were knowledgeable about the risks involved with publishing personal information online. That is, the majority are using the Internet responsibly.
Conclusion #5

Although these results are promising, they do not suggest that adolescents are altogether avoiding placing themselves at risk of personal victimization. Other significant findings related to the students' screen name and email address are important to note. In this study, students reportedly did not use the same privacy standards in creating their electronic identifications as they did with posting personal information online. Nearly half of students with email addresses and screen names described using personally identifiable information when creating these electronic identifications. Of the students, 34% said they revealed their first or last name, 15.8% announced their favorite sports and activities, and 13.6% included their date of birth in their email address or screen name. By using information children reveal in their screen names and email addresses, a predator could easily locate children and potentially inflict harm. Cyber safety, security, and ethics education should be enhanced to ensure that children fully understand the consequences of their online actions.

Conclusion #6

The differences between household placement of the computer and the frequency students reported unsafe online activities were alarming. Although only 30% of the study's population reported computers in private locations, the overwhelming majority of these reported unsafe online practices with twice the frequency of those with computers being monitored. A study released by the Kaiser Family Foundation reported reciprocal findings (Roberts et al., 2005). Parental supervision is among the best strategies reported for protecting children from online dangers. High levels of parental monitoring (supervising children’s online activities, setting rules for Internet use, and using filtering or blocking software) can help parents curtail the risks for children while online. The relationships that emerged from this study between the private household placement of the computer and the frequency of unsafe practices reported by children confirms Magid’s (1998) contention that children with unsupervised Internet access were more likely to take part in risky behaviors online. The results from this study support a
need for educational programs designed to help parents learn about the risks their children face online and how to minimize those risks.

**Recommendations for Practice**

Based on the study's findings, several recommendations are proposed for educational policymakers to encourage changing practices in both educational institutions and children’s homes:

1. Schools should become “universal locations” where children can be taught how to practice safe and responsible use of the Internet by partnering with stakeholders to create a community-wide effort to promote Internet safety education.

2. The primary objective of Internet safety campaigns should be to encourage parents to become actively engaged in online activities with their children. By remaining vigilant and regularly going online with their children, parents can address problems as they arise while simultaneously helping their children recognize potential dangers they might face online and motivating them to behave responsibly.

3. Children should be exposed to high quality, challenging, and engaging Internet experiences that will fulfill their passion for socialization and be presented with guidelines and consequences for using the Internet.

4. School systems should consider conducting the survey used in this study to gain insight into the reported online activities and Internet safety knowledge of students.

**Recommendations for Further Research**

1. A study should be conducted that accounts for differences in parental involvement as related to risky behaviors children exhibit while online to ascertain if parental involvement is a predictor for victimization.

2. A study should be conducted to assess the common denominators in family systems of children who have computers in their bedrooms or other private locations to
understand the factors that influence parents’ decisions with regard to providing their children with Internet access.

3. A replication should be undertaken using populations more diverse in socioeconomic background and environmental conditions than those available in this study to indicate any significant or measurable difference in children’s reported online activities or perceptions of online safety.

4. A study investigating children’s disclosure of personal information on social networking sites should be conducted to provide insight into the extent young people place themselves at risk.

5. A study should be conducted benchmarking the status of kindergarten- through 12th-grade school district Internet safety programs.

The results of the current study confirm that students who have a solid basic understanding of cyber safety, cyber security, and cyber ethics are more likely to make safe and responsible choices when engaging in online activities. It is critical for children to learn to recognize the inherent dangers associated with going online and for them to be vigilant about the information they divulge. Newspaper headlines, television news stories, magazine articles about bullies online, predators lurking in cyberspace, and the dangers of MySpace are prevalent. The media tend to focus on the sensationalism of the Internet. The reality is that by understanding children’s reported online behaviors, increasing awareness of the potential dangers in the virtual world, and educating parents, students, teachers, and communities about Internet safety, great strides can be made toward realizing the potential of the Internet to positively and uniquely support learning for all users. Today’s digital-world children need to understand the issues of right and wrong as related to the Internet world. It is the responsibility of the adults who care about children to help them learn how to identify dangerous situations and how to behave appropriately while online.
REFERENCES


APPENDICES

APPENDIX A

Student Internet Survey

You have been selected to take part in a research study to find out what types of things young people do on the Internet. This survey is anonymous which means no one will know who you are or how you answered the questions.

