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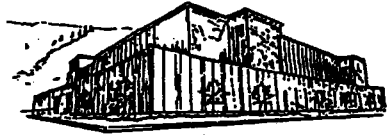
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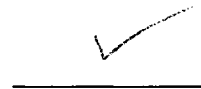
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MIDDLE SCHOOL CHILDREN ONLINE: COMPARING PARENT AWARENESS  
AND SUPERVISION OF STUDENTS' BEHAVIORS

by

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B.S. University of Findlay, 1976

M.Ed. University of Montana, 2003

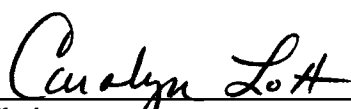
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Doctor of Philosophy

The University of Montana

May 2006

  
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**Middle School Children Online: Comparing Parent Awareness and Supervision of Students' Behaviors**

Chairperson: Carolyn Lott, Ed.D. *CL*

This descriptive study utilized survey research techniques to identify behaviors in which western Montana middle school children engage that potentially put them at risk for online predation. Students and parents were asked to respond to questions regarding computer skills, Internet activities, Internet access locations, and the supervision and rules parents impose upon their children's Internet usage. Responses were compared to determine the behaviors in which students participate that could be considered risky or dangerous.

The study produced a sample of 296 parents and 578 students from nine conveniently selected schools within a 50 mile radius of Missoula, Montana. In most cases, students completed the survey at school. Parent surveys were sent home; however, where policy dictated, both surveys were sent home so that parents could grant permission for student participation.

The data for this study were presented in the form of frequencies and percentages and through descriptions provided by participants. Parents (97%) and students (95%) agreed that most students use the Internet, and students reported being more skilled in using the computer than do parents. While parents and students agreed that the Internet is most often accessed by students at home (parents 88%, students 83%) and at school (parents 88%, students 84%), parents and students disagreed regarding how often students access the Internet from their friends' homes (parents 32%, students 50%), and from the public library (parents 16%, students 26%). Students reported spending nearly twice as much time each week online both at home (parents 778, students 2139) and away from the home (parents 172, students 934) than did parents. More parents (87%) than students (69%) reported having rules established for children's Internet activities.

Parents reported that students most often conducted research for school when they went online, while students reported they most often play online games. Students reported engaging in chat, Instant Messaging, and E-mail more often than parents. Students who used the Internet reported sharing personal information (33%). The information they shared included: first names, last names, phone numbers, E-mail addresses, hobbies and pictures.

## ACKNOWLEDGEMENTS

I would like to express my deep gratitude to the members of my dissertation committee. Dr. Carolyn Lott, my “editor in chief,” advisor and chair of the dissertation committee served and my confidant through every step of my studies and this process. Without her guidance I would never have begun the journey, and with out her support, I certainly would not have completed it. Dr. Sandra Williams has provided a shoulder and sounding board. She has offered assistance not only through the dissertation process, but also by serving as my comprehensive examination chair. Her friendship and guidance are greatly valued. Dr. Roberta Evans has been an inspiration throughout my graduate studies, and her valued input helped make this study successful. Throughout this journey, Dr. Sally Brewer has shared ideas and supplied valuable insight. Dr. Merle Farrier offered assistance in the methodology and statistical analysis for the study. Dr. Doug Reisig helped shape the focus of this study and offered input into its design. To my committee; my heartfelt thanks.

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## DEDICATION

To Jeff, my wonderful husband, who believed I could do this even when I didn't.

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## CHAPTER ONE

### *Statement of the Problem*

#### *History*

Joseph Carl Robnett (J.C.R.) Licklider proposed that a global network could be developed where computers all over the world could “talk” to each other as early as 1960 (Waldrop, 2002). In 1969 the Advanced Research Project Agency (ARPA) awarded a contract for the development of a communications network (ARPANET) which would serve as a communications vehicle in case of a nuclear attack (Howe, 2001).

E-mail was developed in 1972 as a messaging system to be used on the text-based Internet (Howe, 2001). Prior to 1991, the Archie and Gopher systems provided a simple catalog system of documents stored on the Internet. A group of scientists led by Tim Berners-Lee developed an Internet protocol known as the World Wide Web (Lojkin, 2005), in 1991. Over the years, as computers have grown faster and more affordable, access to the Web has become easier.

Today the Internet is used in businesses, schools, libraries and homes to search for products, travel, hobbies, and general information. At least 88% of Americans use the Internet as an information highway (Fox, Rainie, Horrigan, Lenhart, Spooner, Burke, & Oliver, 2000). The 2000 Study of the Social Consequences of the Internet, conducted at Stanford Institute for the Quantitative Study of Society (Nie & Erbring, 2002), determined that 90% of people who use the Internet use it as a communications tool. Among youth, Instant Messaging has become more popular than the telephone and chat rooms are the common meeting grounds for people who want to talk about topics of

common interests (Starr & Jacobs, 2004a; O'Connell, 2003). As more young people access the Internet, issues regarding safety and Internet use arise.

### *Background of the Study*

The number of youth using the Internet has grown 24% over the last four years (Kim, 2004). The National Center for Missing and Exploited Children ([http://www.ojp.usdoj.gov/ovd/publications/bullitens/internet\\_2\\_2001/NCJ184931.pdf](http://www.ojp.usdoj.gov/ovd/publications/bullitens/internet_2_2001/NCJ184931.pdf)) predicted that by the end of the 2005, approximately 77 million youth would be using the Internet. Eighty-seven percent of those youth are between ages 12 and 17 (Fallows, 2005).

Today's youth use the Internet to gather information for school, hobbies and special interests as well as to communicate. Lenhart, Madden and Hitlin (2005) found that 75% of teens who go online use Instant Messaging (IM). i-SAFE America (Starr & Jacobs, 2004a) reported that 30% of teens use email and Instant Messaging as a primary means of communicating with their friends. The Internet and Education: Findings of the Pew Internet & American Life Project (Fox, et al., 2000) reported that 94% of teenagers use the Internet for research. That study also found that while 41% used email to keep in touch with teachers and school friends, 81% of the teens used email to communicate with relatives and friends other than those they knew from school. Another study reported that 56% of youth preferred email over the telephone as a communications tool (Lenhart, Simon & Graziano, 2001).

Starr and Jacobs' i-SAFE America survey (2004a) of 19,000 students also reported that 45% gave out personal information to Internet "friends." Some students (10%) felt that it was okay to post their pictures online. The study also reported that



more than 80% of youth ages 7 to 18 receive inappropriate email on a daily basis and that 1 in 33 children had received an aggressive solicitation to meet a cyber friend somewhere. Some students (10%) reported they had agreed to a face-to-face meeting with someone they met on the Internet.

Many children use the Internet as their primary means of communication with their friends (Starr & Jacob, 2004a). These children often use chat rooms as a place to meet acquaintances and socialize (Aftab, 2000). Adults who use the Internet as a means to identify prey take advantage of the anonymity of chat rooms and Instant Messaging to target unsuspecting youth. Carr (2003) reported that typically an adult will meet a child in a chat room and then use knowledge of popular fashions in clothes, music and sports to present themselves as another child. The adult tries to become a “special friend” to gain trust in the initial stages of what is known as the grooming process.

While most parents believe that the Internet is a valuable tool in facilitating their child’s education, many feel their child is more facile than they with using technology (Starr & Jacobs, 2004b). The communications gap that has always existed between generations has been widened by technology (Oblinger, 2004; Starr and Jacob, 2004b; Mitchell, Finkelhor, & Wolak, 2003). Today’s youth is the first generation to grow up using computers and the Internet as a routine part of their lives (Oblinger, 2004; O’Connell, 2003). Many organizations, including the Federal Bureau of Investigation (FBI), The National Center for Missing and Exploited Children, and CyberAngels, recommend a variety of strategies parents may use to protect and educate their children about potential risks in the technological online environment. These strategies include establishing rules for Internet usage, placing the computer in a public area of the house so

that adults can periodically view the computer screen, installing filtering and monitoring software, and checking the computer history list to see what sites children have visited. Mitchell et al. (2003) report that society places a large measure of prevention responsibility on parents and the report suggests that parents often exaggerate the prevention measures that they actually invoke upon their children to appear more responsible.

An i-SAFE America survey of parents and students, in states other than Montana, (Starr & Jacobs, 2004b) reported that 92% of parents had established rules for their child's Internet usage; 35% of the children surveyed said they did not have rules. That same survey reported that 90% of the parents surveyed felt they had a good idea what their child was doing online. Some students (14%) said their parents had no idea what they did on the Internet and 34% said that they didn't talk about Internet experiences with their parents. More than a third of the children (37%) surveyed felt they had more freedom online and 18% felt safer there than in the real world. When asked "Why?," 52% cited anonymity and 29% mentioned lack of laws or rules.

From the time an infant enters the world adults usually assume a protective role to keep children safe from real-world dangers. As a child grows, adults provide training and rules for the child, teaching the child the dangers of life and the skills needed to stay safe. In the 1950's and 1960's an emphasis was placed on "stranger danger." At that time, the FBI created posters of a disheveled old man hiding behind a tree with a bag of candy in his hand, waiting for an innocent, unsuspecting little girl or boy walking home from school (Lanning, 2001). Today that picture might have that same man sitting behind a computer screen privately "chatting" online with that unsuspecting little girl who is

sitting at her computer in the privacy of her bedroom. The “bag of candy” might be a bus ticket that the man is promising to send the girl so they may finally meet, face-to-face. Throughout childhood parents provide guidance to children, teaching them acceptable behavior and providing restrictions on places they may and may not visit, and with whom they should or should not associate. Today’s technology is offering parents new and different challenges.

The cyber community has become just as real as the physical community. Just as in the physical community, there are places to explore and people with whom to interact. Just as in the physical community, the online community has inappropriate places for children. Just as in the physical world, children in cyberspace can meet strangers, some of whom are dangerous.

### *The Problem*

Researchers have shown that each year more and more children have access to and use the Internet (Lenhart, et al., 2005). As a result more children are exposed to inappropriate materials found on the Internet and more children have the potential to come in contact with dangerous strangers that navigate the information highway. Because children have grown up with this technology, unlike their parents, they are comfortable using it. Because parents often lack this knowledge, they are ill-equipped to prepare their children for the potential dangers that lurk in the online world.

While advances in technology over recent years have allowed more individuals access to the Internet, researchers are just beginning to address the impact it has had on parent-child interactions. More research is needed to identify how parents’ involvement

with their children's' Internet activities impacts online behavior (Gross, Juvonen & Gable, 2001, Wang, Bianchi & Raley, 2005).

To date few studies have focused specifically on the topic of parental knowledge of children's Internet usage. Further, no studies have gathered data that suggests what Montana middle school children do when they go online. In this study, western Montana middle school children identified the online activities in which they engage. Parents reported the online activities in which they believe their children engage and provided data regarding the rules and guidelines they have established for their child's Internet use. The researcher looked for relationships that existed between parent and student responses in these areas.

#### *Purpose Statement*

The purpose of this descriptive study was to identify the difference between parent and student responses regarding those online activities in which Montana middle school children engage that could be considered dangerous. The study also attempted to determine if a relationship existed between student behavior and parental supervision of children's online activities. The results of this study should be used in a way that will ultimately help to keep those children safe when they engage in online activities.

#### *Importance of the Study*

Each year more children use the Internet as a means of communications (Starr & Jacobs, 2004a). Students do not view the online environment the same as they do the real-world and do not realize the dangers that exist there (Berson & Berson, 2005). As a result, they engage in activities that might be considered risky in the real-world (Aftab,

2000). Frequently, adults do not establish rules for their child's Internet activities (Starr & Jacobs, 2004b).

Adults who target children for sexual predation use the Internet as a means for targeting their prey. They have established a practice called grooming which utilizes chat rooms, E-mail, and Instant Messaging, the same communication tools used by children to make contact with children (O'Connell, 2003, Carr, 2002).

This study was important because it utilized existing research to identify the potentially dangerous activities in which Montana middle school engage that could put them at risk for predation. The information from this study can be used to develop educational programs for Montana educators, parents, and children that show how the activities in which children currently engage places them in danger of predation.

### *Research Questions*

A review of the existing body of empirical literature on Internet safety revealed that parent-student relationships concerning Internet safety is a new area of study with limited research data having been collected to date. Because research-based studies are scarce, several questions were raised leading to this research study. These questions involved children's online behavior which places them at-risk of falling prey to online predators. Similarly, questions regarding parental knowledge and supervision of their children, who engage in potentially dangerous online activities, were raised.

The guiding questions for this study asked to what degree Montana middle school children engage in online activities that could place them at risk of predation and how much do parents know about what their children do on the Internet?

### *Definitions of Terms*

For the purpose of this study, the following definitions apply:

A buddy is an individual listed in a buddy list.

A buddy list feature displays the screen names of friends and family members who are online when you're online, allowing for easy, spontaneous communication using either the Instant Message feature, or by setting up a private chat room. Buddies may be added or deleted from buddy list groups at any time (America on Line, 2005).

A chat room is defined as any virtual space where two or more users can get together and exchange conversation. Chat rooms are usually developed around a common topic and messages are exchanged in real-time (ISPRANK, 2005).

A child or student is defined as a pupil in fifth, sixth, seventh, or eighth grade and living in the same household with the defined parent.

The computer history, also known as a history list, is a record of the web addresses that a specific computer has visited. The list is accessible through the history button in a web browser which will allow users access to previously visited pages which are stored within a record on that computer.

Cybersex is “Sexual activity or arousal through communication by computer” (The American Heritage Dictionary Online, 2005).

The Cyber world or cyber community is the group of people that exists on the information highway. This includes web sites, chat rooms, bulletin boards, Instant Messaging forums, any virtual location where information is disseminated

or shared. It is an online place where personal relationships may be developed (Gyong & Paddon, 1999).

Grooming is a process that involves techniques designed to lower victim's inhibitions in order to exploit them sexually (Brown, 2001).

Instant Messaging (IM) is an electronic form of communication which is similar to a chat room. Text-based conversations are sent in real-time over the Internet between individuals using similar software. The Instant Messaging system alerts you when someone on your private list (buddies) wants to initiate a conversation with you (International Engineering Consortium, 2005).

The Internet is a global network of computers which allows people from all over the world to communicate and share information (Nelson, 1999). For this study, the World Wide Web, the online environment, and the Information Highway, all refer to this definition of the Internet.

An Internet predator is an individual who utilizes the Internet to learn about and develop a relationship with a child for the purpose of establishing a face-to-face meeting and a sexual encounter (Starr & Jacobs, 2004a).

Loco parentis is defined by *Black's Legal Dictionary* (Garner, 2004) as an individual who is legally responsible for a child.

A middle school student is defined as a child in sixth, seventh, or eighth grade.

A parent is defined as a biological or adopted mother and/or father or legal guardian.

Predation is "the act of preying or plundering (Mish, 1985)." Internet predation utilizes the network of computers known to be the Internet as the vehicle to connect the predator with the prey.

A profile is “a concise biographical sketch” (Merriman-Webster Online, 2005). An online

profile is a searchable, biographical sketch that is stored in a web environment.

Profiles often contain personal information about the user that includes first and last names, addresses, phone number, age, hobbies, and photographs.

Real-time “is the actual time during which something takes place” (Merriman-Webster

Online, 2005). On a computer when an activity takes place in real-time it is

happening presently, as opposed to being delayed. An Internet chat occurs in real-time and email is delayed.

A screen name is a pseudonym used when communicating online.

### *Limitations and Delimitations*

Limitations, things that could have an affect on the study but that which the researcher can not control (Gay & Airasian, 2003), and delimitations, the parameters which are placed on the study (Creswell, 2003), have been identified for this study to better understand the results.

#### *Limitations*

This study encountered limitations. Survey questions relied on the honesty and recall of subjects when responding; therefore, there was an assumption of truthfulness among participants.

Parents were asked to complete the surveys, and in some cases, they were asked to have their children complete the surveys at home and then return them to school. In the schools where this occurred, there was an assumption that the children felt they could answer honestly, even if the parents read the children’s responses.



There was an assumption that parents and students would agree to participate and that the students would take the documents home, give them to their parent, and upon completion, return the documents to the school. There was a chance that the survey packets were lost, not given to the parent, not returned to the school, or that the parent and/or student declined to respond.

There was an assumption that each participant would answer every question on the survey.

There was an assumption that parents and children used computers, accessed the Internet and engaged in online activities. Some families who were asked to participate in this study may not have had computers in their home, or access to the Internet.

Socio-economics may play a role in this study. Students from more affluent communities may be more apt to have computers, and/or access to the Internet than those in more rural or less affluent communities. Affluence could also affect the age of the computer and/or the speed of the Internet connection within the home, which could also affect the activities in which a child might engage.

The sample was convenient; therefore, this study may not be generalizable to other populations.

### *Delimitations*

This study was delimited by parents of and students in Montana middle schools, grades 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup>, in an area within 50 miles of Missoula, Montana. No private, parochial, or home school children or their parents were contacted to participate in this proposed study.

The students and the parents who participated in this study are not paired. While the students who responded to the survey were asked to take the surveys home for their parents to complete, when they were returned, they were not matched so that the researcher can not report data between family members. As a result, conclusions were based on responses of the student sample compared to responses of the parent sample and not responses within a family unit.

The data were collected by one survey to which parents responded and another one to which students responded. A student who is absent on the day the survey was given may not have been asked to participate and may not have received the parent survey to take home.

While there are a number of risks and dangers associated with Internet use, this study focused on those that place middle school aged children at risk of predation.

### *Summary*

The Internet has changed how people interact and communicate with others. Until parents understand the hazards of the online world and supervise their children in this new environment, children will continue to be at an elevated risk for incidence of predation (Mitchell, et al., 2003). The same study conducted by Mitchell et al. suggested that further research needs to be conducted to test the efficacy of parental supervision and education regarding children's behavior on the Internet. Adults need to learn the dangers that exist in the cyber community and discover strategies they can employ to educate and monitor children's activities in the online environment.

By learning the online activities in which Montana middle school children report they engage, which research has identified as risky in regards to Internet predation, and

comparing children responses to parents, educational programs may be developed to help protect children as they go online.

## *CHAPTER TWO*

### Review of the Literature

#### *Introduction*

Since its inception in the 1960's as a military defense system, the Internet has changed people's ability to interact and communicate. Each year more homes acquire computers and access to the Internet (Kim, 2004). The 2004 Enumeration Study conducted by Nielsen/Net Ratings (Kim) reported that nearly 75% of U.S. households had access to the Internet. According to that study, more than 49 million children between the ages of 2 and 17 were using the Internet. The U.S. Department of Justice (2001) estimated that seventy-seven million young people would be online by the end of 2005. As more children have access to the Internet, the opportunity for exposure to inappropriate materials and contact with strangers increases (Mitchell et al. 2003).

While the Internet provides its users with opportunities for communication and access to information, it also provides temptations, some of the same temptations that exist in the real-world. The difference between how children react to temptation is often based on the interactions and guidelines that have been established by adult-role models, parents and guardians. While there are a number of risks associated with children using the Internet, this study focused specifically on identifying children's online activities that puts them at risk for predation. The study also identified supervision strategies parents employ in an effort to keep their child safe from online dangers.

A search of the literature found no dissertations and very few research studies conducted on the topic of Internet safety as it relates to parent perceptions of children's

online behavior. The review of the literature reveals information about Internet predation and the grooming process which pose threats to online youth. The following is a synopsis of what researchers have learned about what children and adults do while they are online and parents' views of how children use the Internet for personal activities as well as an educational tool.

### *Internet Predation*

i-SAFE America (Starr & Jacobs, 2004a) defined a predator as an individual who uses the Internet to stalk youth with the intention of causing them harm. Because children often believe that the people they meet and communicate with in chat rooms and via email and Instant Messaging are their friends, and because of the anonymity provided by computers, children unknowingly allow themselves to fall prey to online predators who often take on a false identity (Carr, 2003). While there have always been a relatively small number of cases where strangers assaulted, abducted or even murdered a child prior to the Internet, these abductors had limited access to their prey. The Internet, in part because of the degree of online anonymity as well as its lack of system-imposed statutes, has provided a new channel for these predators to find a child with whom they have had no previous contact or knowledge (Carr, 2003; Berson, Berson & Ferron, 2002).

