INTERPRETING MIDDLE SCHOOL STUDENTS’ ONLINE EXPERIENCES: A
PHENOMENOLOGICAL APPROACH

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of the requirements for the degree
Doctor of Philosophy

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This dissertation entitled
INTERPRETING MIDDLE SCHOOL STUDENTS’ ONLINE EXPERIENCES: A
PHENOMENOLOGICAL APPROACH

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The focus of this dissertation was to investigate the experiences of middle school youth when they access the Internet at home or at school and the meanings they give to their online experiences. Gender differences were explored in terms of boys and girls’ uses of the Internet and their understandings of these uses. Three middle schools in Ohio were the major settings, in which focus groups of boys and girls were conducted to gain first hand data from the middle school students. Multiple perspectives were gained through interviews with teachers, parents, media specialists, and principals. Observations within schools were used to add depth to this qualitative study with a phenomenological approach. Qualitative data analysis was used for interpretation of the data collected from multiple sources.

Findings of the study showed that students are savvy with Internet use at home and they loved using the Internet for multiple purposes. In contrast, the students reported the Internet use at school is limited and to some extent boring. On the surface, boys and girls reported using the Internet to do the same things such as chatting and gaming. Deeper analysis showed that boys and girls were in fact quite different in terms of what content they chose and the meanings they gave to chatting and gaming. The ease of the Internet also brought up the problem
of digital cheating and plagiarism. More frequent Internet use exposed the middle school youth more often to certain dangers online.

The findings of this study indicated that more engaging, constructivist ways of using the Internet to involve students in higher order thinking activities that are relevant to their own experiences can help combat plagiarism, enhance gender equity, reduce the digital divide, and promote meaningful learning.

Approved:

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Chapter One: Introduction

An Overview of the Problem

The Internet has become increasingly important for young people both for their education and for their everyday life. A Pew Internet and American Life Project (Lenhart, Simon, & Graziano, 2001) on the Internet and education conducted a survey of 754 youths ages 12-17 in November and December of 2000. The survey found that 94% of youth ages 12-17 who had Internet access said that they used the Internet for school research and 78% said they believed the Internet helped them with schoolwork. About 41% of online teens said they used email and instant messaging to contact teachers or classmates about schoolwork. The literature about youth and the Internet all suggests that the young people are getting more Internet-savvy and the school needs to catch up with the youth in ways of using the Internet. The literature also reveals a lack of current research in how middle school students are using the Internet, particularly how boys are different from girls in their ways of using the Internet.

When children are growing up in the twenty-first century, they are growing up with computers and the Internet. Tapscott creates a term for these children: “Net Generation” (Tapscott, 1998, p. 1). The first generation of baby boomers grew up with television, whereas the Net Generation is the first generation that is immersed in computers and digital media. While television is a passive medium, computers and digital media are empowering the young generation “to question, challenge and disagree” (Tapscott, p. 88). According to Tapscott, the use of the Internet and digital media will “grow from the rich experience of students working with teachers,
researchers, business people, and educators to forge, through actual experience, a new model of learning” (Tapscott, p. 135). The computers and the Internet will encourage curiosity and experimentation and force people to think about the meaning of the new technology and the use of it. Tapscott believes that computers and the Net are “simply preconditions for moving to a new paradigm in learning,” and “give children the tools they need and they will be the single most important source of guidance on how to make the schools relevant and effective” (Tapscott, p. 136).

Not coincidentally, the Pew Internet & American Life Project titled their report “The Digital Disconnect: the widening gap between Internet-savvy students and their schools.” The report warns that middle school and high school students are using the Internet in versatile ways, and their school teachers are not catching up with the students to respond to their new ways of using the Internet. Many schools and teachers have not yet recognized—much less responded to – the new ways students communicate and access information over the Internet. Teachers do not assign Internet-related assignments, nor are the activities they do assign very engaging (Levin & Arafeh, 2002).

The Pew project and Tapscott talk about the young generation in general, and they do not go deeper to talk about how gender fits in the picture. How are students in middle school and high school using the Internet? How are girls using the Internet and how are boys using it? What are the implications for the educators and administrators who do, or do not, use the Internet as part of their curriculum?

The NSF project, “Getting the Media Message,” for which the researcher has
been working for the last several months, found in a survey in a middle school in Ohio, that girls reported accessing the web more frequently from home than from school or library locations. Girls cited “chat” as the reason why they like computers, while boys tend to cite “games” and “websites” as the reason for why they like computers (Bernt, Bernt & Turner, 2003). However, the survey raised many other unanswered questions, such as what are the boys and girls doing online? What meaning do they give to their experiences with the Web?