Please note: Completing this survey is voluntary. You can choose not to take part in this survey or to not answer any question you would rather not answer.

Please take your time to complete the survey and give your honest opinions and answers.

I. About You

1. I am a: □ Male □ Female

2. I am in: □ 6th grade □ 7th grade □ 8th grade

II. Your Experiences with the Internet

3. Where in your home is the computer you use most of the time?
   □ A room where I can close the door and use the computer in private
   □ A room in the house where my parents/guardians can see what I am doing

4. During a typical day, how much time at home do you spend on the Internet?
   □ Less than 30 minutes per day
   □ 30 minutes to 1 hour per day
   □ 1-2 hours per day
   □ More than 2 hours per day

5. Do you have your own email address?
   □ Yes □ No
a) My e-mail address uses part of or all of:
   (Check ☑ ALL that apply)
   □ My first or last name
   □ My home address
   □ My phone number
   □ My date of birth (either some part of or all of)
   □ My age
   □ My gender (boy/girl)
   □ My school name
   □ My favorite sport or activity
   □ My favorite celebrity

6. Do you have an e-mail address that your parents don’t know about?
   □ Yes  □ No

7. Do you have your own website? (Example: MySpace, Facebook, AOL)
   □ Yes  □ No
   a) If you answered Yes, do your parents regularly visit your website?
      □ Yes  □ No  □ Don’t know
   b) Which of the following things does your website have on it?
      (Check ☑ ALL that apply)
      □ My first or last name
      □ My e-mail address
      □ Picture(s) of me
      □ Pictures and names of my friends
      □ My telephone number
      □ My address
8. Do you have a screen name?

☐ Yes  ☐ No

a) My screen name uses (part of or all of):
   (Check ☑ ALL that apply)
   ☐ My first or last name
   ☐ My home address
   ☐ My phone number
   ☐ My birth date (either some part of or all of)
   ☐ My gender (boy or girl)
   ☐ My school name or location
   ☐ My favorite sport or activity (Example: soccerchick, bballer)
   ☐ My favorite celebrity
Please read each statement and circle the number that explains how often you do each activity.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9. I erase the history on my computer that shows what Web sites I have visited</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>10. I IM (Instant Message)/Chat with people I have only met online</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>11. I go in chat rooms that are for people 18 and over</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>12. I spend time on MySpace</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>13. I use secret codes like BRB, POS, P911 when I IM/text so my parents won’t know what my friends and I are saying</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>14. I purposely visit websites that my parents would not like me to visit</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>15. I have been seriously threatened while I was Instant Messaging or in an e-mail</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>16. I send/receive e-mail messages</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>17. I use IM (Instant Message)</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>18. I go online when I am not supposed to</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
### III. Safe Practices

*Please read each statement and circle the number that explains how often you do each activity.*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Daily</th>
<th>Once/Twice a week</th>
<th>Once/Twice a month</th>
<th>Almost Never</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.</td>
<td>I put my real name on websites, blogs, or in chat rooms</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>20.</td>
<td>I tell people I meet online my real name</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>21.</td>
<td>I put my home address on websites, blogs, or in chat rooms</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>22.</td>
<td>I give people I meet online my home address</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>23.</td>
<td>I put my school name on websites, blogs, or in chat rooms</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>24.</td>
<td>I tell people I meet online the name of my school</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>25.</td>
<td>I put pictures of myself and/or my friends on websites or blogs</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>26.</td>
<td>I send pictures of myself and/or my friends to people I meet online</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>27.</td>
<td>I tell people I meet online where I like to hang out</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>28.</td>
<td>I list where I like to hang out on websites, blogs, or in chat rooms</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>29.</td>
<td>I list my favorite sports/activities on websites, blogs, or in chat rooms</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>30.</td>
<td>I tell people I meet online what my favorite sports/activities are</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>31.</td>
<td>I reply to e-mails from people I do not know</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