Law enforcement agencies and Internet safety organizations have identified how predators identify and lure targets into face-to-face meetings. The process, called grooming, usually begins in a chat room, where hundreds of individuals can communicate using their computers in real-time. In 2003, O'Connell identified the grooming practices employed by many offenders. In that study, the researcher found the process usually begins with victim selection in a chat room, where the predator can pose

as a child with the hope of attracting a victim of specific age and gender. In an effort to learn more information about the child, once engaged in a conversation, the predator often conducts Internet searches relating to the personal information the child reveals during the chat. He also reviews the child's online profile. This profile, requested by the chat room provider when a user enters a chat room, is an online summary of personal information that can include the user's name, sex, age, address, phone number, school, hobbies, interests, personal websites and even pictures. Profiles are easily accessed when the child is in the chat room and are also searchable. They can provide additional information about the child's online activities which might be useful to the predator. When the predator feels he has enough information about the child, he will initiate a conversation in the chat room and eventually persuade the child to move to a more private Instant Message (IM) conversation or to email (O'Connell, 2003; Carr, 2003).

The next step in the grooming process is the "friendship forming" stage (O'Connell, 2003). This is the time when the predator gets to know the child. During this stage the predator will engage in "small talk" and begin to establish a bond with the child. This friendship forming stage is followed by the "relationship forming" period when the adult will attempt to become the child's best friend. During the friendship and relationship forming stages, conversations may take place via email and Instant Messaging. Once the pedophile feels that he has built a solid relationship with the child, he may ask to call the child on the telephone. Using the child's phone number, an Internet search may be conducted to reveal the child's address and driving directions to the child's home. With this information, the predator can then focus on conversations that reflect his knowledge of things close to the child's home and even stalk the child while planning a

face-to-face meeting. Secrecy is an important element of the grooming process and at times during this stage, the predator may send the child a cell phone to keep the child's parents from learning about the relationship (Carr, 2003). As the pedophile builds trust with the child, he establishes a friendship in which the child believes they are best friends. The child becomes dependent on the friendship and believes that he/she can tell this cyber-friend anything.

Throughout the process the pedophile conducts a "risk assessment" so he can better assess threats to his involvement in the relationship (O'Connell, 2003). As the grooming process progresses, conversations will typically move from school, hobbies or other common interests to those of a more sexual nature, such as, "Have you ever been kissed?" Often the pedophile will send pornographic images to the child and ask questions about how the picture made the child feel. Children have been persuaded to take pictures or videos of themselves and/or friends performing sexual acts as well. The pictures are then sent to the predator (Carr, 2003). Later the pedophile may threaten to tell the child's parents about the picture as a ploy to keep their friendship secret.

Eventually, the pedophile will arrange to meet the child face-to-face. Wolak, Finkelhor and Mitchell's study (2004) reported that in 93% of these meetings a sexual offense was committed. The time from the initial contact and the face-to-face meeting varies; sometimes it only takes a few hours to develop the relationship to a point where a meeting is established; other times it takes several months (O'Connell, 2003; Carr, 2003).

A study of Internet-initiated sex crimes against minors (Wolak, et al., 2004) raised questions about some of the previously believed facts regarding Internet predator's discussions with potential targets during the grooming process. The study reported that

76% of the victims met the offender in a chat room, a statistic that is consistent with findings in other studies (Berson et al, 2002, Berson, 2005, O'Connell, 2003). Offenders who met their victims elsewhere often searched the profiles of chat rooms to find personal information that would allow them to initiate a conversation. Most offenders took time to develop relationships with their victims and many spoke on the phone (79%), sent pictures (48%), and gifts (47%) to their targets. However, unlike the predator profiles provided in the Berson (2002, 2005) and O'Connell (2003) studies, which suggested offenders pose as peers, most of the offenders in this study (Wolak, et al., 2004) admitted to their victims that they were older.

Another discrepancy between the Wolak et al. (2004) study and others (O'Connell, 2003, Carr, 2003) revealed that the offenders in the Wolak study did not blatantly deceive their targets about their sexual motives. The subjects in this study revealed that most of the offenders openly solicited their prey. Eighty percent discussed sexual topics in conversations with their victims. Twenty percent engaged in cybersex and 18% sent sexually suggestive pictures to their victims. Table 1 shows the characteristics of victims and dynamics of Internet-initiated sex crimes discovered in the Wolak et al. (2004) study.



**Table 1 – Characteristics of Victims and Dynamics of Internet-initiated Sex Crimes**

Characteristics	Internet Initiated (n = 129)
12 years old	1%
13 years old	26%
14 years old	22%
15 years old	28%
16 years old	14%
17 years old	8%
<b>Victim gender</b>	
Female	75%
Male	25%
<b>Offender gender</b>	
Female	1%
Male	99%
<b>Victim lived with</b>	
Both biological parents	61%
Single parent	27%
Parent or stepparent	7%
Foster parent or other	1%
<b>Dynamics of Internet-Initiated relationships</b>	
<b>Offender met victim</b>	
In a chat room	76%
Through Instant Messages	10%
Through email	5%
Other	5%
Offender and victim communicated online	77%
<b>Other: Offender</b>	
Talked to victim on phone	79%
Sent mail to victim	19%
Sent pictures to victim	48%
Gifted money to victim	47%
<b>Offender was deceptive by</b>	
Claiming to be younger than 18	9%
Shaving years off but not pretending to be a minor	25%
Lying about physical appearance or other aspects of identity	26%
Lying about sexual motives	21%
Offender and victim met face-to-face	74%
Sexual offense was committed at face-to-face meeting	93%

While much of the data collected in the Wolak et al. study supported what was already popularly believed, some of the data, especially those relating to offender deception, deviated from what was previously observed in studies by O'Connell (2003) and Carr (2003). The O'Connell (2003) and Carr (2003) studies found offenders posed as peers and did not admit being older until after they felt a solid relationship had been established. Even then, they did not admit to their true age and often still posed as minors. The Wolak et al. study indicated that 25% of the offenders pretended to be younger than they actually were, but they did not pretend to be minors. The inconsistencies reported between studies raise questions that can only be answered through additional research. Wolak et al. point out that research about Internet-initiated sex offences is in its infancy and that more research is needed in a variety of related areas.

Regardless of how or where in the online environment the potential target is approached or the deceptions employed by the potential offender, the interactivity provided by the web can compromise children's safety, especially when they reveal personal information about themselves to others.

### *Students' Internet Behavior*

Today's youth has grown up playing video games and using computers to access the online world. For them the computer and the Internet are second-nature. Students use computers to download music and games, to communicate via email, Instant Messaging, and chat rooms, and to gather information for homework (Taylor, 2002). A high school girl who participated in a study conducted by the Pew Foundation (Levin, Arafel, Lenhart & Rainie, 2002) said,

You can do so many things at once. Like, if I'm on the Internet, I'm researching, doing homework, downloading music, and talking to people, and like, looking at Web sites...I do like five things at once on the Internet...and that's good (p.7).

Children are often very familiar with these practices and see them as routine. As a result, they do not realize that these practices bring with them consequences that range from acquiring incorrect or inappropriate information to engaging in activities that are dangerous or even unlawful.

Before the Internet, pedophiles frequented places such as schools, playgrounds, and other locations where children could be found. Today, the Internet provides these individuals an expanded pool of victims. Online children can be easily identified and groomed for criminal purposes (Federal Bureau of Investigations, 2005). According to Mitchell et al. (2003), one child in five who regularly socializes on the Internet has encountered a stranger who wanted to engage in "cyber sex." As many as 25% of the children who use the Internet have had an unsolicited exposure to pictures of naked people or people having sex. Of those, only one child in four told a parent or reported the incident to any law enforcement agency. Many sites (87%) commonly visited by children collect personal information about site visitors. Some children (6%) who go online are threatened or harassed by others. Any one of these encounters could be potentially dangerous to a child, and many of them are related to incidences of predation (Mitchell et al., 2003).

During the 2003-04 school year, i-SAFE America surveyed more than 19,000 students regarding their online behavior. Starr and Jacobs (2004a) from the i-SAFE

America organization reported that 80% of the students spent at least one hour each week on the Internet, and of those, 11% spent more than eight hours a week online. Twelve percent of those surveyed said they spent more time with their friends online than they did in person, and 30% reported using email, chat rooms or Instant Messaging as the primary way they kept in touch with their friends. More than a quarter of the students (29%) reported using chat rooms; the highest usage was amongst seventh-graders (45%).

Levin et al. (2002) found that students use the computer differently at school than they do at home, even when doing homework. The study reported that students explained using the Internet for schoolwork: as a virtual textbook and reference library, as a virtual tutor, and as a study group. Several students who participated in the Levin (2002) study reported that they did not feel free to surf the web at school or engage in the same online activities they would at home or at the library because when they were online at school, there was often an adult in close proximity, monitoring their online activities. The safety and well being of children is very important to educators; however, in reality, few adults are prepared for their role as protectors for youth online. As children spend more time online they are immersed in an environment that often has been shielded from the supervision of parents and other consistent adults (Cole et al., 2001).

Developmentally, children do not begin realizing risk until middle childhood (Berson & Berson, 2005). As a result, adults assume a protective role. Even with the actualization of danger, adolescents are vulnerable and often make poor decisions when it comes to taking risks (Berson & Berson 2005). Andersen (2002) reported that “multiple sensory inputs are demanding on cognitive resources and can overwhelm children’s capacity to engage in thoughtful decision making” (p. 32). Because children are exposed

to technology that requires these multi-sensory inputs, they may underestimate the potential for risk. As a result, they may not be able to make decisions that will keep them safe.

Children do not view the virtual world of the Internet in the same way they do the real world. In a 1999 collaborative study, conducted by *Seventeen Magazine On-line*, CyberAngels, the College of Education at the University of South Florida and the Department of Child and Family Studies at the Louis de la Parte Florida Mental Health Institute, 10,800 girls between the ages of 12 and 18 were surveyed regarding their online activities. One of the young girls responded, "Since nobody seems to be eager to talk to a 15 year old, I always pretended I was an 18 year old female. However, that sometimes attracted bad attention from guys" (Aftab, 2000, p.5). In that same study, another girl said, "Yes, obviously people are more bold and outgoing on the Internet when they don't have to deal with the consequences of their actions" (p.3). And a third girl said,

I'll just say that online you can be absolutely ANYONE you want to be, which is why a lot of people do things that they would not normally do. In real life, people everywhere judge you based on your looks, actions, and who knows what else, but online, all that really matters is your attitude and personality. (p.3)

This study revealed that most of the girls spent the majority of their time in chat rooms where they admitted more openly insulting others, attacking others' opinions, exchanging sexual jokes or innuendos, and "engaging in generally outrageous behavior" (Aftab, 2000).

In the American Association of University Women's (Haag, 1999) study of teenage girls, many admitted changing their characters to fit in with their peers in real-life. The study further found that in the cyber world, however, the anonymity of sitting behind a computer screen in the comfort of one's home removes some of the pressures to fit in and provides a false sense of security. Berson's study of adolescent girls' online behaviors (2000) reported the following comments:

“I have on-line personalities and real-life ones, which are different. A lot of times no one really knows you on-line, so you feel more free [sic] to say things that you wouldn't in real life.”

“I do things on-line that I could never do in person. I am able to stand up for myself and what I believe in.”

“Of course I've pretended. Everyone does. You pretend to be older...or you pretend to be a guy...or you just pretend to be whoever you wanna [sic] be.”

“I flirt with people and even had cybersex, but I wouldn't do this in real life.”

“If I am ever in a chatroom I always make up things about myself. This is why I say don't trust anyone because everyone else does the same thing” (p. 3).

These responses indicate that children feel a freedom in the virtual world that they don't feel in the real world. That sense of freedom often drives student to online behavior that could be considered risky or dangerous. For youth, the online environment lacks rules for conduct. Many young people, who in the real world have strong ethics and manners,

demonstrate a lack of respect, responsibility, honesty, kindness, justice, or tolerance when they are online (Willard, 2000).

Starr and Jacobs' i-SAFE America survey (2004a) of 19,000 young people reported the following behaviors:

- 55% of students admitted sharing name, sex, age, and other personal information over the Internet
- 52% of the students preferred to be alone while online
- 10% admitted to posting their picture on the Internet
- 40% visited inappropriate websites
- 10% met someone in person whom they first met online
- 25% saw nothing wrong with chatting with strangers
- 21% said that after getting to know someone on the Internet, they would believe them to be truthful

Statistics such as these indicate that young people are less cautious in regards to sharing personal information online and that they are more apt to trust individuals whom they meet online than they are in the physical world.

### *Chat Rooms*

The Internet offers many ways to communicate. In the early years of the Internet, chat rooms were known as bulletin board services where threaded discussions took place. Users would dial up the bulletin board server and post messages there for others to read and respond. As the Internet grew and became faster, this asynchronous method of communication gave way to the more popular multi-user Internet Relay Chat (IRC) in which individuals can discuss a variety of topics in real-time.

Many individuals feel that chat rooms have become one of the fastest-growing segments of the Internet. They were designed to be a virtual meeting place where people from around the globe could come together to discuss virtually any topic. As a result, people use chat rooms to meet and talk with people who share common interests. Among youth, chat rooms have become very popular. Seventy-one percent of online youth between the ages of 15 and 17 use chat rooms (Lenhart et al., 2005).

The speed and frequency at which conversations within chat rooms move is quite fast. Chat room acronyms have been developed which allow users to communicate via what appears to be cryptic coding. A/S/L (age/sex/location), CTN (can't talk now), and PAW (parents are watching) are common phrases amongst chat room users. This new language only widens the gap between children who use the language in online chats with friends and their parents who are often unaware of how to interpret this cryptic dialogue.

Frequently, online pedophiles use chat rooms to locate potential victims (O'Connell, 2003; Carr, 2003). It is here that predators may lurk in the background and watch conversations, waiting to glean information as unsuspecting participants discuss their shared interests. The predator can often search the membership profiles to learn more about the potential victim before initiating conversation. With enough information to begin a discussion, the predator will then approach the target in the chat room and initiate a conversation. Often the predator will pose as a peer in order to establish a bond and begin the grooming process (Bennett & Hess, 2001).

An important feature of chat rooms is their anonymous nature. Even though participants must register to enter the chat room, it is easy to provide false or fictitious information (Subrahmanyam, Greenfield, & Tynes, 2004). Upon entering for the first



time, users are asked to provide a screen name with which they will be identified when they are in the chat room. Since this screen name becomes the user's pseudonym, it is relatively easy to be anonymous and vague when engaging in conversation.

When children enter chat rooms, they are told that the persona they assume should not reveal personal information such as their real name, address or phone number. Given this, O'Connell (2002) suggested the child's online persona encourages them to assume an identity that is different from that which is truly their own. O'Connell argued that society does not provide children with explanations for why they are expected to change their name and be secretive or even elusive. In not doing so, it sends them mixed signals: "be yourself" but do not reveal information about yourself. Because of the mixed signals these guidelines send to children, they are apt to engage in behavior that is different from and beyond the boundaries they know to be acceptable in the real world.

In a 1999 survey conducted of 10,800 teen-aged girls in *Seventeen Magazine Online*, Aftab (2000) asked the respondents to explain if they had done anything online that they would not do in the real world. Overall, they admitted that when they were online they felt they could do things they would not do offline. They admitted to being much more aggressive and verbally abusive to those with whom they interacted online and cited the anonymity provided by the computer as the reason. They also indicated a trust in those with whom they regularly interacted online and viewed these individuals as "friends" even though they had not met these people face-to-face. Further, because they viewed their chat room buddies as friends, most of them saw no danger in agreeing to meet them face-to-face.

Research on chat rooms has been conducted that focuses on how the online environment differs from the conventional face-to-face conversations (Subrahmanyam et al., 2004; O'Connell, 2003, Greenfield, 2004). Subrahmanyam et al. (2004) note that chat room conversations are composed of several topics being discussed simultaneously with people contributing in short responses to more than one conversation. Most chat is text based, where conversation is typed like email bouncing back and forth between groups and appearing immediately on the screen. In chat rooms, conversations between adolescents are frequently focused on sex (Subrahmanyam et al., 2004). Bremer and Rauch (1998) reported that sexual comments are made every four minutes in AOL teen chat rooms. Mitchell et al. (2001) found that children who participate in chat rooms are at greater risk for unwanted sexual solicitation.

Carr (2003) also reported that adults with an established sexual interest in children deliberately and frequently go to chat rooms that are known to be popular with children. These adults are usually up-to-date with knowledge in the latest fashions, music, and sports so they can present themselves as another child and engage in conversation. Because pedophiles typically initially meet their prey in an Internet chat room, children who frequent chat rooms are more likely to come in contact with these individuals (Carr, 2003).

#### *Adults and the Internet*

I think...[school] would be a lot better if parents and older people would get more information about the Internet, because, I mean...I don't blame them, because they didn't grow up with the Internet...I think that if there

was a better understanding from parents and older people than [sic] I think education would skyrocket a lot (Levin et al., 2002, p. 7).

Children use the Internet more than their parents. A Family Safe Media (2003) report found 61% of the study's 9 to 17-year-olds were using the Internet compared to 52% of their parents. These statistics indicate a usage gap between children and parent users of the Internet. This gap could support parent reports that indicate they feel their children know more about the Internet and its use (O'Connell, 2003).

**Table 2 – Demographics of Internet Users**

Demographics of Internet Users	
	Use the internet
Total Adults	68%
Women	67
Men	69
Age	
18-29	84%
30-49	80
50-64	67
65+	26

Source: Pew Internet & American Life Project Tracking surveys (March 2000 - present). (Fox, et al., 2000)

Adults use the Internet in many of the same ways as children. Email and Instant Messaging are the most popular. The United States Department of Commerce reported in 2002 approximately 42% of online adults use email. That same study reported that 36% of adult users conduct searches for information and products and 33% search for news, weather, and sports information. Twenty-one percent purchase items from the Internet and another 8% do their banking online. Age plays a role in online behavior. The Pew

Internet and the American Life project (Lenhart et al., 2005) surveyed 1,100 Americans and found that young adults between the ages of 18 and 29 were the largest group of adult Internet users today. Adults 55 or older were least likely to use the Internet but when they did, 42% of them used it for email. A similar percentage of this age group also conducted Internet searches, usually on health related issues.

A relatively small number of adults use chat rooms as a means of communication. Lenhart et al. (2001) reported that 17% of adults use chat rooms or some form of online messaging other than email. Whitty (2002) found that some older adults are turning to chat rooms for emotional support. Participants in the Whitty study who resided in nursing homes showed less depression when they used the Internet as a means of communication. Young (2004) reported that online communication among adults via chat rooms and email has opened the door for online affairs. These affairs differ from those that occur in the real world; however, they do impact a marriage in many of the same ways, including separation and divorce. The studies conducted about adult use of chat rooms show that adults use these virtual communities to build friendships and relationships with cyber friends in much the same way that children do.

The following table from the Pew Internet and American Life project (Fox et al., 2000) shows how adults use the Internet:

**Table 3 – Internet Activities**

<b>Internet Activities</b>		
Internet Activities	Percent of internet users who report this activity	Most recent survey date
About 68% of American adults use the internet. That translates into approximately 137 million people.		
Here are some of the things they do online:		
Send e-mail	91	May-June 2005
Use a search engine to find information	84	May-June 2004
Search for a map or driving directions	84	February 2004
Do an internet search to answer a specific question	80	Nov-Dec 2003
Research a product or service before buying it	78	February-March 2005
Check the weather	78	November 2004
Look for info on a hobby or interest	77	November 2004
Get travel info	73	May-June 2004
Get news	72	February-March 2005
Buy a product	67	May-June 2005
Surf the Web for fun	66	November 2004
Look up phone number or address	54	February 2004
Send Instant Messages	40	February-March 2005
Play online games	36	May-June 2005
Search for info about someone you know or might meet	27	February-March 2005
Read someone else's web log or "blog"	27	May-June 2005
Use internet to get photos developed/display photos	21	August-October 2001
Look for info on something sensitive or embarrassing	18	June-July 2002
Chat in a chat room or in an online discussion	17	February-March 2005
Visit an adult website	13	May-June 2005
Go to a dating website or other sites where you can meet other people online	9	May-June 2004

Source: Pew Internet & American Life Project Tracking surveys (March 2000 – present) (Fox, et al., 2000)

More and more parents are accessing the Internet, however, many still feel ill-equipped to educate their children about the Internet because they are not fully aware of the issues (O'Connell, 2003). Many parents admit that their children know more about the Internet than they (Starr and Jacobs, 2004b; O'Connell, 2003; Allen and Rainie, 2002). As a result, while parents have concerns about Internet safety, they often find it difficult to discuss Internet related issues with their children. Parents' reports regarding restrictions they place on their child's Internet use differ from the reports of their children (Starr and Jacob, 2004b). In general researchers show that parental accounts of restrictions they place on children's Internet activities are greater than what their children report (Starr & Jacob, 2004b; Turow & Nir, 2002; Wang et. al, 2005). When asked about guidelines and supervision they invoke upon their children, parents often respond in a way that makes them appear more responsible than they perhaps really are (Mitchell, et al., 2003). Results from the Berson and Berson (2000) study suggested that discussions and supervision by parents seemed to make a difference in the online behaviors of many children. When parents spent time online surfing with their children, none of them engaged in cybersex, while 60% of the youth in the Berson and Berson study reported sexual exchanges when they were online alone. In the Levin et al. (2002) study, students reported they felt less free to surf at school where teachers and other adults monitored their behavior. These findings indicate that the proximity or supervision of adults does impact students' online behavior.