My research examined middle school students in Ohio in terms of how they are using the Internet at home and at school. How are girls using it differently from the boys and what are the implications? How is Internet use in school different from Internet use at home? What are the implications for education?

Tapscott (2001) maintained that education will:

…shift from linear to hypermedia learning, from instruction to construction and discovery, from teacher-centered to learner-centered education, from absorbing material to learning how to navigate and how to learn, from school to lifelong learning, from one-size-fits-all to customized learning, from learning as torture to learning as fun, and from the teacher as transmitter to the teacher as facilitator.

(p. 1)

According to Tapscott, these changes will require teachers to learn new tools, new approaches, and new skills, which is an enormous challenge.

In the book The Road Ahead, Gates said that, “I am someone who believes that because progress will come no matter what, we need to make the best of it” (Gates,
While discussing education in a digital age, Gates expressed confidence:

The highway is going to give us all access to seemingly unlimited information, anytime and anyplace we care to use it. It is an exhilarating prospect, because putting this technology to use to improve education will lead to downstream benefits of every area of society. (p. 184)

The researcher examined ways that can narrow the digital disconnect between the middle school students and their schools, and also between the girls and the boys. Do teachers need to consider new ways of arranging classrooms? Will Internet use in classrooms promote a more constructivist learning environment? I will examine middle schools to look for ways of more student-centered use of Internet and seek strategies to conquer problems that hinder the student-empowering uses of the Internet.

The digital divide is another important issue in middle schools. Means, Penuel, and Padilla (2001) found that more affluent schools tend to employ more student-centered uses of technology, whereas the urban or rural schools tend to be more traditional. In my study, the researcher examined three middle schools: one rural school, one urban, and one suburban to see if there are student-centered uses of Internet at each school, and to reveal what are the barriers and strategies for such effective uses for both boys and girls.

It will be interesting to examine how middle school students construct their reality of ethics. Josephson Institute of Ethics (1998, 2002) reported that the cheating rate in middle schools and high schools increased from year to year. The results
seemed to reveal the deterioration of ethics among the young. Lathrop and Foss (2000) connected the increased rate of cheating and plagiarism with the advancement of technology, including the World Wide Web. Since middle school is a crucial stage for the formation of ethics in one’s life, it will be worthwhile to see how middle school students construct their understandings of cheating, honesty, and plagiarism.

**Purpose of the Study**

The first purpose of the study is to investigate how middle school students are using the Internet both at school and at home. The study will explore the experiences related to Internet use that boys and girls in the middle schools have. Focus groups in the three selected middle schools will reveal trends and problems of Internet use that are related to middle school students. Issues such as ethics, privacy online, and the digital divide will be discussed.

Another important purpose of the study is to see how boys and girls use the Internet differently at home or at school. The National Science Foundation project, Getting the Media Message, has found gender differences related to media use in their pilot study in a rural middle school. Bernt, Bernt and Turner (2003) reported that girls tend to use media (including the Internet) to be involved with people or social relations, whereas boys tend to use media to satisfy their hobbies. The project did not go into details to find out what kind of social relations the girls are really getting into, or what kind of games or other hobbies the boys are engaged in. Since other research suggests that boys and girls differ in terms of Internet use, this study will examine in detail the experiences of boys and girls in Internet use, and the different meanings
they give to these experiences. How do boys and girls interpret their online experiences? What do these experiences mean for middle school education?

**Research Questions**

The study addressed the following questions:

1. What are the experiences of middle school youth when they access the Internet at home and at school, and what meaning do they give their online experiences?

2. Do boys and girls have different online experiences? Do they interpret these experiences differently?

The study is a qualitative study with a phenomenological approach. First, focus groups were used in the study to listen to the students to gain their perspectives of the phenomenon of the Internet. To understand students’ school experiences better, the researcher interviewed middle school teachers and media specialists/librarians about what online experiences they had observed in media centers and classrooms. In order to get more information about the students’ online experience at home, interviews with parents were also conducted. Finally, the researcher observed students using the Internet in the media center in three middle schools.

**Significance of the Study**

The study is significant in many ways. First of all, the study is timely. The Internet is a new technology and it has entered homes and schools of the United States in the most recent decade. By understanding students’ perspective, educators, curriculum designers, and teacher educators will be better prepared to develop
meaningful learning activities that exploit the potential of the Internet as an educational resource and that take full advantage of young people’s online experiences.