32. Someone that I have met online has *asked* me to meet them in person?

- □ Yes  □ No

33. I have met in person someone that I met online.

- □ Yes  □ No

### IV. Parental Supervision & Rules

34. Which of the following people have talked to you about how to be safer on the Internet? (Check ☑ ALL that apply)
☐ No one has talked to me
☐ Parent or guardian
☐ Other adult relative
☐ Teachers
☐ Friend
☐ Other

35. Does your home computer have software that won’t let you visit certain websites?

☐ Yes  ☐ No

a) If you answered yes, what do you think about the software? (Check one)

☐ It does a good job of keeping me from going to sites I shouldn’t.
☐ It keeps me from getting to some sites I need for home work.
☐ Sometimes sites get through that should be blocked
☐ I can get around it if I want too.

36. Which of the following rules do your parents have for you when you use the Internet at home? (Check ☑ ALL that apply)

☐ Don’t give out any personal information
☐ Don’t visit certain types of sites
☐ Tell my parents if I find something on the Internet that makes me uncomfortable
☐ Don’t say insulting things on the Internet
☐ Only use the computer when a parent/guardian is home
☐ Only be online for a set amount of time each day
☐ Don’t go in chat rooms

37. Which of the following statements are true for you? (Check ☑ ALL that apply)

☐ My parents/guardians know where I go online.

☐ I can easily prevent my parents/guardians from knowing where I go online if I want too.

☐ My parents/guardians don’t care where I go online.

☐ My parents/guardians visit websites before I am allowed to visit them.

☐ My parents think they know where I am going online but they really don’t.
V. Online Safety Knowledge

<table>
<thead>
<tr>
<th>Read each statement and circle the number that describes how safe you think each activity is.</th>
<th>Safe</th>
<th>Sometimes Safe</th>
<th>Never safe</th>
</tr>
</thead>
<tbody>
<tr>
<td>38. Put my real name on a website, blog, or chat room</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>39. Tell someone I have only met online my real name</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>40. Meet in person a friend that I made online</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>41. Put my home address on a website, blog, or chat room</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>42. Tell someone I have only met online my home address</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>43. Put the name of my school on a website, blog, or chat room</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>44. Tell someone I have only met online the name of my school</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>45. Put a picture of myself and/or my friends on a website, blog, or chat room</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>46. Send someone I have only met online a picture of myself and/or my friends</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>47. Tell someone I have only met online what my favorite sports/activities are</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>48. List my favorite sports/activities on a website, blog, or chat room</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>49. E-mail someone I don’t know</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>50. Tell someone I have only met online where I like to hang out</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>51. List where I like to hang out on a website, blog, or chat room</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Thank you for your time. If you have any questions you may contact Tonya Berrier at XXX-xxx-xxxx or XXX-xxx-xxxx
APPENDIX B

Permission Letter: Director of Schools

Tonya Allen Berrier
XXXXX Road
XXX, TN XXXXX
April 3, 2007

Dr. [Name]
Director of Schools
[Name] County Schools
[City] [State] [Zipcode]

Dear Dr. [Name],

As one of the requirements for the Doctor of Education degree at East Tennessee State University, I am required to write a dissertation. For my dissertation, I am planning to complete a study that will focus on the online behaviors and Internet safety knowledge of children in sixth-, seventh-, and eighth- grades.

This letter is to request your permission to conduct this study with one sixth-, seventh-, and eighth- grade class at each of the [Name] County Schools Districts seven elementary schools and four middle schools. Realizing that each school principal must also give permission to conduct this study, I also request permission to contact the principals at each school asking their permission to participate in this study. The study will involve students completing a 44-item computer-based survey sometime during May 2007.

In preparation for the study, I will contact the principal at each participating school to arrange for the students to complete the computer-based survey with a minimum of disruption. Consent forms will be sent to parents requesting permission for their child to participate in the study. Only those students receiving parental permission will have the opportunity to complete surveys. All collected data will remain completely anonymous as students will not be asked to identify themselves in any way; whereas, the research data will be reported in summary form only.