Research results suggest that parental monitoring lends to positive child outcomes. Amato and Fowler (2002) found that parental supervision of children's activities such as restricting the amount and types of television programs that children

watch combined with other parenting practices was associated with better grades in school. Concerns about the effects of the Internet on children are similar to those expressed about television. While most parents have rules about their children's use of the television, parents who feel less skilled in using technology feel less able to impose rules for technology use (Lugaila, 2003). Pettit, Laird, Dodge Bates and Criss (2001) reported that parental monitoring is associated with fewer delinquent behavior problems in early adolescence.

Many parents believe that the Internet helps children with educational tasks, however, they question its potential as an educational tool (Turow & Nir, 2000). Most parents do believe that the Internet is safe for their children to use. The three most prevalent concerns among parents are exposure to pornography (46%), dangerous adults (29%) or violent or hateful content (20%) (National School Board Foundation, 2000). Parents' concern, however, does not result in lower levels of Internet use at home (US Dept. of Commerce, 2002).

Mitchell, Finkelhor and Wolak (2005) reported on the use of filters as a means of protecting children from inappropriate materials and unwanted solicitations. The study reported that parents with children between the ages of 10 and 15 were more likely to use filtering and blocking software than those with older children. The study also reported that parents' computer use and knowledge were often related to filter use. Parents who were concerned over youth exposure to sexual material and had a low degree of trust for their child often used filtering and blocking software. Also, parents who knew a great deal about what their children did online often utilized filtering software. These findings

seem to indicate that the lack of trust between parent and child plays a role in the use of filtering software on the computers children use at home (Mitchell, et al., 2005).

Parents often have a different view than their children when it comes to sharing personal information online (Turow & Nir, 2000). Turow and Nir's (2000) study consisted of 304 children between the ages of 10 and 17, and 1001 parents who had at least one child between the ages of 8 and 17. The Turow and Nir study used an unmatched parent and student sample similar to the one used in this study. However, as in this study, when the surveys were returned, it was possible to match a small percentage completed by students and parents within a family unit. Where possible, Turow and Nir reported results between paired family members.

Turow and Nir conducted their study through telephone interviews and reported the following:

- 41% of parents who go online with children ages 8-17 and 36% of youngsters aged 8-17 reported having disagreements over the sharing of information on the web
- Nearly half of the parents who participated in the study did not realize that websites gather information about their visitors, often without those visitors' knowledge
- 61% of parents with children 8-17 worry about their children revealing sensitive information online

The Turow and Nir (2000) study, conducted through the Annenberg Public Policy of the University of Pennsylvania, compared children's and parents' views of privacy and the release of personal information on the Internet. When participants were asked if they had



had discussions regarding the sharing of information online, 69% of the parents and 66% of the children polled said they had. However, when parents and children within the same household were asked about these conversations, most did not agree that the discussions had ever taken place (Turow & Nir, 2000).

Starr and Jacobs (2004b) conducted surveys of 4,500 parents and 36,000 children. The results showed that parents do not necessarily see things the same way as their children. Eighty-eight percent of the parents said they felt they knew “some” or “a lot” about what their children do and where they go while they are on the Internet. Ninety-two percent said they had established rules for their children’s Internet activities. The results collected from the children revealed that 40% of them did not talk about Internet safety with their parents, and one-third of them did not share where or what they did on the Internet with their parents. Thirty-four percent of the students said their parents had not established rules of online behavior, and 14% said their parents had no idea how much time they spent online. These statistics indicate that parents are concerned about issues surrounding their children’s Internet usage and that discrepancies exist between what parents and their children report. Mitchell et al. (2003) noted that there could be a problem in the validity of parent responses to surveys in that parents may exaggerate the level of supervision, monitoring, and interactions they engage in an effort to appear to be responsible.

Wang, Bianchi and Raley (2005) conducted a search to learn more about rules that parents establish for their children’s Internet activities. Their study used data from Pew Internet & American Life Project and reported that 61% of parents had rules about how long their child may stay online or that they checked the websites their children visit.

About 44% of the parents reported that they had filtering or monitoring software installed on their home computers. Children's responses to the same questions were lower than parent responses with only 30% of the children reporting having rules about when or for how long they could stay online. These findings are consistent with the Star and Jacobs study.

This study collected data exclusively from parents and students in western Montana and compared the data to results reported in other studies. The information gleaned from this study is relevant to the views and practices within this rural state and provides data regarding potential at-risk online behaviors of students in Montana.

As a new phenomenon, researchers have not identified the at-risk activities online in which Montana youth engage. So, too, research is missing that suggests how parental supervision influences children's online behaviors. As a result, studies that test the efficacy of parental education and the supervision in this area are needed (Mitchell et al., 2003). This study asked Montana parents to report on their personal knowledge of the online activities in which their child participates and the rules and supervision they impose upon their child regarding those online activities. The children who participated in this study were asked to report the amount of time they spend online, the activities in which they participate, and the rules and supervision their parents impose upon them regarding those activities. The parent and student responses were compared quantitatively and qualitatively to identify discrepancies.

### *Summary*

Researchers have shown that Internet predation typically follows a pattern called grooming in which a predator typically targets a youth in a chat room and then gathers

information from online sources to initiate conversation. Once the predator has established a relationship with the child, he then will attempt to meet the child face-to-face (O'Connell, 2003, Mitchell et al., 2003). Researchers have reported that many children spend a great deal of time online communicating with their perceived friends in chat rooms, Instant Messaging, and emailing (Lenhart et al., 2005, Fox et al., 2000, Fallows et al., 2005). Often these perceived friends are acquaintances that have been made through virtual contacts, not face-to-face meetings. Since the Internet provides users anonymity, users can never be certain that virtual acquaintances are really who they say they are.

While research in the area of parent/child relationships with regard to Internet behaviors is still in its infancy, reports tend to show discrepancies between parent and child responses in the areas of parental guidelines, supervision and usage. This study focused on the online activities in which western Montana middle school children participate. It compared middle school parents' responses to questions about their children's online activities with middle school children's responses to questions about the online activities in which they engage. From those responses, discrepancies between parental perceptions and student behavior regarding online activities were identified. The information gleaned from the discrepancies, when compared to existing research results provide useful information in the development of Internet safety programs targeted towards parents and students. While similar research has been conducted in different areas of the country, no research has specifically focused on the Internet practices of parents and students in the rural state of Montana. Data collected from this study provide a foundation upon which educational programs for parents and students may be created.

The study also supplies a foundation upon which new instruments for identifying at-risk behaviors of online youth may be developed and additional studies may be designed.

The next chapter describes the tactics used to implement the study. It includes explanations regarding sampling, instrumentation, and data collection.

## CHAPTER THREE

### Methodology

#### *Introduction*

Each year an increasing number of children use the Internet as their primary means of communication with friends and family (Lenhart, et al., 2005, Starr & Jacobs, 2004a). Children report that they use chat rooms as a means of communicating with their friends (Lenhart, et. al, 2005; Starr & Jacobs, 2004a; Levin et al., 2002). Pedophiles also frequent chat rooms that are popular among youth in an effort to identify prey (O'Connell, 2003; Carr, 2003). Based on these research findings, it can be concluded that children who spend time in chat rooms are at risk of coming into contact with pedophiles.

This study utilized survey research techniques to identify the online behaviors of western Montana middle school students. Survey research was also used to discover the online activities in which parents report their middle school students engage, the locations in which they access the Internet and the rules parents impose upon their children. The results were used to compare the online behavior identified by students to those considered risky in existing research studies (Starr & Jacob, 2004a, O'Connell, 2003, Carr, 2003, Berson & Berson, 2002). The study compared parental practices which researchers (Aftab, 2000, Berson & Berson, 2002, Starr & Jacob, 2004b, Allen & Rainie, 2002) have found effective in managing children's at-risk, online activities with those reported by Montana parents.

### *Definition*

For the purpose of this research, at-risk student behaviors are defined as those which result in an experimentally important or consistent difference between parent and student responses in the areas of Internet access locations, Internet activities, and Internet rules.

### *Population and Sample Size*

Gall, Borg, and Gall (1996) define convenient sampling as one that occurs when the researcher selects a sample that suits the purposes of the study and is convenient. The sample for this study consisted of sixth, seventh and eighth grade students and parents from geographically and conveniently selected schools within approximately a 50 mile radius of Missoula, Montana.

While the Montana Office of Public Instruction (OPI) School Directory (2005) reports there are 215 middle schools in the state, 28 fall within the geographical guidelines. Administrators from 16 school districts were invited to participate, however, seven either declined or did not respond to invitations. As a result, the sample for this study consisted of parents and students from nine public school districts within 50 miles of Missoula, Montana.

### *Instrumentation*

The survey instrument used in this proposed study was formulated by the researcher based on the research questions using the review of the literature. Questions were carefully crafted to be clear, concise, easy-to-answer and non-threatening. The

surveys were designed to maintain confidentiality of participants in an effort to increase truthfulness and the percentage of response return (Gay & Airasian, 2003).

The parent survey consisted of 14 questions (Appendix B). The questions on this survey focused on three areas of interest: personal skill-level and use of computers, placement and configuration of the home computer, and knowledge of and authority over the child's online activities. These areas were carefully selected so that responses to one question might support a response from another. For example, a parent affirming computer placement in a public area of the home might not feel the need to discuss rules about accessing inappropriate sites because they may feel that the close proximity of other family members or adults prevents children's access to such websites. The last question on the survey asked parents if they would be interested in attending a parent workshop on Internet safety.

The student survey (Appendix C) consisted of 13 questions that were closely aligned with those asked of the parents. Questions for both the student and the parent surveys were selected based on practices and activities that were identified to be at-risk in the review of the literature. This was done so that student responses could be compared to those of the parents.

A pilot study was conducted for both the parent and student surveys. This pilot study took place at a geographically convenient school which met the criteria for the sample population but was not part of the actual study. Responses were gathered from 42 parents and 60 students. Parent participants in the pilot study were among those gathered for an Internet safety meeting. Prior to the meeting, the researcher addressed the parent attendees explaining the purpose of the pilot study and inviting them to participate. The

parents were asked to respond to the questions on the survey as if they were participating in the data collection process. They were asked to note any questions that were unclear, or difficult to understand. After they had completed the surveys, the researcher led a discussion about the questions and solicited input. As a result of that discussion, no questions were changed, however, the questions were reordered in a way that was more logical to the pilot participants.

The pilot study for students was conducted at the same school where the parent pilot study was conducted. The computer teacher asked the students to complete the survey. The teacher made notes of the student comments. Students asked if they were to check each of the rooms in their homes where they used the computer, if they were to check all of the places they access the Internet (school, home, library, etc.), and what to do if they did not know what their parents did when they went online. Since the directions already answered these questions, the researcher did not adjust the questions but noted that students were sometimes unclear about how to respond with multiple replies to the same question. Because the order of questions was changed on the parent survey, the order was also changed on the student survey so that similar questions were parallel in numbering between the two surveys.

#### *Data Collection Procedure*

The researcher identified all of the schools within 50 miles of Missoula, Montana. An E-mail (Appendix A) was sent to administrators in 16 school districts inviting them to participate in the study. The E-mail described the study explaining that students and parents would be asked to complete questionnaires regarding their Internet activities. Among the 16 school districts, nine agreed to participate.



Once an administrator agreed to participate in the study, the researcher requested an E-mail confirmation which was then forwarded to the Institutional Review Board for approval. Appointments were set with each of the school administrators and the researcher visited the schools to disseminate copies of the letter of invitation (Appendix B, C, and D), parent (Appendix E) and student (Appendix F) surveys. Timelines were set at each school so that the researcher would know exactly when the surveys were being conducted at each school and so reminder notes (Appendix G) could be sent home approximately one week after the original surveys went out. Approximately two weeks after the surveys were distributed, the researcher returned to the school to collect the completed forms. After the researcher collected the completed surveys from each of the schools, data were entered into Microsoft Excel for initial compilation. Once all the surveys had been returned to the researcher and all the data entered, responses were compared using Statistical Package for Social Sciences (SPSS 13.0 for PC).

In most schools prizes, which consisted of bookmarks, hemp bracelets, or cookies, were awarded to the homeroom or classroom that had returned the most surveys. Arrangements for these rewards were established during the initial meeting between the researcher and the building administrator and students were told that prizes would be awarded for high-return rates within dissemination groups.

The anticipated response rate defined for this study was 60%. While no standardized formula exists, Baily (1991) reports that a 30% response rate is reasonable; Babbie (1979) suggests that a response rate of at least 50% is adequate, 60% is good and 70% is very good. The student response rate for this study was 48%, which is close to what Babbie (1979) considers adequate. The parent response rate for the study was 26%

which falls below what Baily (1991) considers reasonable and must be considered when analyzing the data.

### *Variables and Level of Data*

Independent variables are those that are manipulated by the experimenter (Howell, 2002, p.4). For this study the independent variables were the responding parents and the responding students.

Dependent variables are those not under the experimenter's control (Howell, 2002, p.4). For this study the dependent variables were the responses parents and students provided on the survey form.

Most of the questions asked on both the student and parent surveys returned data that was considered to be nominal. The only exception to this is the question that asked parents and students to report how many hours each week students spend online. That data was considered ratio.

### *Research Questions*

The primary research questions for this study concerns online practices in which Montana middle school children engage and potentially places them at risk for Internet predation. Questions also focused on what parents knew about their children's Internet usage as well as the rules and supervision they impose upon their children's online activities.

Research questions for this study ask:

1. In which online activities do Montana middle school children engage?

2. In which online activities do Montana middle school children engage that researchers have identified as risky or dangerous?
3. To what degree is there agreement between parents and middle school students regarding the number of hours middle school children spend online each week, both in and away from the home?
4. To what degree is there agreement between parents and middle school students regarding the locations where middle school children access the Internet?
5. To what degree is there agreement between parents and middle school students regarding the online activities in which children most often engage?
6. To what degree is there agreement between parents and middle school students about the establishment and discussion of rules about websites children may and may not visit?

#### *Sub-questions*

A number of sub-questions also relate to this study. Responses to these questions may provide insight or support responses for other survey responses. They include:

1. Where in the home is the computer that is used by middle school children located?
2. What types of personal information do middle school children share in the online environment?
3. What Internet training have middle school children and their parents received?
4. Is there a relationship between the ability levels reported by parents and the limitations and supervision they impose upon their children?

### *The Null Hypothesis*

The null hypothesis for this study is:

There will be no experimentally important or consistent difference between parent and student responses within the sample regarding computer skill level, student Internet use, locations where students access the Internet, the number of hours students spend online both in and away from the home, the online activities in which students engage, or the establishment of rules for students' Internet usage.

### *Statistical Procedure*

The instrument used in the study collected data, which in many cases, were nominal. Data collected from many of the questions were reported in percentages which were then compared. Some of the survey questions resulted in data that were used in a descriptive fashion and matched to statistical results in an effort to explain response patterns or differences.

Data analysis was completed using Statistical Package for Social Sciences (SPSS 13.0 for PC). Nominal level data was analyzed using frequencies and Pearson's Chi-square tests.

### *A Priori*

Statistical consistency was set at  $\alpha = .05$  (Gay & Airasian, 2003). A practical importance of the findings was determined by an experimental difference of 10%.

### *Validity*

Campbell and Stanley (1993) explain internal validity as referring to whether or not an experimental treatment makes a difference and whether there is sufficient evidence to support the claim. For this study, the threats to internal validity could include history. If parents, students, family members or friends have experienced an incidence of Internet predation, that experience could influence responses to the survey questions. The same threat could exist if parents and students have read articles or seen television programs reporting incidence of predation.

For this study, the sample was conveniently selected. The response rate of students was 48% which is close to what Babbie (1979) considers adequate. The parent response rate for the study was 26% which falls below what Baily (1991) considers reasonable. This could lead to issues in validity issues regarding the reliability of responses.

Experimental mortality could also have threatened reliability in the event that participants began responding to the survey questions, however they did not complete the survey.

External validity refers to the generalizability of the outcomes (Campbell & Stanley, 1993). The sample for this study was conveniently selected and may not be generalizable to other populations.

### *Summary*

This study utilized survey research to identify the online activities middle school children reported they engage by comparing student and parent survey responses. The

study identified schools within a 50 mile radius of Missoula, Montana. Administrators from nine schools agreed to participate.

The research questions for this study considered online behaviors in which student engage and related practices parents utilize regarding those behaviors. The null hypothesis stated that there would not be an experimentally important or consistent difference between parent and student responses to variables existing literature deems risky or dangerous in regards to Internet predation. Chi-square tests were conducted to compare nominal data.

The next chapter discusses descriptive information and computations derived from the sampling survey. It also includes comparisons between those parent and student groups.

## CHAPTER FOUR

### Analysis

#### *Introduction*

The purpose of this study was to identify behaviors in which western Montana middle school children engage that potentially put them at risk for online predation. The first goal was to learn in which online activities children in sixth, seventh and eighth grades engage, and then to identify the location from which they gain Internet access. The next goal was to determine which of those activities could be perceived as dangerous based on existing research. The final goal was to learn how much parents know about what their children do when they go online and what types of supervision they impose upon their children regarding online activities.

The data from parent and student responses to a survey were analyzed using the Statistical Package for Social Sciences (SPSS 13.0 for PC). Statistical analyses were conducted using descriptive statistics such as frequencies, descriptive and Chi-Square tests. Qualitative data from comments made by respondents are also reported. These data are reported, in most cases, using the participants' own words.

This chapter will first discuss descriptive information and computations derived from the sampling survey. Data were collected from middle schools students and parents of middle school students, not necessarily living in the same household, which were conveniently selected within a 50 mile radius of Missoula, Montana. This chapter will include comparisons between responses between the parent and student groups. The sample contained 567 students and 307 parents, however, not all participants responded to every question.

### *Presentation of the Data*

Survey responses were examined using the Frequencies and Explore programs of the Statistical Package for the Social Sciences (SPSS 13.0) software.