I believe the results of this study will promote a community wide awareness of Internet safety issues and help parents and professional educators discover possible strategies for protecting children from dangers associated with the Internet. Ultimately, and most importantly, this study has the potential to be a catalyst for helping young people gain the knowledge, decision-making skills, and motivation necessary to make safe and responsible choices when they are using the Internet.

As you can see, the study will not only satisfy a requirement from the university, but will also prove useful to the school system as well. Upon completion, I will be happy to share the results of my study with you. I appreciate your consideration in this matter. If you have any further questions, you may contact me at (XXX) xxx-xxxx (office) or at (XXX) xxx-xxxx (home) or via e-mail [address].

Thank you for your consideration. I look forward to your decision on this request as soon as possible.

Sincerely,

Tonya Allen Berrier

Permission is hereby granted to Tonya Allen Berrier to contact eleven elementary and middle school principals in [Name] County and to survey (online) sixth-, seventh-, and eighth- grade students.

_____________________________           ________________________
Signature               Date

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Dear Parents,

XYZ school is taking part in an Internet Usage research study to discover the Internet habits and behaviors of middle school students. Students will be asked to complete a computer-based survey answering questions about the types of activities they participate in while online, their frequency of use of these activities, and their opinions about unsafe online practices. The survey will take about 20 minutes to complete and will be taken during the school day. The results of this study will provide the [Name] County School System with information to guide and assist parents in providing the best educational programs designed to keep students safe and smart on the Internet.

We would like all selected students to take part in the survey, but participation is voluntary. Completing this anonymous Internet survey will cause little or no risk to your child. Students will not put their names on the survey. Also, no school, class or student will ever be mentioned by name in a report of the results. Your child will get no benefit right away from taking part in the survey. However, the results of this survey will help children in the future by influencing Internet safety programs. Students can skip any question that they do not wish to answer. You may refuse for your child to participate. Your child can quit at any time. If your child quits or refuses to participate, the benefits or treatment to which they are otherwise entitled will not be affected. Students not participating in the study will be provided with an alternative activity while the survey is being administered. If your child participates in this study, he/she will receive a small piece of candy such as a tootsie roll.

If you have any questions, problems or research-related problems at any time, you may call Tonya Allen Berrier at XXX/xxx-xxxx (home) or XXX-xxx-xxxx ([Name] County Schools) or e-mail [address], or Dr. Eric Glover at XXX/xxx-xxxx. You may call the Chairman of the Institutional Review Board at XXX/xxx-xxxx for any questions you may have about your child’s rights as a research participant. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you can’t reach the study staff, you may call an IRB Coordinator at XXX/xxx-xxxx or XXX/xxx-xxxx.

Every attempt will be made to see that your study results are kept confidential. A copy of the records from this study will be stored in the researcher’s residence for at least 10 years after the end of this research. The results of this study may be published and/or presented at meetings without naming your child as a subject. Although your rights and privacy will be maintained, the Secretary of the Department of Health and Human Services, ETSU IRB, and personnel particular to this research have access to the study records. Your records will be kept completely confidential according to current legal requirements. They will not be revealed unless required by law, or as noted above.

If you have no objection to your child taking part in the survey, you and your child should read and sign the attached form and return it to your child’s teacher preferably tomorrow, but no later than Friday, May 18. If you prefer your child not take part in the survey, please check the refusal box, sign and return the attached form to your child’s teacher.

Your child’s participation is very important to the success of this study, and we certainly appreciate your time, help and quick return of the attached consent form.

Tonya Allen Berrier, Ed.S
Technology Educator
[Name] County Schools
Internet Survey

Participant Permission/Refusal Form

Permission for Student Participation
I have read or had this document read to me and know what the survey is about. I understand that my child may withdraw from the research study at any time without any consequences or explanation and is free to ask questions at any time, without penalty. I understand that I will be given a signed copy of this informed consent document.

I agree to have my child to complete the Internet use survey at school under the direction of his/her teacher. I understand that my child can withdraw from the study at any time without penalty. I understand that if I have any questions I can address them at any time to the researcher, Tonya Allen Berrier, or the researchers project chair, Dr. Eric Glover, or my child’s teacher or principal.

Parent/Legal Guardian Signature Please print your child’s name

Student’s Signature Date

XYZ School

Refusal for Student Participation
If you do not want your child to take part in the survey, check the box, sign and date the form, and return the form to the school no later than May 18, 2007. Signing and returning this form will dismiss your child from taking the survey.

[] My child may not take part in this survey.

Child’s name: ____________________________ Grade: _____

Teacher: __________________________

Parent’s signature Date
Dear Student,

You are being asked to take part in an Internet Usage research study to discover the Internet habits and behaviors of middle school students. You will be asked to complete a computer-based survey answering questions about the types of activities they participate in while online, their frequency of use of these activities, and their opinions about unsafe online practices. The survey will take about 20 minutes to complete and will be taken during regular class time under the direction of your teacher. Research of this type is important because the results will promote the importance of educational programs designed to keep students safe and smart on the Internet.

Completing this anonymous Internet survey will cause little or no risk to you. The survey has been designed to protect your privacy. You will not put your name on the survey. Also, no school, class or student will ever be mentioned by name in a report of the results. Your participation is voluntary. You may skip any question that you do not wish to answer. In addition, you may stop participating in the survey at any point without penalty.

Your teacher or principal should be able to answer your questions about the survey.

If you are willing to take part in the survey, please sign this form and give it to your teacher. If you do NOT want to complete the survey, please check the refusal box, sign and return the form to your teacher. You will receive a small piece of candy such as a tootsie roll for your participation.

Your participation is very important to the success of this study, and we certainly appreciate your help.

Permission for Student Participation
I have read or had this document read to me and know what the survey is about. I understand that I may withdraw from the research study at any time without any consequences or explanation and I am free to ask questions at any time, without penalty.

_________________________________  ___________________________
Student Signature     Please print your name

_____________________     _________  XYZ School
Homeroom Teacher  Date

Refusal for Student Participation
[ ] I do not want to fill out the survey.

_________________________________
Student Signature
### APPENDIX E

Multiple Response Table for Reported Online Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>N</th>
<th>n</th>
<th>%</th>
<th>n</th>
<th>%</th>
<th>n</th>
<th>%</th>
<th>n</th>
<th>%</th>
<th>Daily</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I erase the history on my computer that show what web sites I have visited.</td>
<td>443</td>
<td>278</td>
<td>62.8</td>
<td>82</td>
<td>18.5</td>
<td>22</td>
<td>5.0</td>
<td>27</td>
<td>6.1</td>
<td>34</td>
<td>7.7</td>
<td></td>
</tr>
<tr>
<td>I IM (Instant Message)/Chat with people I have me only online.</td>
<td>444</td>
<td>275</td>
<td>61.9</td>
<td>76</td>
<td>17.1</td>
<td>21</td>
<td>4.7</td>
<td>33</td>
<td>7.4</td>
<td>29</td>
<td>8.8</td>
<td></td>
</tr>
<tr>
<td>I go in chat rooms that are for people 18 and over.</td>
<td>444</td>
<td>370</td>
<td>83.3</td>
<td>49</td>
<td>11.0</td>
<td>13</td>
<td>2.9</td>
<td>3</td>
<td>.7</td>
<td>9</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>I spend time on MySpace.</td>
<td>443</td>
<td>213</td>
<td>48.1</td>
<td>36</td>
<td>8.1</td>
<td>17</td>
<td>.8</td>
<td>44</td>
<td>9.9</td>
<td>133</td>
<td>30.0</td>
<td></td>
</tr>
<tr>
<td>I use secret codes like BRB, POS, P911 when I IM/text so my parents won’t know what my friends and I are saying.</td>
<td>445</td>
<td>273</td>
<td>61.3</td>
<td>58</td>
<td>13.0</td>
<td>9</td>
<td>2.0</td>
<td>18</td>
<td>4.0</td>
<td>87</td>
<td>19.6</td>
<td></td>
</tr>
<tr>
<td>I purposely visit websites my parent would not like me to visit.</td>
<td>444</td>
<td>314</td>
<td>70.7</td>
<td>83</td>
<td>18.7</td>
<td>17</td>
<td>3.8</td>
<td>11</td>
<td>2.5</td>
<td>19</td>
<td>4.3</td>
<td></td>
</tr>
<tr>
<td>I have been seriously threatened while I was online.</td>
<td>443</td>
<td>397</td>
<td>89.6</td>
<td>33</td>
<td>7.4</td>
<td>7</td>
<td>1.6</td>
<td>4</td>
<td>.9</td>
<td>2</td>
<td>.5</td>
<td></td>
</tr>
</tbody>
</table>