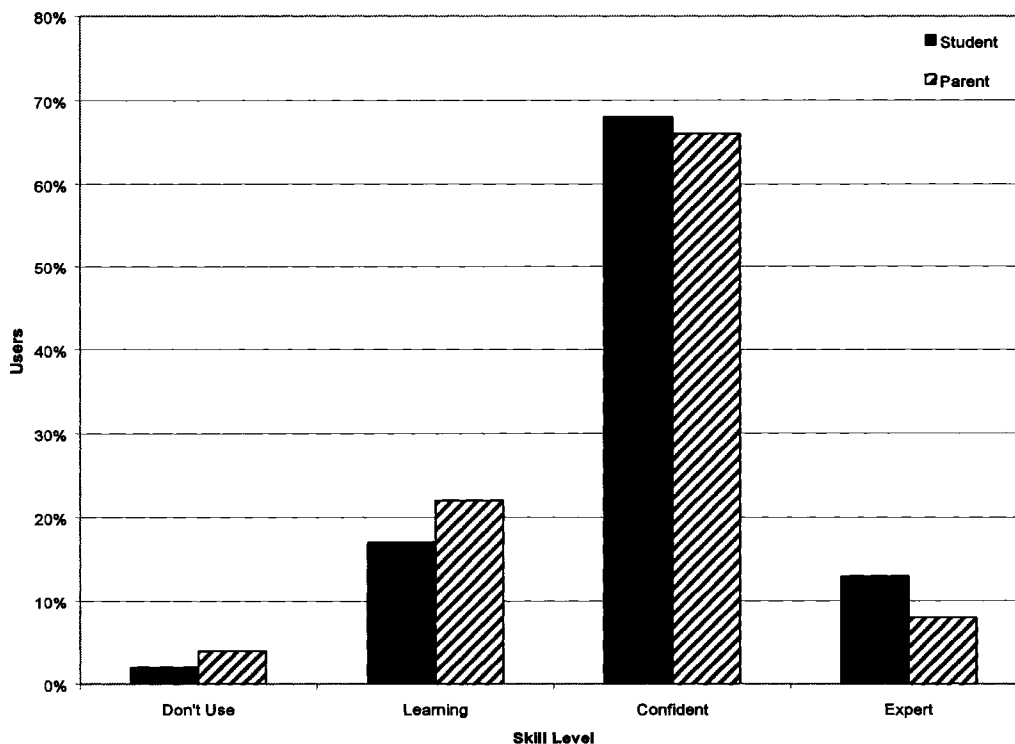
### *Survey Results*

The survey instruments used for this study consisted of 14 questions for parents (Appendix E), and 13 questions for parents (Appendix F). The questions on each of the surveys asked the participants for similar information so that parent and student responses could be compared. The following is a report of the statistical analyses and a compilation of the qualitative data reported by the study's participants. This report is organized by question in the order in which they appeared on the survey.



### Computer Skills

**Figure 1 –Skill Level between Groups**

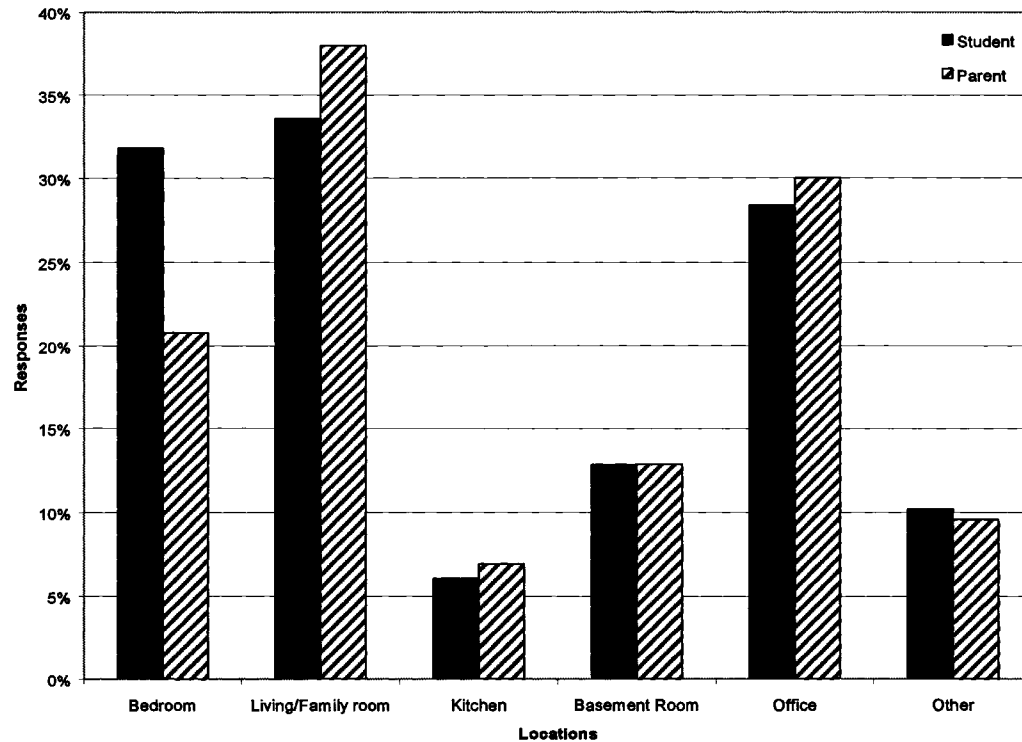


*Figure 1.* Question 1: Please indicate the best description of your computer skills. (Parent n = 294, Student n = 574)

When asked about the level of skills in using computers, 2% of the students and 4% of the parents reported that they did not use computers at all. Parents (22%) reported they needed to learn more about computers than did students (19%). Slightly more students (67%) than parents (66%) felt confident with their computer skills. And more students (13%) than parents (8%) considered themselves experts when it comes to using computers. Overall, most students and parents consider themselves to be confident or expert computer users.

*Computer Ownership and Placement*

**Figure 2 – Computer Location within the Home**



*Figure 2.* Question: Where in your home is the computer located? (Parent n = 267, Student n = 578)

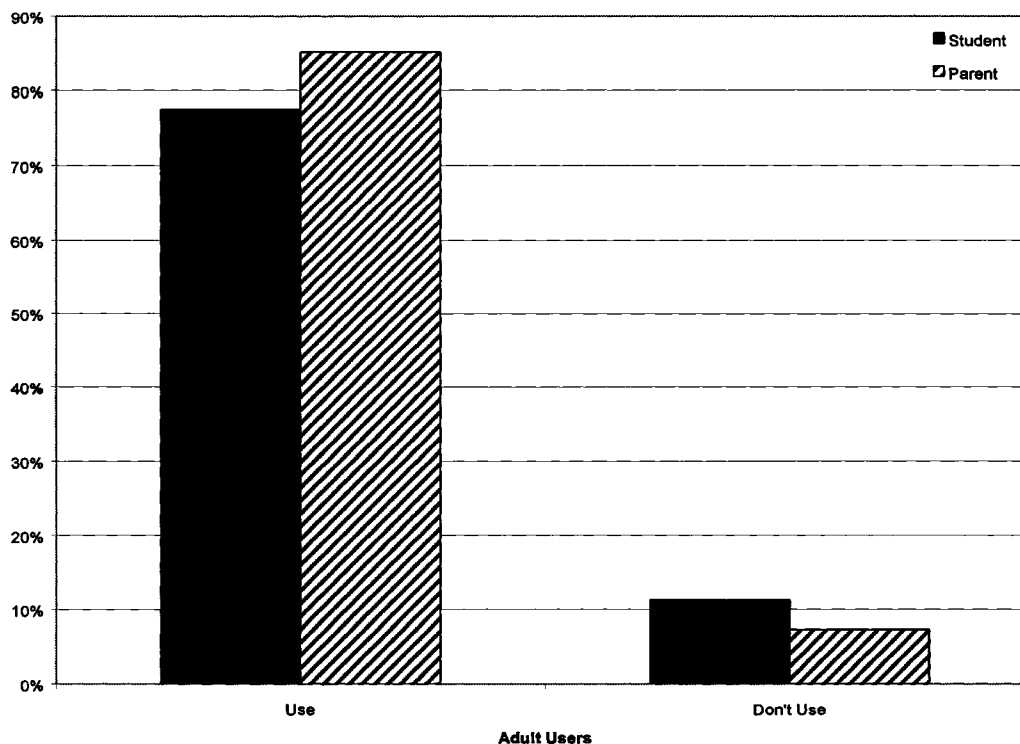
Overall, parents and students are in agreement about computer ownership.

Students (34%) and parents (38%) most often reported computers were located in the living room or family room area of the home. Additionally, parents and students were in close agreement that computers were also located in other rooms considered public areas in the house. More students (32%), however, reported computers located in the bedroom than parents (21%), an area of the house considered to be more private and in a more distant proximity to adult supervision.

Other rooms of the home where the computer was reported to be located (students– 10%, parents– 10%) included the dining room, laundry room, computer room, loft, mud room, back entry area and ping pong room.

### *Adult Use of the Internet*

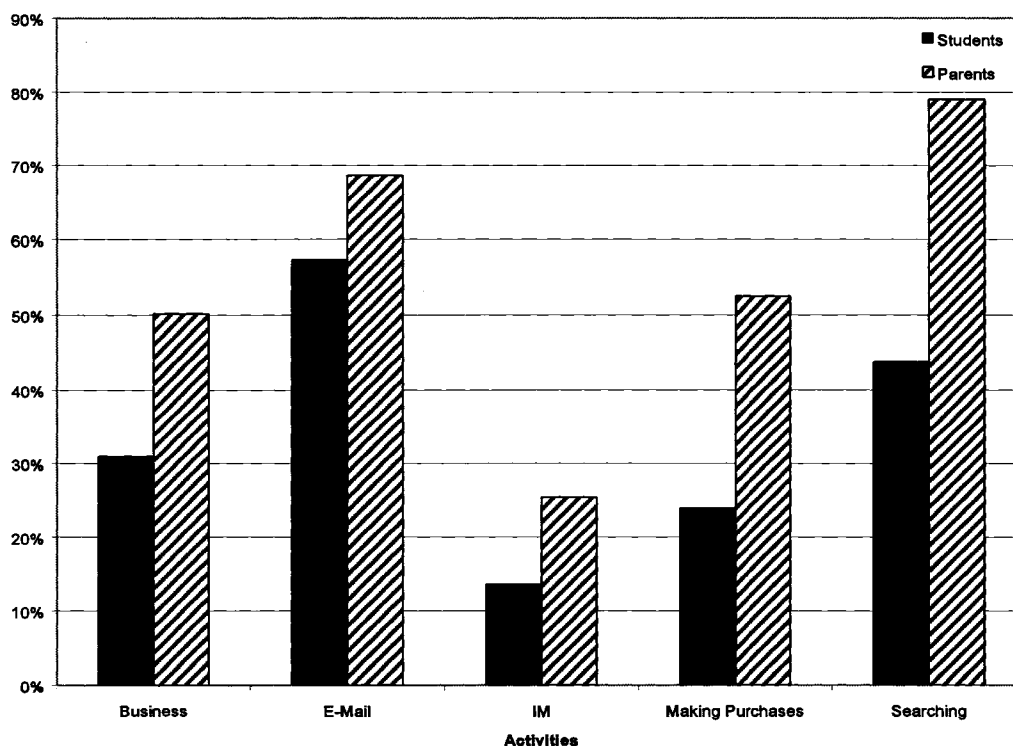
**Figure 3- Adult Internet Users**



*Figure 3.* Question: Do the adults in your home use the Internet? (Parent n = 280, Student n = 497)

Student and parent respondents agreed that most parents used the Internet. Only seven percent of the parents said that they did not use the Internet, while 11% of all students reported that their parents did not use the Internet. Nearly all parent respondents (85%) indicated they were Internet users, compared to 78% of the student respondents who said their parents used the Internet.

When asked to describe their online activities, a quarter (25%) of the parents who use the Internet reported using Instant Messaging, while only 14% of the students reported that their parents used Instant Messaging. Half of the parents (50%) reported using the Internet for business and 69% used E-mail. Student respondents reported that 57% of their parents used E-mail. More than half of the parents (52%) reported making purchases online compared to 24% reported by students. The most popular online activities reported by parents was Internet searching (75%). Those parents reported searching for information related to travel, sports and hobbies, health issues, entertainment, work related information, materials for classes or education, games and money management. Slightly less than half of the students (44%) reported that their parents conducted Internet searches for travel, work related materials, health information, items to purchase, research for classes they take, as well as to help their children with homework, sports related topics, hobbies, real estate and music. They reported that their parents play games, pay bills, download music and purchase things online. One student reported that his father has “porno” on his computer. Since the student did not define what he meant by “porno,” it might mean that the child has seen information on his father’s machine he considers to be “porno,” that he has seen his father visiting sites that contain materials he considers to be pornographic, or other interpretations based on the child’s understanding of “porno.”

**Figure 4- Adult Online Activities**

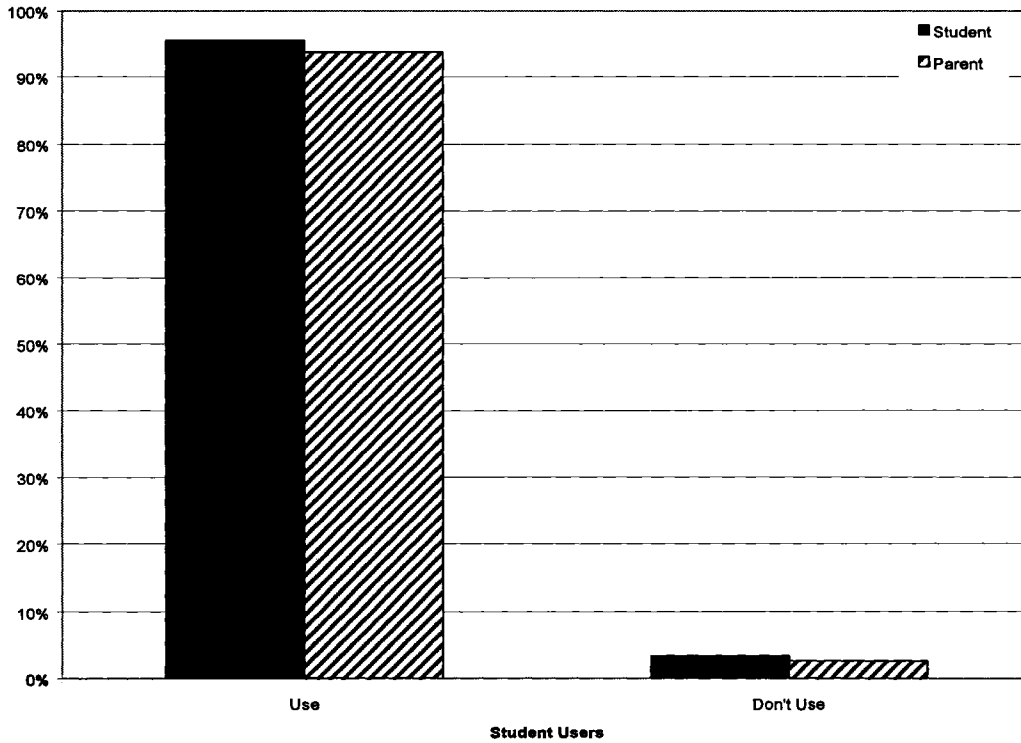
*Figure 4.* Question: If the adults in your home go online, what in which activities do they engage? (Parent n = 287, Student n = 568)

Some students (14%) reported they did not know what their parents do when they go online. Parents reported that they conduct Internet searches (79%) more than they E-mail (57%), while students reported parents E-mail (57%) more than they conduct searches (44%). Parents use the Internet to conduct business (50%) and make purchases (52%) more frequently than students reported (business -31%, purchases 24%) as well. Students reported that nearly one-quarter of their parents (14%) use Instant Messaging while parents reported using IM nearly twice as much (25%). These findings show that parents participate in each of these activities more than students know. This difference could mean that students don't know how much time their parents actually spend engaged in these activities or, because the parents and students were not matched, that the

parents of the students who participated in the study spend less time engaged in these activities than do the parents who responded to the survey.

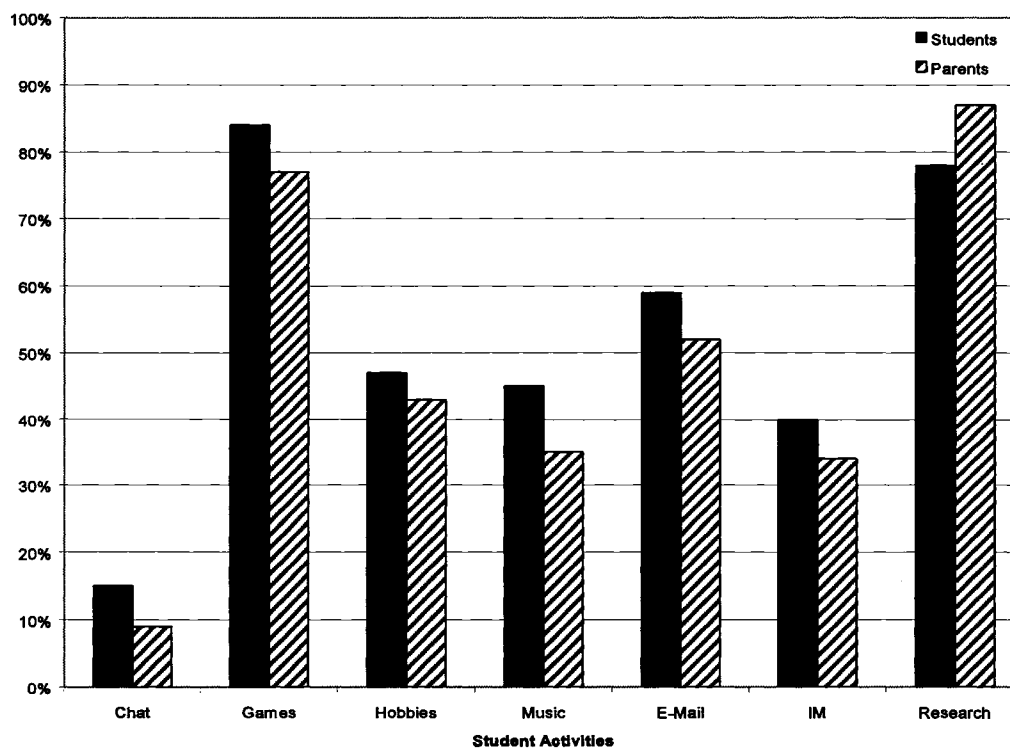
*Student Use of the Internet*

**Figure 5 – Student Internet Users**



*Figure 5. Question: Do you/your child use the Internet? (Parent n = 292, Student n = 554)*

Students and parents were in close agreement regarding students' use of the Internet. The number of parents who reported having children who used the Internet (97%) was very close to the number of students who reported using the Internet (96%).

**Figure 6- Student Online Activities**

*Figure 6.* Question: If your child uses the Internet, what do they do when they go online? (Parent n = 288, Student n = 562)

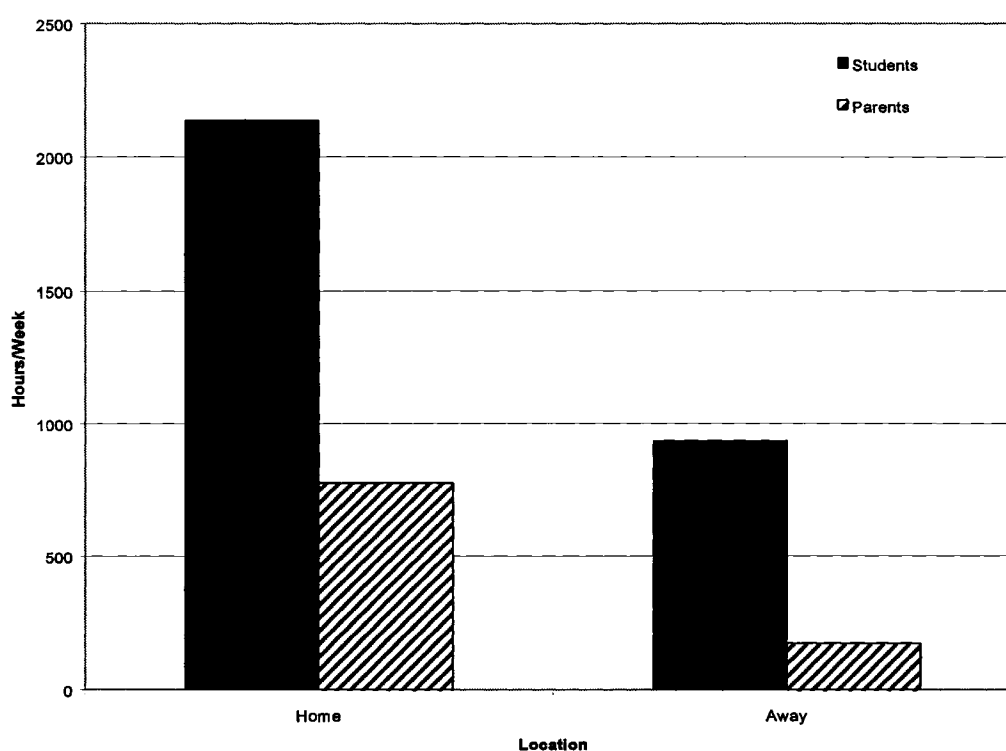
Students who use the Internet reported playing games as the most frequent activity in which they engage (84%), followed by conducting research for school (78%). More than half of the students use E-mail (59%) and 47% search for hobbies while 45% download music online. Students reported they also Instant Message (40%) and 15% use chat rooms. Other activities (23%) that children reported participating in online included making purchases, looking up movies and television shows, going to sites related to their pets, and looking for pictures.