111
<table>
<thead>
<tr>
<th>Activity</th>
<th>N</th>
<th>n</th>
<th>%</th>
<th>N</th>
<th>n</th>
<th>%</th>
<th>N</th>
<th>n</th>
<th>%</th>
<th>N</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I send/receive email.</td>
<td>443</td>
<td>115</td>
<td>26.0</td>
<td>50</td>
<td>11.3</td>
<td>53</td>
<td>12.0</td>
<td>59</td>
<td>13.3</td>
<td>166</td>
<td>37.5</td>
<td></td>
</tr>
<tr>
<td>I use IM.</td>
<td>444</td>
<td>179</td>
<td>40.3</td>
<td>69</td>
<td>15.5</td>
<td>28</td>
<td>6.3</td>
<td>52</td>
<td>11.7</td>
<td>116</td>
<td>26.1</td>
<td></td>
</tr>
<tr>
<td>I put my real name on the Internet.</td>
<td>442</td>
<td>279</td>
<td>63.1</td>
<td>88</td>
<td>19.9</td>
<td>12</td>
<td>2.7</td>
<td>15</td>
<td>3.4</td>
<td>48</td>
<td>10.9</td>
<td></td>
</tr>
<tr>
<td>I tell people I meet online my real name.</td>
<td>436</td>
<td>322</td>
<td>73.9</td>
<td>68</td>
<td>15.6</td>
<td>12</td>
<td>2.8</td>
<td>8</td>
<td>1.8</td>
<td>26</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>I put my home address on the Internet.</td>
<td>442</td>
<td>406</td>
<td>91.9</td>
<td>27</td>
<td>6.1</td>
<td>4</td>
<td>.9</td>
<td>4</td>
<td>.9</td>
<td>1</td>
<td>.2</td>
<td></td>
</tr>
<tr>
<td>I give people I meet online my home address.</td>
<td>440</td>
<td>417</td>
<td>94.8</td>
<td>16</td>
<td>3.6</td>
<td>2</td>
<td>.5</td>
<td>4</td>
<td>.9</td>
<td>1</td>
<td>.2</td>
<td></td>
</tr>
<tr>
<td>I put my school name on the Internet.</td>
<td>438</td>
<td>329</td>
<td>75.1</td>
<td>73</td>
<td>16.7</td>
<td>14</td>
<td>3.2</td>
<td>6</td>
<td>1.4</td>
<td>16</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>I tell people I meet online the name of my school.</td>
<td>442</td>
<td>341</td>
<td>77.1</td>
<td>57</td>
<td>12.9</td>
<td>16</td>
<td>3.6</td>
<td>6</td>
<td>1.4</td>
<td>22</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>I put pictures of myself and/or my friends on the Internet.</td>
<td>441</td>
<td>243</td>
<td>55.1</td>
<td>47</td>
<td>10.7</td>
<td>53</td>
<td>12.0</td>
<td>33</td>
<td>7.5</td>
<td>65</td>
<td>14.7</td>
<td></td>
</tr>
<tr>
<td>I send pictures of myself and/or my friends to people I meet online.</td>
<td>438</td>
<td>357</td>
<td>81.5</td>
<td>43</td>
<td>9.8</td>
<td>16</td>
<td>3.7</td>
<td>8</td>
<td>1.8</td>
<td>14</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>I tell people I meet online where I like to hang out.</td>
<td>437</td>
<td>360</td>
<td>82.4</td>
<td>42</td>
<td>9.6</td>
<td>5</td>
<td>1.1</td>
<td>11</td>
<td>2.5</td>
<td>19</td>
<td>4.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>Almost Never</td>
<td>Once-Twice Month</td>
<td>Once-Twice Week</td>
<td>Daily</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------------</td>
<td>-------</td>
<td>--------------</td>
<td>------------------</td>
<td>-----------------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>442</td>
<td>327</td>
<td>72</td>
<td>8</td>
<td>13</td>
<td>22</td>
<td>5.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I list where I like to hang out on the Internet.</td>
<td>442</td>
<td>327</td>
<td>72</td>
<td>8</td>
<td>13</td>
<td>22</td>
<td>5.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I list my favorite sports and activities on the Internet.</td>
<td>443</td>
<td>192</td>
<td>84</td>
<td>47</td>
<td>84</td>
<td>19.0</td>
<td>18.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I tell people I meet online what my favorite sports and activities are.</td>
<td>443</td>
<td>220</td>
<td>92</td>
<td>32</td>
<td>27</td>
<td>27</td>
<td>2.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I reply to emails from people I do not know.</td>
<td>442</td>
<td>295</td>
<td>80</td>
<td>17</td>
<td>18</td>
<td>4.1</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