Most parents (87%) reported that their children's primary online activity was conducting research for school. Many parents (77%) also reported their children played games online. Parents reported E-mail use (52%) slightly less than did students.

Additionally, parents reported their child uses the Internet to find information about hobbies (43%), download music (35%), Instant Message (34%) and use chat rooms (9%). Other online activities (7%) in which parents reported their children engage included designing and upgrading personal web sites, finding movies, and looking for information about pets.

### *Time Students Spend Online*

**Figure 7 – Number of Hours Students Spend Online**



*Figure 7.* Question: Approximately how much time do children spend online at home? From away from your home? (Parent n = 198, Student n = 482)

Calculating the amount of time that students spend online each week was difficult because not all of the students who reported using the Internet provided the amount of time they spent online each week, and 52% of all parents reported they did not know how much time their child spends online each week. Some students (2%) reported that they do

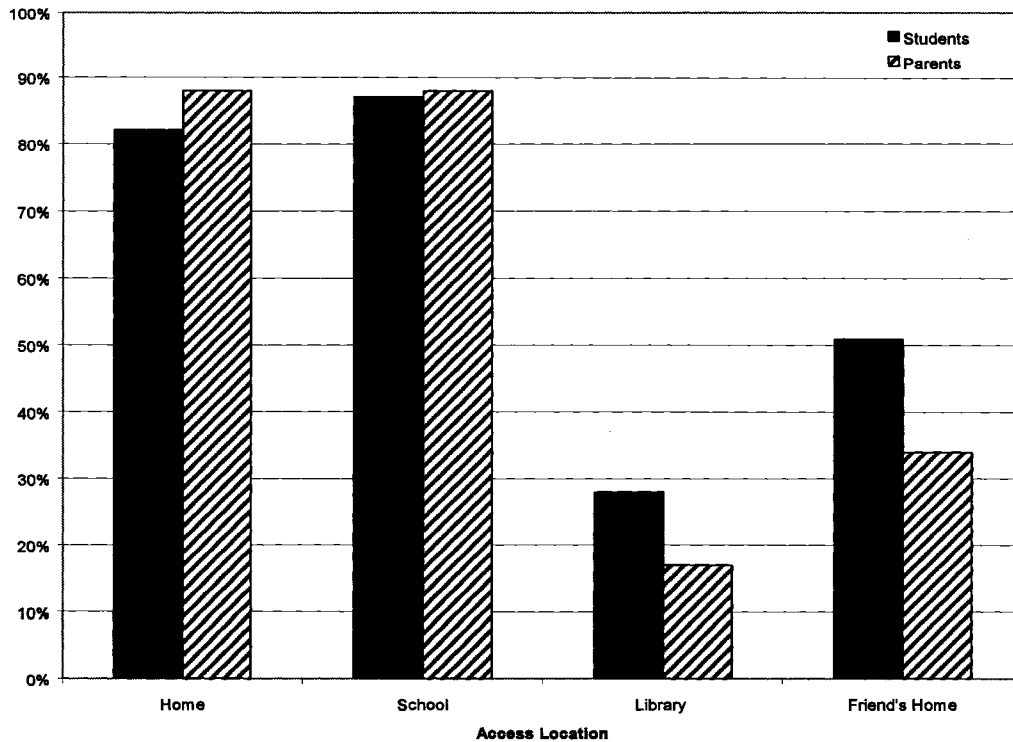


not use the Internet. Since 578 students participated in the study and 2%, or 12 students, reported they didn't use the Internet, 566 students reported being Internet users. Of those 566 students, those who responded reported spending a total of 2,139 hours each week using the Internet at home. This is an average of 4 hours each week, however, since not all students reported how much time they spend online, that average may not be exact. The students reported spending an additional 934 hours each week using the Internet away from home for an average of 2 hours each week spent online away from home. These totals indicate that approximately 30% of the students' time online is spent away from home. Again, because not every student responded to this question, caution must be used when considering these findings.

Slightly more than half of the parents (52%) reported not knowing how much time away from home their children spent online. Parents reported their children spent 778 hours each week online at home, less than half of what the students reported. This is an average of 2.5 hours each week. However, since not all of the students reported how much time they spend online, this may not be an accurate calculation. Parents reported that their children spent 172 hours online away from home. These totals indicate that parents believe 19% of their children's time online occurs away from home, compared to the 30% reported by students.

## Where Students Access the Internet

**Figure 8 – Student Internet Access Locations**



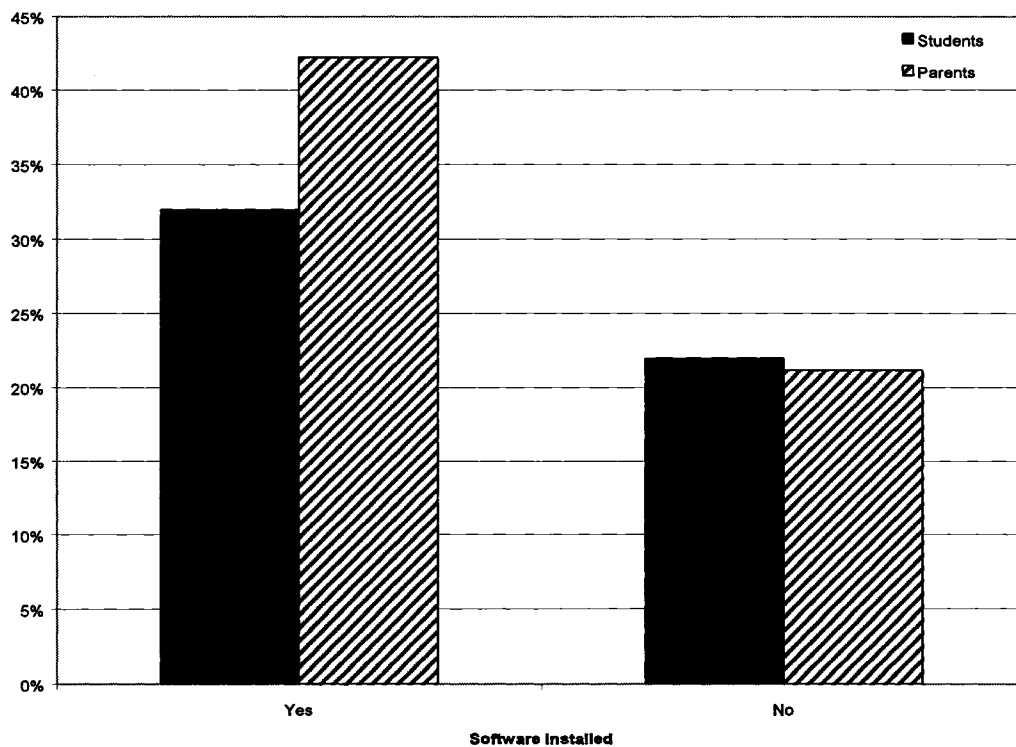
*Figure 8.* Question: From where do you/your child access the Internet? (Parent n = 291, Student n = 562)

All parents reported that students access the Internet equally from school and home (88%) while all students reported using the Internet at school (87%) slightly more than at home (82%). More students reported that they use the Internet at the public library (28%), compared to 16% of parents. Slightly more than half of the students reported using the Internet at their friends' homes (51%), while only 34% of parents reported their child uses the Internet at the home of a friend. Other places parents and students reported accessing the Internet (students 15%, parents 7%) included a non-custodial parent's house, a family member's house, or at a parent's place of employment.

Parents and students were in agreement regarding the other places from which students accessed the Internet.

### *Blocking Software*

**Figure 9 – Blocking/Filtering Software**



*Figure 9.* Question: Do you have blocking software that keeps you from doing things online installed on the computer that you use at home? (Parent n = 227, Student n = 530)

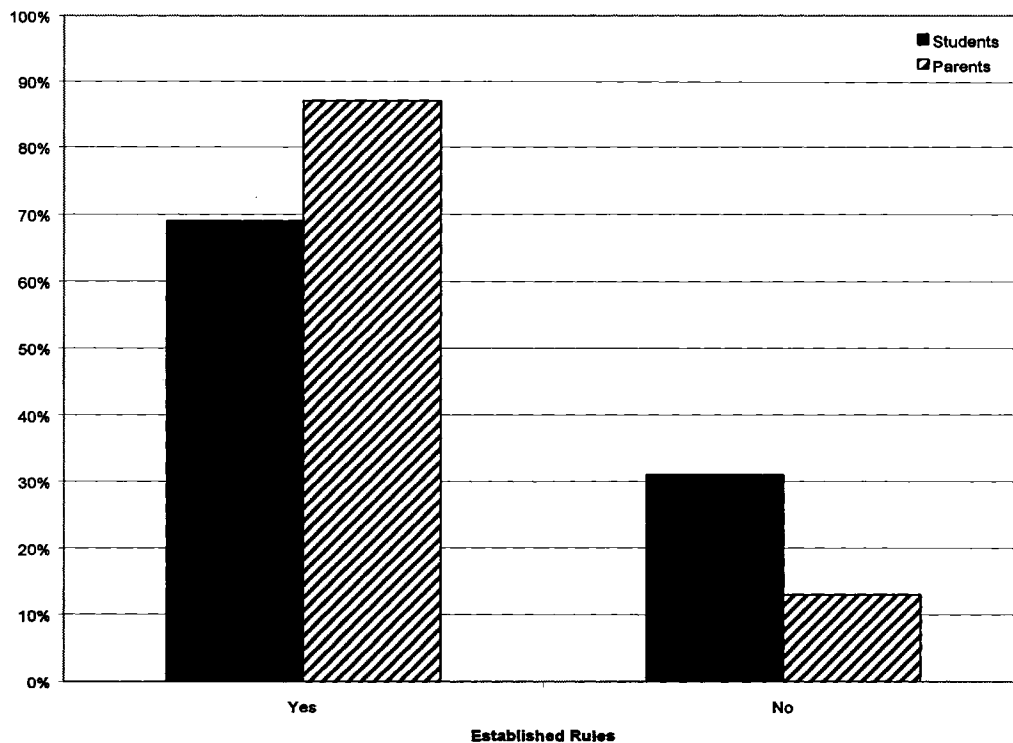
Nearly half of all parents (42%) indicated they had blocking software on their computers. Some parents (21%) responded that they did not have this type of software and another 12% indicated that they did not know if they had it or not.

Nearly one-third of the students (32%) reported having blocking software installed on their home computers and 22% reported that they did not. The largest percentage (41%) of students reported not knowing if they had blocking software or not. This raises questions regarding the students' understanding of what blocking software is.

One student commented, “I used to [have blocking software] my parents trust me we have unwanted mail and pop-up blocker [sic].” Another student commented, “Never heard of it.”

### *Rules of Internet Use*

**Figure 10 – Internet Usage Rules**



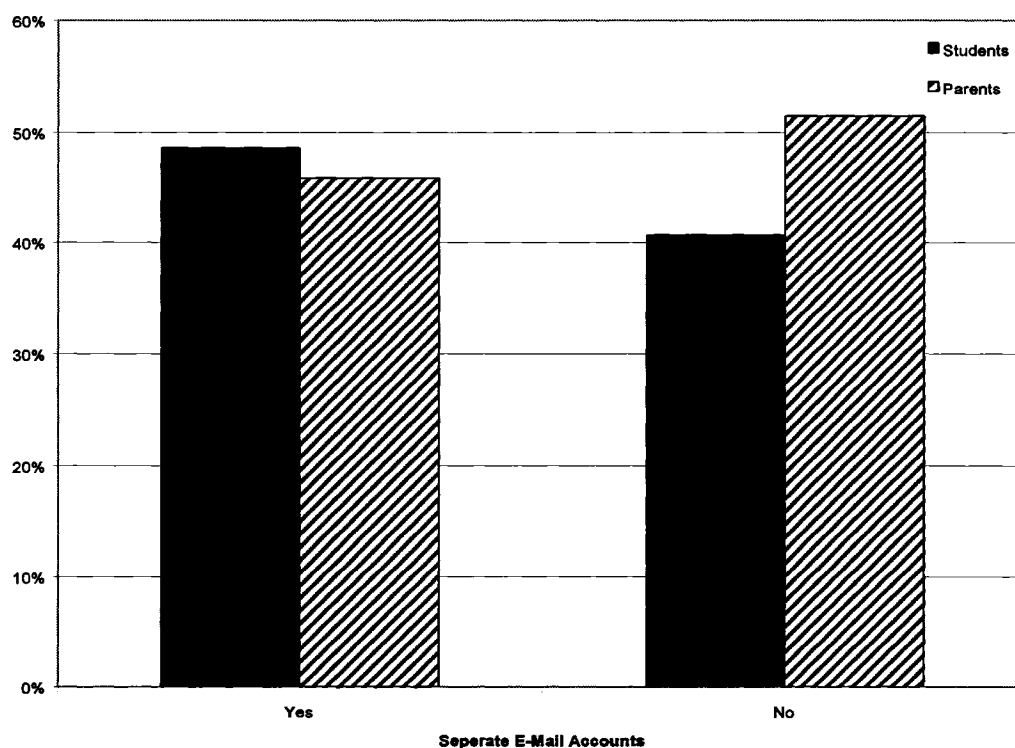
*Figure 10.* Question: Have any adults in your home/you discussed rules about the sites you/your child may and may not visit? (Parent n = 288, Student n = 566)

Most parents (87%) reported they had established rules for their child’s Internet use, while 69% of the students reported their parents had established rules for their use. Nearly one-third of the students (31%) reported that their parents had not established rules compared to only 13% of the parents. One student, who reported that rules had not been established, commented, “But it’s pretty clear what not to go to!” Other students reported they were “good kids” and that their parents trusted them. Since these children

did not indicate anywhere in their responses that they had gone to inappropriate web sites, or that they had engaged in improper conversations, it is not possible to determine if, in these cases, the establishment of rules would make a difference in behaviors.

### *E-mail Accounts*

**Figure 11 – E-Mail Accounts**



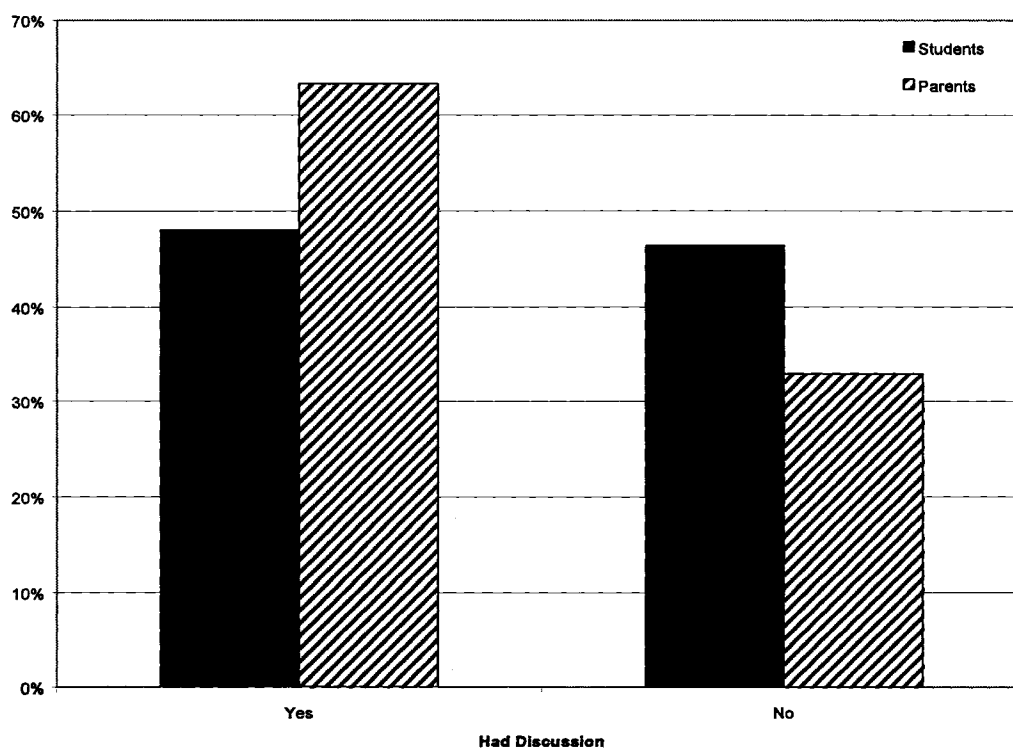
*Figure 11.* Question: Do you/your child send and receive Email from an account different from your parents? (Parent n = 292, Student n= 552)

Approximately one half of the parents (46%) and the students (49%) reported that students send and receive E-mail from accounts different than their parents. A little more than half of the parents (51%) reported that their children use the same accounts as they and 2% reported that they did not know if their children used different E-mail accounts. Slightly less than half of the students (41%) reported that they did not have separate

accounts and 9% of them did not know if their E-mail accounts were different from their parents'. At least one student responded saying that he/she would soon be getting a separate account.

### *Inappropriate/Sexual Oriented Messages*

**Figure 12– Discussions Regarding Sexually Oriented Messages**

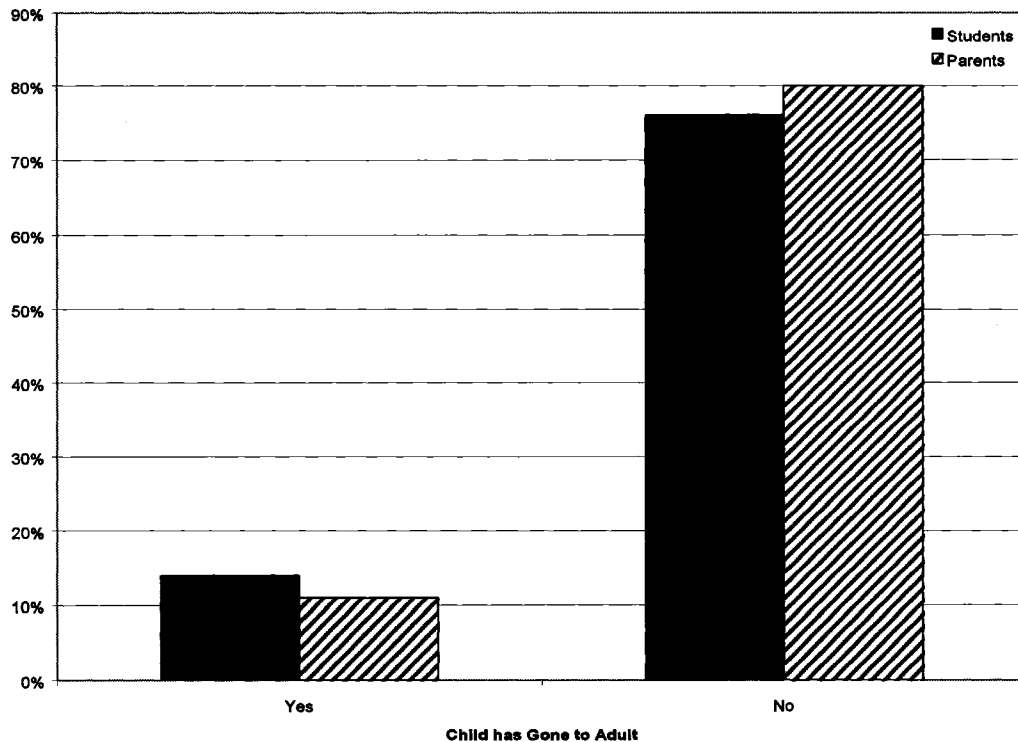


*Figure 12.* Question: Have you and your parents/child discussed what to do if you/your child receive(s) sexually oriented messages while you're online? (Parent n = 292, Student n = 529).

Parents (63%) reported they had discussed with their child what to do if the child received a sexually oriented message. Fewer students (48%) reported having such discussions with their parents. This may be because the parent/student responses were not matched. Those parents who responded may have had such discussions with their

children, while the parents of the students who responded may not have had a discussion with their child regarding the receipt of an inappropriate message.

**Figure 13– Gone to Adult after Receiving Inappropriate Message**



*Figure 13.* Question: Have you ever gone to your parents/Has your child ever come to you to discuss an inappropriate message you/your child received? (Parent n = 273, Student n = 507)

When asked if they had ever received a sexually oriented or otherwise inappropriate message, 76% of the students replied they had not. Many of the students wrote comments indicating they “never had any” when asked this question. One student wrote “I am a good girl! Promise.” This comment might indicate that she believed that because she considered herself “good,” she would not receive an inappropriate message. Other comments from this individual’s survey indicated the importance of being a “good girl.” When asked if adults had talked about rules, she responded, “I am a good kid!”

Her comment regarding what she had been taught about Internet safety was “Never be a bad girl - be good!”

Parent responses were similar to the students with 80% of the parents reporting that their child had never come to them to report receiving such a message. Parent comments about their instructions to their child in the event an inappropriate message is received included:

- “Never open an email from someone you do not know – then imediatley [sic] tell me or his dad.”
- “We had our son block him from emailing.”
- “I have a very strong filter on my computer and I am with them while they are online – at all times!”
- “It was not sexual [sic] it was swearing and we discussed that he is to leave teams (he is gaming) that use foul language.”
- “We put a block on the comp!!!”
- “Turn the computer off- [sic] many of these are “attack” sites that you can’t click out of.”
- “We have a computer for games but no Internet – I am not comfortable with it in my home.”
- “Delete the email and never answer back.”
- “When she’s on the computer I am sitting right with her.”
- “It doesn’t happen because we have blockers, firewalls and McAfee.”
- “I don’t know what to do.”
- “Delete the message and change email accounts.”

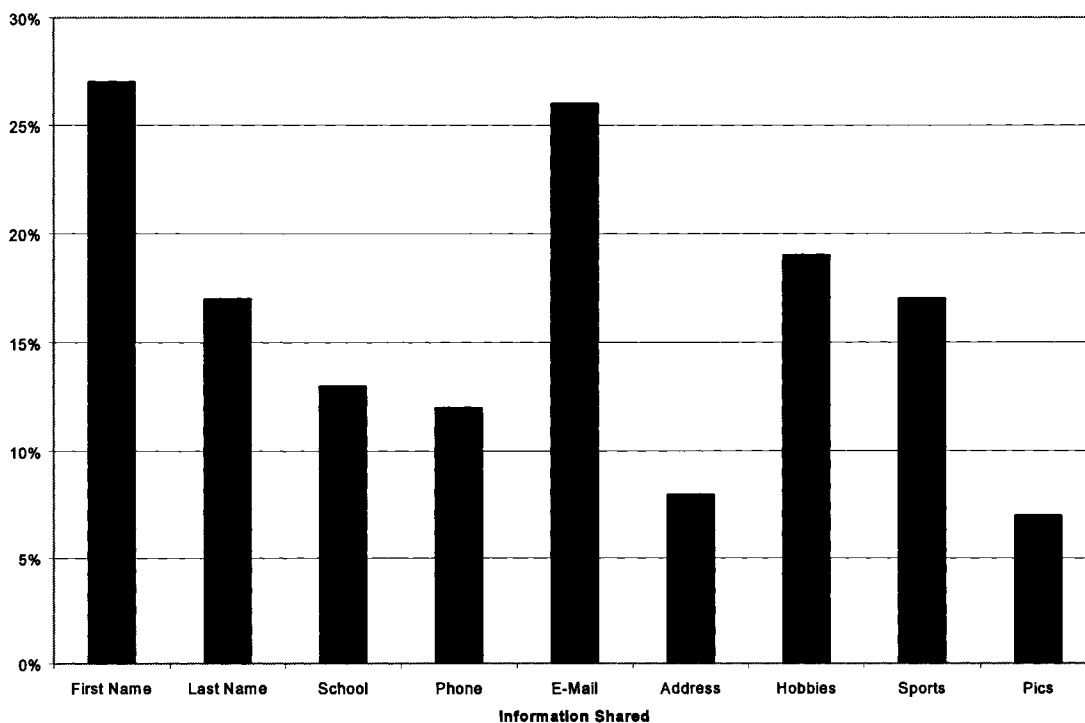


- “Tell an adult and he’ll take care of it.”
- “Show me.”
- “I made her discontinue use of that area, [sic] when it continued, I removed her computer.”

These comments seem to indicate that parents have different ideas of what inappropriate messages are and how children receive or come in contact with them when in the online environment. They also seem to indicate that some parents don’t know what to tell their children and that one would like to learn more about this topic.

### *Personal Information*

**Figure 14 – Students Sharing Personal Information**



*Figure 14.* Question: Have you ever shared personal information online? (Student n = 470)

More than half of all students (51%) reported that they did not share personal information while they were on the Internet. However, 33% reported that they did share some information about themselves. More than one-quarter reported sharing their first names (27%), 17% shared their last names, 13% shared the name of the school they attended, 12% gave out their phone numbers, 26% gave out their E-mail address, 8% gave out the physical address of their home, 19% shared hobbies which they enjoyed, 17% shared the sports in which they participated, and 7% had posted pictures on the Internet. Other personal information that students reporting sharing online included:

- Passwords
- “Lunch number is in my email”
- Pet’s name
- Zip code
- Facebook
- Age
- “Fake stuff”
- City
- State
- Gender
- Birthday
- Friends’ names
- “Net name”
- Nickname
- What I do on weekends

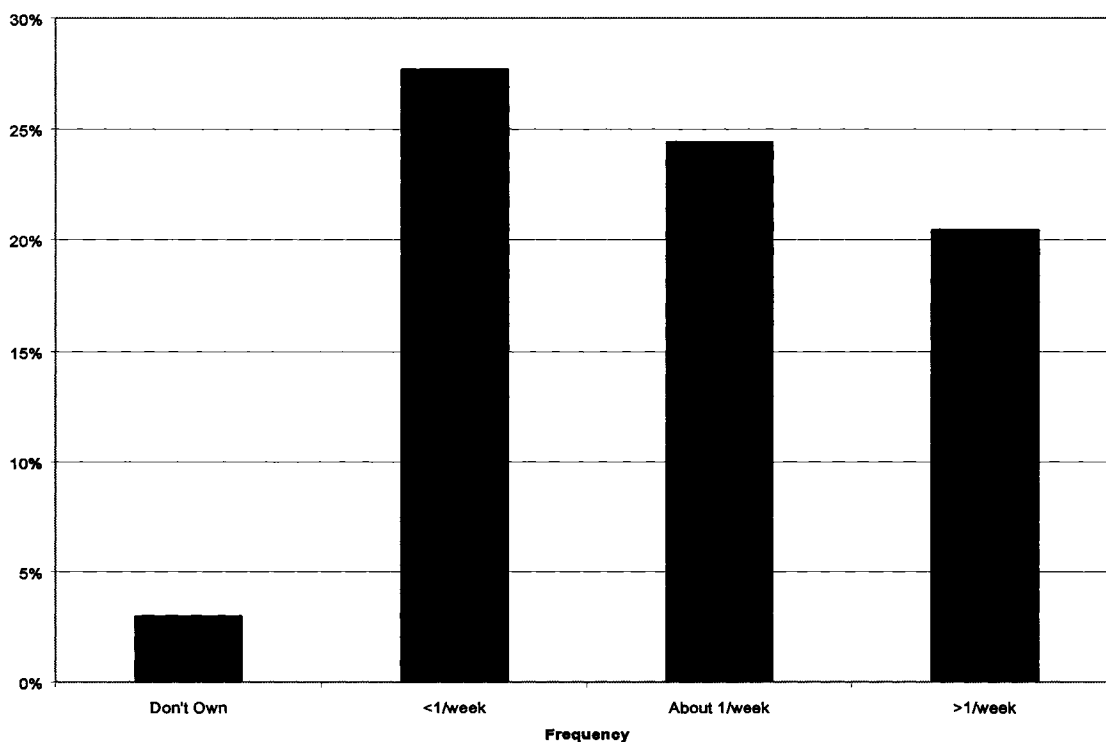
Many of the students qualified that they shared this information “only with friends.” One student said he shared “Only people I know I Instant Message with.” Another said he shared “only to friends from school on MSN [sic] never anywhere else.” These statements indicate that students don’t realize that strangers could be watching the conversations and gleaning personal information about unsuspecting individuals who are engaged in conversations with people that they know. One student was warned to “use false name when log onto Disney.” This statement might consistent that the student is

keeping his/her name private and raises questions regarding how this type of anonymity affects his online behavior.

Responses from some students indicated that they had been told they shouldn't share personal information with individuals they had met online. As a result, some of the students may have chosen not to respond because they realized there was a danger involved with sharing personal information online and as such something they didn't want to admit they had done.

### *Computer History*

**Figure 15 – Frequency at which Parents Check Computer History**



*Figure 15.* Question: How often do you check to see what sites the web browser on your computer has visited? (Parents n = 274)

Parents were asked to indicate how often they checked to see which sites the web browsers on their computer had visited. Some parents (3%) indicated they do not own a computer, and some (15%) indicated they did not know how to check to see what websites the computer had visited. Of those who did check, 28% reported they checked the computer history less than once each week, 24% checked about once each week, and 20% checked more than once each week. While most parents responded to this question (92%), some did not. Those who did not know may not have wanted to admit they did not know how to check the computer's history.

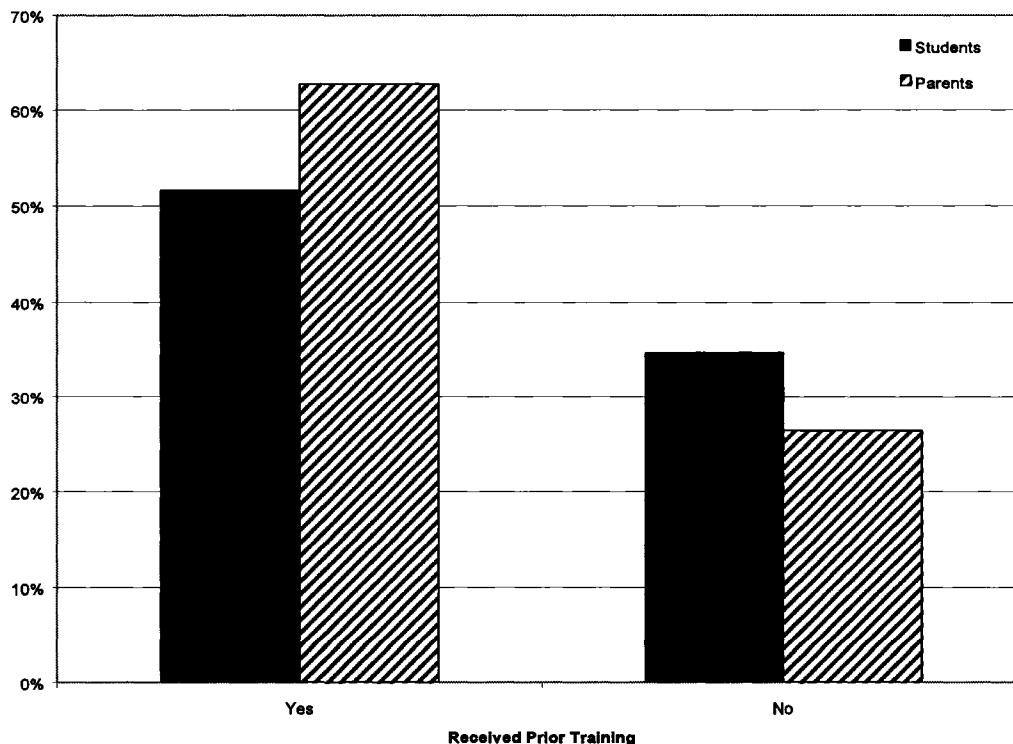
Parents' comments regarding checking their computer history included:

- "I do not check [sic] as I stated I am always with my children while they are online and the one that gets them to sites that they want to go."
- "I can see the computer from the room we are all in. I don't need to check it."
- "I check it every time they go on."
- "I get a report every time they go on."
- "We would like to know how to check."
- "I check when my kids are at the computer and see what they are doing."

These comments seem to indicate that some parents feel their children are safe when parents participate in online activities with their children and they don't need to check to see the sites the computer has visited. Others check the computer, and some who don't check would like to know how to check the sites that the computer has visited.

*Internet Safety Training*

**Figure 16 – Previous Internet Safety Training**



*Figure 16.* Question: Have you learned about Internet safety? *To parents:* Would you be interested in attending a workshop for parents on Internet safety? (Parent n = 270, Student n = 483)

More than half of all parents (63%) and all students (52%) indicated that they had received some type of Internet training. Parents reported having received that training from:

- Work
- School
- Television
- Magazines
- Trial and error
- Books
- i-Safe
- School/class
- Personal experience
- Friends
- On the computer
- YWCA
- Workshops
- Church

- Fliers
- Business conference
- Self-taught
- Parental controls
- Girl scouts
- Common sense
- Software
- Network administrators/Internet provider

One parent reported having learned to “Never allow your child to go on the Internet without your supervision, [sic] that’s all there is to it. Be there at all times.”

Another reported having learned “Not to give out any personal information such as name, address, phone number, school, what we look like, etc.” One parent said, “Know where your kids are going on the web.” While Internet safety organizations such as i-SAFE America and Netzmart Kids advocate these tips, these statements alone do not constitute Internet safety training.

Students reported learning about Internet safety from the following sources:

- Mom/Dad/Parents
- School
- Computer Class
- Aunt/Uncle
- Teachers
- Grandparents
- “By trail and error”
- “From other’s mistakes”
- Disney site
- Church
- “A lady came to our computer class and talked about it.”

When students were asked what they learned about in these Internet safety trainings, they responded:

- “Don’t talk about pursanle [sic] to anyone”

- “Mom – she taught me to exit from inappropriate sites. Don’t talk to strangers and don’t click on pop-ups.”
- “I use common sense.”
- “My dad – don’t go to chat rooms or bad sites.”
- “I don’t remember.”
- “Mom and Dad – be careful what sites you go to.”
- “Mother and Grandmother – don’t give personal information to people I don’t know.”
- “Not to ever go where you don’t belong.”
- “Don’t talk to bad people.”
- “Dad said there are weirdoes online.”
- “Don’t share name address and age.”
- “Don’t talk in chat rooms.”
- “Don’t go to bad sites – don’t put my information up.”
- “My space could be dangerous [sic].”
- “My mom – I’ve learned to ask her if I can go on and which site I’m going on.”
- “Mom and Dad said, No inappropriate nude people and no downloading.”
- “My sister told me things to do about certain things.”
- “I learned how to use the computer at school. I learned all good researching sites. What not to even think about accessing.”
- “My parents and teachers. I learned to not go on sites that may not be inappropriate, and certain sites are not for kids like me.”
- “No XXX sites and don’t click on pop-ups.”

- “Don’t do anything stupid [sic] they will check what we are doing.”
- “Parents taught me how to block pop-ups and told me not to open stuff I don’t know and don’t go to a site I don’t know.”
- “Mom and Larry, if someone ask [sic] you to met [sic] them somewar [sic] say no. No for your fone [sic] #, adres [sic] and picher [sic].”
- “I learned from my dad, and he taught me to not give my last name, address of my house, or any family business.”
- “Do not chat with people you don’t know, even if they say they are 12 or something. They are tricking you, so they could possibly try to get you.”
- “In school during P.A.[Practical Arts] we did a game about someone who had met with an online stocker [sic] and was in trouble. We had to figure out where he was and save him. I learned not to give out info.[sic] To people so that they can find you.”
- “Mr. Smith at school, I learned that there are pedifiles [sic] all over and that you never give any personal info out on the internet.”
- “If you see something bad, don’t look.”
- “If you give a person your phone they can find where you live, it’s dangerous.”
- “My mom told me there are sick people who use chat rooms and you can get vireses [sic].”

These comments seem to reveal that some children are aware that personal information should not be shared online, and that there are websites that contain materials that are inappropriate for children. However, these comments do not indicate that children know what personal information is, or how it might be shared in a public forum



without the child realizing he/she is doing so. Some of the students' interpretations of comments parents have made to their children may be ambiguous.

### *The Hypotheses*

The null hypotheses for this study considered skill levels, internet usages, locations where students accessed the internet, student activities, and the establishment of rules for children's online activities. For this research, an experimentally important difference was defined as a difference of 10% between the parent and student groups. The alpha level was defined as  $\alpha = .05$ . A Chi-square Distribution Table (Appendix J) was utilized to determine importance (Gay & Airasian, 2003). Tables containing the Chi-square test results may be found in Appendix I. Analysis of the data revealed that some differences were important beyond the .05 level. Those are reported at the more potent levels of importance.

#### *Hypothesis 1: Comparing Parent and Student Responses within the Entire Sample*

The hypothesis stated that there would be no experimentally important or consistent difference between all parent and all student responses regarding skill level, Internet use, locations where students accessed the Internet, students' online activities, and the establishment of rules. The following is a discussion of the hypothesis in light of the survey responses.

#### *Skill Level between Parent and Student Groups*

The level of skill reported among all parents and all students fell within 10% in each of the four levels: don't use (student 2%, parent 3%), learning to use (student 19%, parent 21%), confident (student 59%, parent 68%) and expert (student 15%, parent 7%)

user. The results of the Chi-square test returned  $\chi^2 (3, N=868) = 10.771, p = .013$ . While the value of  $\chi^2$  was found to be important beyond the .05 level, the difference set a priori was not met; therefore, the statistical analysis failed to reject the null.

#### *Student Internet Use between Parent and Student Groups*

Parents and student were in agreement that nearly all students used the Internet. In fact, among all students only 3% reported that they did not use the Internet. The difference between all parent and all student responses did not meet the level of importance defined *a priori*, and the Chi-square value ( $\chi^2 (1, N=865) = .477$ ) was not found to be consistent. Therefore, this analysis failed to reject the null.

#### *Student Internet Access Locations between Parent and Student Groups*

Among parents and students, all agree that students most often accessed the Internet from school and at home. Parent (17%) and student (28%) responses differed by 11% regarding access at the library and by 23% regarding access from friends' homes (parents 31%, students 54%). Students' responses were greater than parents' in each of these incidences. These differences were larger than the definition set *a priori*. Chi-square for the library was measured at  $\chi^2 (1, N=865) = 12.522$  which is consistent beyond the .05 level. Chi-square for friends' homes was measured at  $\chi^2 (1, N=865) = 23.415$  which is also consistent beyond the .05 level. Since access locations at the library and friends' home were found to be consistent and important, the null hypotheses for these locations are rejected.

### *Student Internet Activities between Parent and Student Groups*

Among all parent respondents, 84% reported that their children spend most of their online time conducting research for school. Among all students, most (78%) reported playing games as the most popular online activity, followed closely by research for school (77%). Among parents (7%) and students (15%), chat was the activity in which children engaged the least. None of the responses between parents or students was greater than the 10% set *a priori*, and the null hypothesis is not rejected.

### *Internet Use Rules between Parent and Student Groups*

Among parents, 87% reported they had established rules for their child's Internet use. More than half the students (69%) reported their parents had established rules for their Internet use. This difference is greater than the 10% set *a priori*.  $\chi^2 (1, N=854) = 30.69$  which was found to be consistent beyond the .05 level. As a result the null hypothesis is rejected.

### *Research Questions*

Research questions for this study involved children's online behavior which places them at-risk of falling prey to online predators. Similarly, questions regarding parental knowledge and supervision of their children, who engage in potentially dangerous online activities, were raised. This section considers the data collected from participants' responses and their comments as they relate to those questions.

#### *Question 1. Students' Online Activities*

Students who go online most often reported conducting research for school (77%), followed closely by online gaming (75%). Slightly more than half (59%) used E-

mail and nearly half searched for information relating to hobbies (46%) and downloaded music (44%).

*Question 2. Students' At-Risk of Dangerous Behaviors*

Students who accessed the Internet frequently (59%) used E-mail to communicate with others. Fewer than half of those who participated in the study used Instant Messaging (39%) and still fewer reported participating in chat rooms (15%). These results indicate that students use the Internet as a method of communicating with others.

Students who go online most often share their first names (27%) and E-mail addresses (26%). Some share information about their hobbies (17%), the sports they participate in or like (17%), their last names (17%), their school name (13%) and their phone number (12%). Some have posted pictures (7%), and given out their home address (8%). Others have shared their sex, age and the names of their friends. From these reports it is apparent that children share personal information when they go online.