113
## Frequency Distribution Identifying Students' Perceptions of the Safety of Online Behaviors

<table>
<thead>
<tr>
<th>Activity</th>
<th>Safe or Sometimes Safe</th>
<th>Never Safe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N$</td>
<td>$n$</td>
</tr>
<tr>
<td>Put my real name on the Internet</td>
<td>443</td>
<td>142</td>
</tr>
<tr>
<td>Tell someone I have only met online my real name</td>
<td>445</td>
<td>103</td>
</tr>
<tr>
<td>Meet in person a friend that I made online</td>
<td>445</td>
<td>149</td>
</tr>
<tr>
<td>Put my home address on the Internet</td>
<td>443</td>
<td>42</td>
</tr>
<tr>
<td>Tell someone I have only met online my home address</td>
<td>444</td>
<td>33</td>
</tr>
<tr>
<td>Put the name of my school on the Internet</td>
<td>443</td>
<td>153</td>
</tr>
<tr>
<td>Tell someone I have only met online the name of my school</td>
<td>440</td>
<td>122</td>
</tr>
<tr>
<td>Put a picture of myself and/or my friends on the Internet</td>
<td>441</td>
<td>204</td>
</tr>
<tr>
<td>Send someone I have only met online a picture of myself and/or my friends</td>
<td>444</td>
<td>104</td>
</tr>
<tr>
<td>Activity</td>
<td>Safe or Sometimes Safe</td>
<td>Never Safe</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>------------------------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>n</td>
</tr>
<tr>
<td>Tell someone I have only met online what my favorite sport/activities are</td>
<td>442</td>
<td>280</td>
</tr>
<tr>
<td>List my favorite sport/activities on the Internet</td>
<td>441</td>
<td>300</td>
</tr>
<tr>
<td>Email someone I do not know</td>
<td>444</td>
<td>119</td>
</tr>
<tr>
<td>Tell someone I have only met online where I like to hang out</td>
<td>443</td>
<td>79</td>
</tr>
<tr>
<td>List where I like to hang out on the Internet</td>
<td>439</td>
<td>90</td>
</tr>
</tbody>
</table>
VITA

TONYA ALLEN BERRIER

Personal Data: Date of Birth: November 21, 1968
Place of Birth: Johnson City, Tennessee
Marital Status: Married

Education: University of Tennessee, Knoxville
Elementary Education, B.S.
1991

University of Tennessee, Knoxville, Tennessee
Curriculum and Instruction, M.S.
1992

Lincoln Memorial University, Harrogate, Tennessee
Administration and Supervision, Ed.S.
1995

East Tennessee State University, Johnson City, Tennessee;
2007

Professional Experience: Teacher, New Center School, Sevierville, Tennessee
1992 - 2007

Technology Educator, Sevier County Schools, Sevierville, Tennessee
2007- Present