*Question 3. Students' Time Online*

Not every student who reported using the Internet reported how much time he or she spent on the Internet. The same was true of parents; some parents who reported their child used the Internet did not share how much time their child spent online. Nearly one-third of the parents (30%) admitted they did not know how much time their child spent online. Therefore, accurately determining how much time students spent online was difficult.

The students (n = 482) reported that they spent a total of 3,073 hours each week online. Of that, 2,139 hours were spent online at home and 934 hours were spent online away from the home.

Parents (n = 198) who responded to this question reported their children spent a total of 2,217 hours each week online: 1,815 hours at home and another 402 hours away from the home. These results support existing research which suggests parents reports that children spend considerably less time online than the children report they actually spend there.

#### *Question 4. Where Students Access the Internet*

Parents (88%) and students (87%) agreed that the Internet was most accessed by children at school. They also are in close agreement (students 82%, parents 88%) that students frequently go online in their own home. More students (51%) than parents (34%) reported they accessed the Internet from friends' homes and from the library (28% students, 17% parents). Other places students reported accessing the Internet was from non-custodial parent's and other family member's homes. From these data it appears parents and students agree that home and school are the most popular places for children to access the Internet. Parents and students somewhat disagree about students accessing the Internet from friends' homes.

#### *Question 5. Rules*

Parents and students were not in agreement when it came to the establishment of rules for children's Internet usage. More parents (87%) than students (69%) reported having rules imposed on children's online activities.

*Sub-question 1. Placement of the Computer in the Home*

Students (34%) and parents (38%) were in agreement that the computer is most often placed in the living or family room of the home. More students (32%) than parents (21%) reported the computer that they most frequently used was located in the bedroom. Parents and students were in agreement (13%) when it came to the computer being in a basement room, and they also agreed that the computer (7% parents, 6% students) was least likely to be in the kitchen.

*Sub-question 2. Sharing Personal Information*

Some students (33%) reported they shared personal information online. The information they shared included their first names (27%), last names (17%), the name of their school (13%) and information about their interests (hobbies 19%, sports 17%). Few students (8%) shared their home addresses or posted pictures (7%). More than one-quarter of the students (26%) shared their E-mail address while 12% shared their phone numbers.

*Sub-question 3. Internet Safety Training*

Slightly more than half (52%) of all students reported that they had received Internet safety training. Those students most often reported receiving training from parents, teachers or other family members. Although several reported being told not to share any personal information when they were online, they did not indicate who gave them this advice. Several also reported that they had been told not to respond to messages from strangers and many were aware of the threat of computer viruses. This information typically came from parents.

Of the parents who reported having received Internet safety training (63%), most said that they had learned about the dangers from news media. Some had taken classes through their places of employment and some reported having discussions with friends and other parents.

#### *Sub-question 4. Skill Level and Internet Activities*

Parents and students were asked about their perceived skill level and which activities they engage when they go online. These questions were asked in an effort to identify if relationships existed between the level of skills in which participants identified themselves and the activities relating to Internet use and at-risk behaviors.

##### *Skill Level and Access Locations*

Parents who do not use the computer reported that their children use the Internet most often at school (67%). These parents also reported that their children were least likely to use computers at their friends' home (22%) or at the library (22%).

Parents who are learning to use the computer also reported their children most often used the Internet at school (85%). Students who are learning to use the computer closely agreed with their parents about most often using the Internet at school (86%). These parents reported that their children were least likely to use the Internet at the library (15%), and, again, the students were in agreement (15%).

Parents who consider themselves experts or confident users reported that their children most often use the Internet at home (92% expert, 85% confident users). Students who consider themselves expert users agreed with these parents (92%). However, students who consider themselves confident users, while in close agreement, reported

accessing the Internet more at school (89%) than at home (85%). Expert (17%) and confident users (18%) agreed with those learning to use the computer (15%) that the library was the least likely place for children to access the Internet. Students were again in close agreement that the library was the least often location from which the Internet was accessed (learning 15%, confident 16%, expert 17%). Students who were confident computer users accessed the Internet from their friends' homes (55%) considerably more than other students (35% learning, 34% expert) and more than parents in any group reported (33% learning, 35% confident, 33% expert).

These data would indicate that at the expert level users access the Internet more frequently at home than from other locations. The school is a popular place for students to access the Internet and favored among those who do not consider themselves experts. The library is the least likely place for students to access the Internet.

#### *Skill Level and Student Internet Use*

All parents (100%) who considered themselves expert computer users use the Internet. They also reported that their children (100%) are Internet users. Ninety-five percent of the parents who are learning to use the computer, and 98% of those parents who consider themselves confident computer users, also use the Internet. Students within those groups (95% learning, 96% confident) also reported using the Internet. It would seem that computer skill level does have a relationship to Internet usage.

#### *Skill Level and Rules*

Parents who do not use the Internet are, by a very small margin, the largest group (89%) to report establishing rules for their children (82% learning, 88%



confident/expert). Students who do not use the computer were the largest group to report having rules as well (75%). This might mean that because they don't use the computer, parents feel that they need to be sure that their children have rules established for its use, or it might mean that they report they have established rules in an effort to appear responsible (O'Connell, 2003). It could also mean that students do not use the computers because of the rules established by their parents.

Among parents who reported using the computer, expert and confident users agree (88%) that they have established rules for their children's Internet activities. Parents who are learning to use the computer reported they, too, have established rules for their children (82%).

While students who use computers were in agreement between the skill levels about the establishment of rules (67% learning, 70% confident, 69% expert), they were not in agreement with parents regarding this topic (82% learning, 88% confident, 88% expert).

#### *Rules and Internet Activities*

Parents who have established rules for their children's Internet use reported their children most often use the Internet to conduct research for school. However, children who reported having rules for their online activities report they most often go online to play games. Parents and students who reported having rules are in close agreement regarding students' Internet use for E-mail (58% parents, 61% students), Instant Messaging (36% parents, 40% students), research for hobbies (44% parents, 50% students) and chat rooms (10% parents, 13% students.) From these reports it is difficult

to determine if the establishment of rules is important in relationship with student online activities.

### *Summary*

This study focused on Internet activities in which middle school children in western Montana engage and the restrictions parents place upon their child's online practices. The data from this study revealed that parents and students agree that the vast number of middle school children in Montana use the Internet. Parents and student also agreed on the types of activities in which children engage and that parental skill levels do not play a role in the online activities in which students engage.

Differences between parents and students were identified in the locations from which students access the Internet. While students and parents agreed that the Internet was most often accessed from home, there was disagreement in how often it was access from the homes of children's friends. Parents and students also disagreed in the establishment of rules imposed by parents on children's Internet activities. Parents reported having rules for their child's online activities more often than students reported parents placed restriction upon them.

With regards to the amount of time students spent online, students reported they spent nearly twice as much time online both at home, and away from the home, than did parents. This was also true within the stratified population. Many parents admitted they did not know how much time their children spent online.

Some of the information gleaned from the data collection could be activities or practices considered risky or dangerous, as prescribed in the review of the literature.

Students reported spending time in chat rooms and using the Internet as a communication tool. They reported sharing personal information such as their names and phone numbers in online conversations. Parents and students admitted that, in some instances, the computer was located in areas of the home such as the bedroom which could be considered private.

The following chapter provides conclusions from this research and recommendations for additional research that could provide more insight into the findings of this study. It also uses information garnered from this study to provide suggestions for parents, students and educators that might be helpful in making children's online experiences safer.

## CHAPTER FIVE

### Summary, Conclusions and Recommendations

#### *Introduction*

This chapter includes a discussion of the findings and conclusions to those findings. These conclusions will have implications for parents, students and those individuals interested in developing Internet safety training education and materials for families living in western Montana. Additionally, there are recommendations for further research.

#### *Discussion and Findings*

The purpose of this study was to better understand in which online activities Montana middle school children engage that could be considered dangerous and to identify limitations and supervision parents impose upon children engaged in online activities. The study compared data between parents and students in an effort to determine to what degree children are engaging in at-risk behavior. Parents and students who participated in this study were not matched; that is, while parents and students from the same household may have responded to the survey, responses compared between a parent and child living within the same household were not identified or reported.

The sample population for this study was comprised of 567 students and 307 parents. Two surveys were used. The parents' survey consisted of 14 questions asking for information regarding parent computer skill level, computer placement in the home, locations where their child access the Internet, how much time children spend online each week, and rules and discussions they have established and initiated regarding their child's

online activities. The student survey consisted of 13 questions closely matching those asked of parents.

The null hypotheses for this study stated that there would be no experimentally important or consistent difference among parent and student responses to several independent variables which included skill levels, the number of hours children spent online, the online activities in which they engage, the locations from which they accessed the Internet and the imposition of rules placed on children's online activities by parents. Research questions provided additional information that will be used to discuss the conclusions from the study.

The findings between the parent and student responses reported important and consistent differences between the locations from which student access the Internet, specifically between the library and friends' home variables, and regarding the imposition of rules.

Other findings of interest were identified between parent and student skill levels where overall parents appeared to be less skilled in using the computer than were the students. When comparing results found in this study to existing research, the findings of this study supported those of others in this regard.

While many of the participants did not respond to the question regarding the amount of time students spent online, from the responses that were collected, it appears that Montana students spend considerably more time online than are parents aware. The discrepancies in responses between parents and students concerning this issue raise questions regarding parental knowledge of students' online activities and behaviors.

### *Conclusions*

Today's youth grows up using computers and the Internet. For them, technology is second nature and something they use, in most cases, with ease. While most parents also use technology, they frequently consider themselves less skilled and they use the tools differently than do their children.

Among children who use the Internet, conducting research for school and playing online games were the most popular online activities. They also reported using E-mail, and Instant Messaging, and chat. While activities such as visiting chat rooms and Instant Messaging, which researchers (O'Connell, 2003, Carr, 2003) have linked with Internet predation, were less popular among the students, children engaged in these activities more often than parents realized. Even though research does not exist which links online gaming to predation, individuals who engage in this activity utilize a communication function common to chat rooms, and the same dangers that exist in the chat room environment could exist in the gaming rooms. More research is needed to link the practice to the danger.

Children who use the Internet to communicate with others admit that they share personal information online. Nearly 25% of the students who participated in this study admitted they shared their first name online. Fewer (14%) shared their last name, while 3% shared their physical address, 13% shared the name of their school and 7% posted their pictures. Eleven percent of the students shared their phone numbers. What many students are not aware of is that a predator can use the Google Search function to search for a listed phone number. Once the phone number is found, Google returns the name to which the phone is registered and the address for that individual, as well as a link that

goes to a map, complete with driving directions, to the location of that individual. By sharing a phone number in a public area online, a child has potentially given a predator driving directions to the child's home. When a predator learns the child's name and interests (18% shared hobbies, 19% shared sports), he has an easy opportunity to engage in conversation which begins the grooming process (O'Connell, 2003). Many of the students who reported sharing information were careful to note that they only shared this information with their friends. It should be noted that if children are sharing this information in public forums such as chat rooms, web logs, or in some cases even in Instant Messaging, others may be monitoring the conversations and gleaning information without the participants' knowledge. Any time personal information is shared online, there is always a risk. Unsuspecting children who share such information may not realize the danger in which they are placing themselves.

Other online activities in which Montana middle school children reported they engaged included searching for hobbies and sports and conducting research for school. While these activities may seem safe enough, researchers (Finkelhor et.al, 2001) have reported that children most often come into contact with inappropriate materials while they are surfing the web. It can be assumed that even students who are looking for school related materials are at risk of finding websites that contain materials that are not directly related to their searches, and that some of that material is inappropriate. As a result, even students who are conducting Internet searches for school may be at risk of coming into contact with materials unsuitable for children.

The students also reported they download music from the Internet more often than parents report their children do so. Once again, this may not seem like a dangerous

activity, however, any time an individual downloads software from a website, they place their computer at risk of contracting a virus, and the hosting site has the opportunity to place spy ware on the computer.

Parents and students who participated in this study were asked in which room of the home the computers used for Internet activities were located. Most participants agreed that when the family owned a computer, it was most often located in the living or family room of the home, a room that could be considered public. More students (32%) than parents (21%) reported the computer was most often located in a bedroom, a room that could be considered private. Parents and students were also in agreement (13%) that the computer was sometimes located in a basement room, another room that could be considered private. Researchers show that when adults are in close proximity to children who engage in online activities, those children are less likely to visit inappropriate sites and engage in conversations that might be considered risky (Levin, et al., 2002). It is important to note that nearly 25% of the parents, and 33% of the students, in this study, reported that computers were located in what could be considered private areas of the home where children's activities could go unmonitored.

Children and parents agreed that most often Internet access by children occurs in the home and at school, but parents are less likely to know the frequency with which children access the Internet from the library and from the homes of their friends. During a typical week children reported spending more than twice as much time online both at home and away from the home than parents reported. This is important because it speaks to parents' knowledge of what students do online and the rules they have established for their Internet activities. If parents don't know how much time their child spends online,



or from where, they may not know in which activities their child is engaging. Children are more likely to engage in inappropriate or risky behavior when they feel they are not being monitored or supervised by an adult (Levin et al., 2002), and the Internet provides an environment that has been shielded from adult supervision (Cole, 2001). When children access the Internet from away from home, parents have no way of monitoring their child's behavior.

Most parents (85%) reported that they checked the computer's history to see what websites the computer had visited. At least 15% of the parents reported they did not know how to check the computer history.

Many of the parents (45%) who participated in this study reported they had installed filtering or blocking software on their home computers. Some made comments about feeling their children were shielded from inappropriate websites or from receiving E-mail from strangers because of this software. Several parents made comments regarding blocking software which indicated that parents considered programs such as Norton Anti-virus, McAfee and anti-spam software to be programs that filter or block dangerous activity and/or protect children from inappropriate materials and emails they might encounter online. This is important to note because parents may feel that they are protecting their children from access and potential threats, when, in fact, they are protecting their computer against viruses.

Mitchell et al. (2005) reported that parents who were concerned about their children's online activities and those who had a low degree of trust for their child often used filtering and blocking software. When children access the Internet from the library or from their friends' homes, parents do not know if filters exist on the computers their

child uses away from home. If the parent does not know how much time their child spends online, if they do not know from where the child is accessing the Internet, and if they are not aware of the online activities in which their child is engaging, they are not able to assess the potential risk in which their child may be placed in the online environment.

Most parents reported that they had established rules for their child's Internet activities. Students did not agree that rules had been established. In this study, parents who reported not using the Internet were among the greatest to report having Internet rules in place, and children who did not use the computer were the largest group to report having rules for the Internet. The parents and students who considered themselves to be expert users were in the closest agreement regarding the establishment of rules, which may indicate there is a relationship between the skill level of users and the imposition parents place upon their children. Overall, the findings of this study were consistent with other studies (Starr & Jacobs, 2004b, Turow & Nir, 2002) which report discrepancies between parent and student responses regarding rules for Internet use. Studies conducted by Mitchell et al. (2003) and Berson and Berson (2003) suggest that parents respond positively when asked this question in an effort to appear responsible.

Many of the parents who participated in this study reported they had received some training in Internet safety (63%). While very few of these parents indicated they had received formal or classroom training on the topic, many reported they had learned about Internet safety from news reports, articles in the paper and television programs. Some cited programs at their places of employment or meetings through community organizations as the sources of their training. Students reported they had received

Internet safety training from their teachers, parents and other family members. When parents were asked if they would be interested in participating in formal Internet safety trainings, most responded they would not.

The data collected from this study suggest that parents realize potential dangers that exist on the Internet and attempt to place safeguards that will protect their children as they participate in online activities. This study found that parents and students are in disagreement about issues such as the amounts of time children spend online, the frequency which children access the Internet from the home of friends, and the existence of rules for children's Internet use. Much of the data collected from this study confirms existing data that was discussed in the review of the literature.

#### *Recommendations for Further Research*

Research on parent/student relationships regarding Internet use is still in its infancy. Very few resources on this topic were available at the time this study was conducted.

This study attempted to identify online behaviors that place middle school children in western Montana at risk. It was the first study that focused on this rural population. More research is needed that compares parent and student practices both within and between rural and urban populations. So, too, should private, parochial schools and home school families be included in these studies. Once definitions of those practices are in place, research needs to be conducted that determines which practices are considered risky or dangerous and at what level the danger is associated.

While the surveys used in this study provided much information into the practices of parents and students regarding students' use of the Internet, more qualitative

information would have been helpful in establishing patterns for behaviors and supervision strategies. These studies could also utilize participants from within a household to glean and compare parent and child interactions between family members. This qualitative data would provide more robust data which could provide a more in-depth understanding behind the motivation and practices of parents and students alike.

Studies that compare student behavior and the knowledge based on incidence of those in the field of law enforcement need to be conducted. By comparing law enforcement officials' experiences in cases involving Internet predation with activities in which students participate, levels of risk or danger might be associated with children's online activities. Research that resulted in an instrument that measured the level of risk at which a child places himself in relation to his online activities would be very useful.

This study focused on online communication tools such as chat rooms, E-mail and Instant Messaging. Web logs (blogs) and online journals (My Space) are newer online venues where children can place themselves in as much dangers as those investigated in this study. Research needs to be conducted that focus on these, as well as future online activities which potentially place children in danger.

Individuals who conduct workshops for organizations such as i-SAFE America and Web Wise Kids report that parent workshops regarding Internet safety are the lowest attended of any of their programs. Studies need to be conducted to identify how to best educate parents about online dangers. Strategies need to be identified that can be used to entice parents to learn more about Internet safety, to become more involved in the use of technology, and to educate their children in its use.

Schools, community organizations such as the YM or YWCA, Boys and Girls Clubs or church groups should conduct action research studies to determine the needs within their specific community. Once those needs are identified, federally funded organizations such as i-SAFE America or Web Wise Kids could be invited to provide educational programs based on the needs of the community. Additional studies could compile the results of the individual research studies and could be beneficial in identifying specific practices or risks that are associated with community size, economics or location.

Currently a plethora of Internet safety organizations can be accessed online. In visiting these websites individuals can glean information regarding safe use of the Internet. While many of these organizations are federally funded, it appears that few, if any, have worked together to design a comprehensive program that educates parents, students, teachers and administrators. Seemingly each has its niche and few are willing to collaborate. This was evidenced by this researcher who attempted to bring pieces of three individual groups together in the planning stages of this study. Existing Internet safety organizations, with common missions, need to bring their expertise and research together to publish articles, conduct additional studies and develop comprehensive programs that would benefit Internet users of all ages.

#### *Recommendations for Schools, Educators, Parents and Students*

As more individuals acquire technology and go online, a greater need for educational programs that promote responsible Internet use, good citizenship, and safety arise. Educational institutions including K-12 schools and colleges and universities need to educate students and teachers about the dangers that exist in the online environment.

Schools need to adopt and/or develop programs that educate teachers in the dangers and acceptable use of the Internet as an instructional tool. Schools should have acceptable use policies in place for technology/Internet use. By conducting action research within a school community, the school should identify the specific needs of the district and design programs accordingly. Nationally recognized programs such as i-SAFE America and Web Wise Kids, which are available at no-cost, should be consulted and their materials garnered and massaged to create a broad program that reaches administrators, teachers, parents and students.

Educators need to understand the threats and dangers that exist in the online environment. They must educate themselves in the use of technology and the Internet, and they must assist in educating children in becoming responsible users of the Internet. They should reinforce knowledge of online dangers and provide strategies for students who find themselves in potentially dangerous situations.

Parents also need to be involved in the children's online experiences. They need to know in which online activities their children engage, approximately how much time they spend there, with whom they interact when they go online, and from where they access the Internet. Parents need to be just as informed about their children's online activities as they are with the activities in which their children participate in the physical world. Parents need to learn about computers and the Internet. They must understand the dangers that exist in the online environment and they must understand strategies they can use to keep their children safe. Parents should attend classes, read articles, watch television specials and go online to learn about the latest technologies and the threats they pose. Parents need to spend time online with their children, show that they are interested

in what their child does online, and establish rules and guidelines for their child's Internet use.

Students who use the Internet need to realize that it is a real place and that there are rules and consequences for online behaviors. They need to realize that the rules that they follow in the "real" world are the same as the rules they should follow when they go online. Students should understand the dangers that exist in the online world, and they should be savvy in keeping themselves and their friends safe when they engage in online activities. Students should participate in classes that teach them to identify dangers and strategies for protecting themselves against those dangers.

### *Conclusion*

The study of Internet safety is in its early stages. More research needs to be conducted that will provide parents and educators information and strategies for working with youth that will keep them safe as they engage in activities in the online world. From research studies, educational materials and programs need to be developed that will reach the needs of diversified individuals and communities. As the Internet changes and new opportunities for online interactions increase, new research studies must be designed and conducted that address the ever-changing challenges technology brings to society.

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## APPENDICES

**Appendix A**  
**Email to School Administrators**

Dear School Administrator,

I am a doctoral student at the University of Montana preparing to collect data for my dissertation. I am conducting a research study on Internet safety. This study will compare what parents and middle school students in Montana say about children's Internet usage.

Data will be collected using two confidential surveys; one for parents and one for students. Participation is voluntary. I am attaching both surveys and the letter that will accompany them explaining the study and the data collection process. The proposed study, surveys and letters have been tentatively approved by the Institutional Review Board (IRB) at the University of Montana. The IRB will grant full approval when administrators from the schools grant me written permission to collect data at their institutions.

I am writing this email to ask to participate by allowing me to collect data at your school. I would like to meet with you and any interested member of your staff to discuss the study and collection methods which most suit your district.

If you agree to allow me to collect data in your building, I will compensate you by providing Internet safety training materials, free of charge, to your staff, parents or students.

Please respond letting me know if I may call you to further discuss this opportunity.

Thank you for your time and consideration.

Sincerely,

Ann Minckler

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Ann Minckler  
School of Education  
106 McGill Hall  
University of Montana  
Missoula, MT 59812  
406.544.4642

**Appendix B**  
**Letter of Invitation**



Curriculum and Instruction  
School of Education  
The University of Montana  
Missoula, Montana 59812-6346  
Phone: (406) 243-4217  
FAX: (406) 243-1908

May 26, 2006

Dear Parent:

Recent research reports that one in five children under 17 years of age have received unwanted sexual solicitation while on the Internet, and 1 in 33 has received an aggressive solicitation to meet someone, in person they've met online.

I am Ann Minckler, a doctoral student at the University of Montana. I am conducting a research study on Internet safety. This study will compare what parents and middle school students in Montana say about children's Internet usage.

To participate in the study, please complete the attached survey. In doing so you are providing data that will be used to determine discrepancies between parents' perceptions of what children are doing online with the online activities in which children report they practice. Identifying these differences will allow us to provide parents with information and strategies that will help them better prepare their children for the dangers that lurk in the online environment.

Within this study, all participants' identities will remain confidential, even from the researcher. Results of the study will be available at your school by the end of May 2006.

As a means of thanking you for your participation, an Internet safety workshop for parents and another for students will be conducted at your school.

Thank you for your assistance.

Sincerely,

Ann Minckler  
Doctoral Student

Carolyn Lott, Ed.D.  
Faculty Advisor  
Curriculum and Instruction  
(406) 243-5415

**Appendix C**  
**Introduction Letter**

**(When parent and student surveys are sent home)**



Curriculum and Instruction  
School of Education  
The University of Montana  
Missoula, Montana 59812-6346  
Phone: (406) 243-4217  
FAX: (406) 243-1908

May 26, 2006

Dear Participant:

Recent research reports that one in five children under 17 years of age have received unwanted sexual solicitation while on the Internet, and one in thirty-three has received an aggressive solicitation to meet someone, in person they've met online.

I am Ann Minckler, a doctoral student at the University of Montana. I am conducting a research study on Internet safety. This study will compare what parents and middle school students in Montana say about children's Internet usage.

To participate in the study, I am asking that you complete the attached parent survey and that your middle school child complete the attached yellow student survey. Please have your child return both surveys to their school tomorrow.

By participating in this study you are providing data that will be used to determine discrepancies between parents' perceptions of what children are doing online with the online activities in which children report they practice. Identifying these differences will allow us to provide parents with information and strategies that will help them better prepare their children for the dangers that lurk in the online environment.

Within this study, all participants' identities will remain confidential, even from the researcher. However, if you do not wish to participate, simply discard this document.

As a means of thanking you for your participation, an Internet safety workshop for parents and another for students will be conducted at your school.

Thank you in advance for your interest in this study.

Sincerely,

Ann Minckler  
Doctoral Student  
Curriculum and Instruction  
The University of Montana

Carolyn Lott, Ed.D.  
Faculty Advisor  
Curriculum and Instruction  
The University of Montana  
(406) 243-6170

**Appendix D**  
**Letter of Introduction – with Parent Signature**





Curriculum and Instruction  
 School of Education  
 The University of Montana  
 Missoula, Montana 59812-6346  
 Phone: (406) 243-4217  
 FAX: (406) 243-1908

May 26, 2006

Dear Parent,

Recent research reports that one in five children under 17 years of age have received unwanted sexual solicitation while on the Internet, and one in thirty-three has received an aggressive solicitation to meet someone, in person they've met online.

I am Ann Minckler, a doctoral student at the University of Montana. I am conducting a research study on Internet safety. This study will compare what parents and middle school students in Montana say about children's Internet usage.

To participate in the study, I am asking that you complete the attached parent survey and that your middle school child complete the attached student survey. Please have your child return both surveys to their school tomorrow.

By participating in this study you are providing data that will be used to determine discrepancies between parents' perceptions of what children are doing online with the online activities in which children report they practice. Identifying these differences will allow us to provide parents with information and strategies that will help them better prepare their children for the dangers that lurk in the online environment.

Within this study, all participants' identities will remain confidential, even from the researcher. If you grant permission for your child to participate, please sign your name in the space below before returning this document to school. However, if you do not wish to participate or you do not wish for your child to participate, simply discard this document.

My child has permission to complete the attached survey

Thank you in advance for your interest in this study.

Sincerely,

Ann Minckler  
 Doctoral Student  
 Curriculum and Instruction  
 The University of Montana

Carolyn Lott, Ed.D.  
 Faculty Advisor  
 Curriculum and Instruction  
 The University of Montana  
 (406) 243-6170

**Appendix E**  
**Parent Survey**



## Internet Awareness Survey for Parents

This survey asks questions about you and your child's use of the computer and Internet. If you have more than one child in grades 5, 6, 7, or 8, when responding please think about the child who uses the computer THE MOST.

Please check the answers that best fit your practices. Feel free to add comments where needed.

1. Please check the best description of your computer skills?

- I don't use computers at all.
- I am learning to use the computer, but I need to learn more to become a confident user.
- I am confident using the computer and use it for many things.
- I consider myself an expert when it comes to using computers.

2. Do you own a computer?       Yes       No

If you answered yes, please check the room(s) in your home where the computer is located:

- |                                   |  |
|-----------------------------------|--|
| <input type="checkbox"/> Bed room | <input type="checkbox"/> Living room/family room |
| <input type="checkbox"/> Kitchen  | <input type="checkbox"/> Basement room           |
| <input type="checkbox"/> Office   | <input type="checkbox"/> Other (please list)     |

3. Do you use the Internet?       Yes       No

If you answered yes, please check the online activities in which you engage:

- |   |   |
|---|---|
| <input type="checkbox"/> Banking  | <input type="checkbox"/> E-Mail           |
| <input type="checkbox"/> Instant Messaging  | <input type="checkbox"/> Making Purchases |
| <input type="checkbox"/> Searching – What do you search for? (Please list)                  |   |
| <input type="checkbox"/> Other – Please list the additional activities in which you engage. |   |

4. Does your child use the Internet?  Yes  No

If you answered yes, please check all of the places where your child accesses the net:

- Home  School  
 Public Library  Friend's house  
 Other (please list)

5. Do you have filtering software on the computer that your child uses in your home?

- Yes  No  I do not know

6. Approximately how many hours each week does your child spend online?

Approximately \_\_\_\_\_ hours at home

- I do not know how much time they spend online at home.

Approximately \_\_\_\_\_ hours on computers away from home

- I do not know how much time he/she spends online away from home.

7. What does your child do online? Please check all that apply:

- I do not know what my child does online
- \_\_\_\_\_  E-mail \_\_\_\_\_  Chat rooms  
 \_\_\_\_\_  Instant Messaging \_\_\_\_\_  Plays games  
 \_\_\_\_\_  Research for school  
 \_\_\_\_\_  Searches for hobbies or sports information  
 \_\_\_\_\_  Downloads music \_\_\_\_\_  Other (please list)

*On the line provided before the activity, please indicate the activity your child spends the MOST time doing by numbering it 1. Then rank the rest of the activities with consecutive numbers, the highest number being the activity which your child spends the LEAST amount of time doing.*

8. Have you and your child discussed rules about the sites he/she may or may not visit online?  Yes  No

9. Does your child send and receive E-Mail from an account different from yours?  Yes  No  I do not know

10. Have you and your child discussed what to do if he/she receives a sexually oriented message while he/she is online?

Yes  No

11. Has your child ever come to you to discuss receiving an inappropriate message online?

Yes  No

If yes, briefly describe what you told the child to do:

12. How often do you check to see what sites the web browser on your computer has visited?

- I do not own a computer.  Less than once each week  
 About once each week  More than once each week  
 I do not know how to check the web browser for the sites it has visited.

13. Have you learned about Internet safety?  Yes  No

If you answered yes, please briefly describe where you learned about it.

14. Would you be interested in attending a workshop for parents on Internet safety?

Yes  No

*Thank you for your participation in the study.*

**Appendix F**  
**Student Survey**



## Internet Awareness Survey for Students

This survey asks questions about your use of the computer and Internet. Please check the answers that best fit your practices. Feel free to add comments where needed. None of this information will be shared, so please answer truthfully.

1. Please check the best description of your computer skills?

- I don't use computers at all.
- I am learning to use the computer, but I need to learn more to become a confident user.
- I am confident using the computer and use it for many things.
- I consider myself an expert when it comes to using computers

2. Does your family own one or more computers?  Yes

No

If you answered yes, please check the room in your home where the computer you most often use is located:

- Bed room
- Living room/family room
- Kitchen
- Basement room
- Office
- Other (please list)

3. Do the adults in your household use the Internet?  Yes  No

If you answered yes, please check the online activities your parents do online:

- I don't know what my parents do when they go on the Internet.
- Business
- E-Mail
- Instant Message
- Making Purchases
- Searching – What do they search for? (Please list)  Don't know

Other – Please list additional Internet activities in which your parents engage.

4. Do you use the Internet?      Yes                  No

If you answered yes, please check all of the places where you access the net:

- |  |   |
|--|---|
| <input type="checkbox"/> Home                | <input type="checkbox"/> School         |
| <input type="checkbox"/> Public Library      | <input type="checkbox"/> Friend's house |
| <input type="checkbox"/> Other (please list) |   |

5. Do you have blocking software that keeps you from doing things online installed on the computer that you use at home?

- Yes       No       I do not know

6. Approximately how many hours each week do you spend online?

Approximately \_\_\_\_\_ hours at home

Approximately \_\_\_\_\_ hours on computers away from home

I do not use the Internet.

7. What do you do when you go online? Please check all that apply:

- |   |  |
|---|--|
| _____ <input type="checkbox"/> I do not use the Internet.                 | _____ <input type="checkbox"/> E-mail              |
| _____ <input type="checkbox"/> Chat rooms                                 | _____ <input type="checkbox"/> Instant Messaging   |
| _____ <input type="checkbox"/> Plays games                                | _____ <input type="checkbox"/> Research for school |
| _____ <input type="checkbox"/> Searches for hobbies or sports information |  |
| _____ <input type="checkbox"/> Downloads music                            | _____ <input type="checkbox"/> Other (please list) |



On the line provided before the activity, please indicate the activity you spend the MOST time doing by numbering it 1. Then rank the rest of the activities with consecutive numbers, the highest number being the activity which you spend the LEAST amount of time doing.

8. Have any adults in your home discussed rules about the sites you may and may not visit when you are online?  Yes  No

9. Do you send and receive E-Mail from an account different from your parents?  Yes  No  I do not know

10. Have you and your parents discussed what to do if you receive sexually oriented messages while you're online?  Yes  No

11. Have you ever gone to your parents to discuss an inappropriate message you received?  Yes  No

If yes, briefly describe what your parents told you to do:

12. Have you ever shared personal information on the Internet?  Yes  No

If you answered yes, please check all the types of information you have shared:

- |  |  |
|--|--|
| <input type="checkbox"/> First name      | <input type="checkbox"/> Last name                 |
| <input type="checkbox"/> School          | <input type="checkbox"/> Phone Number              |
| <input type="checkbox"/> E-mail address  | <input type="checkbox"/> Home address              |
| <input type="checkbox"/> Hobbies         | <input type="checkbox"/> Sports you participate in |
| <input type="checkbox"/> Posted pictures | <input type="checkbox"/> Other (please list)       |

13. Have you been taught about Internet safety?  Yes  No

If you answered yes, please briefly describe who taught you, where and what you learned.

*Thank you for your participation in the study*

**Appendix G**  
**Reminder Note**



Curriculum and Instruction  
School of Education  
The University of Montana  
Missoula, Montana 59812-6346  
Phone: (406) 243-4217  
FAX: (406) 243-1908

### REMINDER

Last week you were asked to complete a survey about how you use the computer and the Internet. If you've already returned it, please disregard this reminder and accept my thanks for your help with this project. If you haven't already, please complete the survey and return it to school with your child.

Much thanks for your participation.

*Ann Minckler*

Ann Minckler  
Doctoral Student  
Curriculum and Instruction  
The University of Montana

Carolyn Lott, Ed.D.  
Faculty Advisor  
Curriculum and Instruction  
The University of Montana  
(406) 243-6170

**Appendix H**  
**Letter of Thanks**

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*Ann Minckler*  
P.O. Box 365  
Missoula, MT 59806  
406.544.4642  
ann@minckler.us

School Administrator  
Montana Middle School  
Hometown, Montana 598--

May 26, 2006

Dear School Administrator,

As our children become more facile with technology, equipping them with the skills they need to be safe in the online environment is an ongoing challenge. The fact that you agreed to participate in my Internet safety study is a testament towards your understanding of this important issue.

Please accept my most gracious thanks for your assistance with data collection for my doctoral dissertation. The time you spent helping me coordinate the dissemination and collection of the surveys is greatly appreciated. Without the support of your staff, students, and parents, I would not have been able to complete my research. To all of you, my heartfelt thanks.

I am happy to report that all of the data has been collected and analyzed. The results of the study are quite interesting, and I will be sending you a synopsis in the upcoming weeks.

Again, thank you.  
Sincerely,

*Ann Minckler*

Ann Minckler  
Doctoral Candidate

**Ann Minckler**  
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**Appendix I**  
**Chi-square Results**

## CHI SQUARE RESULTS

**Table 4 - Chi-square Results –**

Note: Some values were found to be more consistent than the  $p=.05$  defined *a priori*. Those values are noted at the higher consistency level.

**Demographics of the Sample**

	Total of Sample		$\chi^2$
	<i>n</i>	%	
<b>Group</b>			
Parent	296	34%	
Student	578	66%	
Totals	874	100%	47.65**

*Demographics.* (\*\* indicates  $p < .001$ )

**Skill Levels**

	Total of Sample		Parent		Student		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Skill</b>							
Don't Use	20	2%	11	4%	9	2%	
Learning	163	19%	64	22%	99	17%	
Confident	584	67%	195	66%	389	68%	
Expert	101	12%	24	8%	77	13%	
Totals	868	100%	294	100%	574	100%	10.77**

*Skill Levels.* Measurement between parents and students (\*\* indicates  $p < .05$ )

**Students' Internet Use**

	Total of Sample		Parent		Student		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Internet Use</b>							
Yes	830	96%	284	97%	546	96%	
No	35	4%	10	3%	25	4%	
Totals	865	100%	294	100%	571	100%	30.69**

*Students' Internet Use.* Measurement between parents and students (\*\* indicates  $p < .001$ )

**Student Internet Access Locations**

<b>Location</b>	<b>Total of Sample</b>		<b>Parent</b>		<b>Student</b>		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Home</b>							
Yes	717	84%	255	88%	462	82%	
No	136	16%	36	12%	100	18%	
<b>Totals</b>	<b>853</b>	<b>100%</b>	<b>291</b>	<b>100%</b>	<b>562</b>	<b>100%</b>	<b>4.21*</b>
<b>School</b>							
Yes	747	88%	256	88%	491	87%	
No	106	12%	35	12%	71	13%	
<b>Totals</b>	<b>853</b>	<b>100%</b>	<b>291</b>	<b>100%</b>	<b>562</b>	<b>101%</b>	<b>.07</b>
<b>Library</b>							
Yes	205	24%	49	17%	156	28%	
No	648	76%	242	83%	406	72%	
<b>Totals</b>	<b>853</b>	<b>100%</b>	<b>291</b>	<b>100%</b>	<b>562</b>	<b>100%</b>	<b>12.52**</b>
<b>Friends'</b>							
Yes	385	45%	98	34%	287	51%	
No	468	55%	193	66%	275	49%	
<b>Totals</b>	<b>853</b>	<b>100%</b>	<b>291</b>	<b>100%</b>	<b>562</b>	<b>100%</b>	<b>23.42**</b>
<b>Other Place</b>							
Yes	109	13%	27	9%	82	15%	
No	744	87%	263	91%	480	85%	
<b>Totals</b>	<b>853</b>	<b>100%</b>	<b>290</b>	<b>100%</b>	<b>562</b>	<b>100%</b>	<b>4.86*</b>

*Student Internet Access Locations.* Measurement between parents and students ( \* indicates  $p < .05$ , \*\* indicates  $p < .001$ )



### Student Internet Activities

	Total of Sample		Parent		Student		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Activities</b>							
<b>Chat</b>							
Yes	108	13%	26	9%	82	15%	
No	742	87%	262	91%	480	85%	
Totals	850	100%	288	100%	562	100%	5.31*
<b>Games</b>							
Yes	693	82%	222	77%	471	84%	
No	157	18%	66	23%	91	16%	
Totals	850	100%	288	100%	562	100%	5.72*
<b>Hobbies</b>							
Yes	388	46%	124	43%	264	47%	
No	462	54%	164	57%	298	53%	
Totals	850	100%	288	100%	562	100%	1.18
<b>Music</b>							
Yes	353	42%	100	35%	253	45%	
No	497	58%	188	65%	309	55%	
Totals	850	100%	288	100%	562	100%	8.31*
<b>E-Mail</b>							
Yes	482	57%	150	52%	332	59%	
No	368	43%	138	48%	230	41%	
Totals	850	100%	288	100%	562	100%	3.79
<b>IM</b>							
Yes	319	38%	97	34%	222	40%	
No	531	62%	191	66%	340	60%	
Totals	850	100%	288	100%	562	100%	2.76
<b>Research</b>							
Yes	689	81%	250	87%	439	78%	
No	161	19%	38	13%	123	22%	
Totals	850	100%	288	100%	562	100%	9.37*
<b>Other</b>							
Yes	147	17%	21	7%	126	23%	
No	702	83%	266	93%	436	77%	
Totals	849	100%	287	100%	562	100%	30.27**

*Student Internet Activities.* Measurement between parents and students (\* indicates  $p < .05$ , \*\* indicates  $p < .001$ )

### Rules for Students' Internet Use

	Total of Sample		Parent		Student		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Rules							
Yes	640	75%	249	87%	391	69%	
No	214	25%	39	13%	175	31%	
Totals	854	100%	288	100%	566	100%	30.69**

*Rules for Students' Internet Use.* Measurement between parents and students  
 (\*\* indicates  $p < .001$ )

**Appendix J**  
**Chi-square Table**

**Table 5 - Distribution of  $\chi^2$** 

df	P = 0.05	P = 0.01	P = 0.001
1	3.84	6.64	10.83
2	5.99	9.21	13.82
3	7.82	11.35	16.27
4	9.49	13.28	18.47
5	11.07	15.09	20.52
6	12.59	16.81	22.46
7	14.07	18.48	24.32
8	15.51	20.09	26.13
9	16.92	21.67	27.88
10	18.31	23.21	29.59

*Distribution of  $\chi^2$ . Source: From TABLE A.6 of Gay and Airasian: *Educational Research; Competencies for analysis and applications*. (7<sup>th</sup> Ed). Merrill Prentice Hall; Columbus (p.566).*