The study is significant also because there is a lack of current research in how middle school students are using the Internet, and there is a lack of current research in how boys and girls are using the Internet differently.

The literature review found several studies on students’ sense of ethics, and nearly all of the studies related to young people and the Internet was about high school students. The literature review found a lack of current studies in how middle school students describe the issue of ethics related to the Internet. The researcher addressed this issue in this study.

Similarly, there is a lack of current research in whether middle school students are fully aware of privacy issues online. The perspectives of previous studies were mostly from the teachers, administrators, or parents. Few studies discussed how children felt about this issue of Internet privacy. This study contributed students’ interpretations and it yielded implications for educators and school administrators to balance students’ freedom and restrictions online.

Definition: What is a Middle School?

A middle school reflects a kind of philosophy where groups of young adolescents learn different subjects with a team of teachers working together. According to National Middle School Association (1992, p. 27), there are a few essential elements for a “true” middle school:
1. Educators knowledgeable about and committed to young adolescents.

2. A balanced curriculum based on the needs of young adolescents.

3. A range of organizational arrangements.

4. Varied instructional program.

5. A full exploratory program.

6. Comprehensive advising and counseling.

7. Continuous progress for students.

8. Evaluation procedures compatible with the nature of young adolescents.

9. Cooperative planning.


National Middle School Association (1992) noticed that the existing educational programs lacked focus on the needs and characteristics of the young adolescents. The association contended that educators, parents, and citizens should recognize the importance of the middle level education and should understand the needs of the young adolescents, including physical, social, and emotional needs. A true middle school needs teachers of different subjects, such as language arts, mathematics, social science, physical education, counseling and so on, to work together to meet the different needs of the students. Integrated curriculum is meaningful in this stage of education.

The National Association of Secondary School Principals (1972) believed that the secondary school program “should focus upon the needs of people collectively as well as individually” (p. 11).
Pollak and Hartman (1999) suggested a list of important traits that middle school students should possess. To these two teacher educators, a middle school should include the following important elements:

1. Advocating for each student to avoid isolation or loneliness.
2. Building bridges between elementary and high school, between students and teachers, and between family and community partners.
3. Helping students to become responsible community citizens.
4. Being responsible to students’ personal changes: intellectual, physical, emotional, social, and moral.
5. Providing students with choices and options so that they can explore their interests and talents.
6. Forming flexible teams to best meet the needs of a particular group of students.
7. Grouping students flexibly to achieve academic and social success.
8. Enhancing students’ physical and emotional health.
9. Adopting interdisciplinary curriculum to help students prepare for and cope with real life.
10. Working together as a teacher group to create a common core, instead of each discrete subject.
11. Helping students to see school as an integral, not a separate, part of their lives. Helping them to become lifelong learners that can connect relevant learning to their real lives.
12. Building a nurturing climate and a positive attitude.

13. Using group work and peer interactions to help students develop their own identities, values, beliefs, and attitudes.

14. Encouraging students to celebrate their uniqueness.

15. Providing varied teaching and learning approaches to accommodate individual learning styles, interests, and diverse ways of thinking.

To Pollak and Hartman (1999), middle school students were young adolescents aged 10 to 14. In this study of middle school students’ interpretation of their online experiences, a middle school is defined as a school that falls between grades 6 and 8, where teachers of different subjects work as teams to help students to meet their social, physical, intellectual, emotional, and moral needs.

Theoretical Framework

Underlying this study is a theoretical perspective that the Internet facilitates constructivist learning. Constructivism is a learning theory that “construes learning as an interpretive, recursive, building process by active learners interacting with the physical and social world” (Fosnot, 1996, p.30). Fosnot argues that meanings “may be unique to the cognizing self-regulating individual, but that is not to say that they are idiosyncratic” (Fosnot, 1996, p. 26). According to Fosnot (1996) and Brooks and Brooks (1999a), knowledge is internally and temporarily constructed and each individual has formed his or her own model of the world, and through social interactions individuals modify their models through adjusting discrepancies and conflicts that arise during the interaction with other models of the world. According to
Fosnot, an individual (self) will interact with others through a certain medium to present their world views (meanings) with others. In that process, “taken-as-shared” meanings can be reached to form a certain cultural symbol. A figure was drawn to illustrate such an interaction:

![Diagram of Cognitive Construction](attachment:image.png)

*Figure 1. Cognitive Construction*


Brooks and Brooks (1993) also describe learning as a personal meaning-making process:

Each of us makes sense of our world by synthesizing new experiences into what we have previously come to understand. Often, we encounter an object, an idea, a relationship, or a phenomenon that doesn't quite make sense to us. When confronted with such initially discrepant data or perceptions, we either interpret what we see to conform to our present set of rules for explaining and ordering our
world, or we generate a new set of rules that better accounts for what we perceive to be occurring. Either way, our perceptions and rules are constantly engaged in a grand dance that shapes our understandings. (p. 4)

Marlowe and Page (1998) clarified what meaning construction is for constructivism:

Others can give us information, we can find information in books, and we can get information from the media, but as important as information is—and it is very important—receiving it, getting it, and hearing it does not necessarily equal learning. Learning in constructivist terms is both the process and the result of questioning, interpreting, and analyzing information; using this information and thinking process to develop, build, and alter our meaning and understanding of concepts and ideas; and integrating current experiences with our past experiences and what we already know about a given subject. (Marlowe & Page, 1998, p. 10)

According to Brooks and Brooks (1999b), constructivist education is a “holistic endeavor.” Students learn through understandings about themselves, their relationships and their “relative places in the world” (p. 23). Brooks and Brooks maintain that learning happens naturally in both academic and nonacademic activities (p. 23).

To understand students’ Internet experiences from the perspectives of holistic learning, the study will examine middle schools students’ online or Internet activities both at school and at home. In this study, these activities refer to any activity that the students engage in through the Internet, including educational and recreational
activities. These activities mainly refer to the following experiences:

1. Searching online by using search engines
2. Downloading music
3. E-mailing
4. Chatting online in a chat room, not by phone
5. Playing games online
6. Reading online news and articles
7. Watching movies online
8. Shopping online
9. Attending online conferences
10. Creating web pages
11. Copying and pasting from the Web
12. Hacking
13. Writing articles and posting them online
14. Completing online quizzes
15. Doing Webquest
16. Conducting surveys online
17. Printing online materials

Constructivist learning environments pose challenges to learners because they need to take initiative and be committed and patient at the same time (Brooks & Brooks, 1999a). No matter where the students are accessing the Internet, they relate their online experiences with their prior knowledge. In other words, students are
intellectually engaged in a constructivist environment and were active in their learning process.

Constructivism has significant implications for teaching. Constructivism suggests a new model of instruction where the teacher is the facilitator of the active learner. The challenge to the teacher in a constructivist classroom is to interpret the world models of the students and scaffold their learning accordingly. Brooks and Brooks (1999b) listed five tenets for constructivist teachers:

- First, constructivist teachers seek and value students’ points of view.
- Second, constructivist teachers structure lessons to challenge students’ suppositions.
- Third, constructivist teachers recognize that students must attach relevance to the curriculum.
- Fourth, constructivist teachers structure lessons around big ideas, not small bits of information.
- Fifth, constructivist teachers assess student learning in the context of daily classroom investigations, not as separate events. (Brooks & Brooks, 1999b, p. 21)

By understanding children’s perspectives of online experiences, teachers can become more aware of how to be a facilitator of learning. Brooks and Brooks (1993, p. 25) compared a traditional classroom with a constructivist classroom (Table 1).

According to Brooks and Brooks, the teacher needs courage to be a constructivist because it “requires the willing abandonment of familiar perspectives and practices and the adoption of new ones” (Brooks & Brooks, 1993, p. 25).
Table 1

*A Traditional Classroom and a Constructivist Classroom*

<table>
<thead>
<tr>
<th>Traditional Classroom</th>
<th>Constructivist Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students primarily work alone.</td>
<td>Students primarily work in groups.</td>
</tr>
<tr>
<td>Curriculum is presented part to whole, with emphasis on basic skills.</td>
<td>Curriculum is presented whole to part with emphasis on the big concept.</td>
</tr>
<tr>
<td>Strict adherence to a fixed curriculum is highly valued.</td>
<td>Pursuit of student questions is highly valued.</td>
</tr>
<tr>
<td>Curricular activities rely heavily on textbooks and workbooks of data and manipulative materials.</td>
<td>Curricular activities rely heavily on primary sources.</td>
</tr>
<tr>
<td>Students are viewed as &quot;blank slates&quot; onto which information is etched by the teacher.</td>
<td>Students are viewed as thinkers with emerging theories about the world.(cognitive apprentices)</td>
</tr>
<tr>
<td>Teachers generally behave in a didactic manner, disseminating information to students.</td>
<td>Teachers generally behave in an interactive manner mediating the environment for students.</td>
</tr>
<tr>
<td>Teachers seek the correct answers to validate student lessons.</td>
<td>Teachers seek the student's point of view in order to understand student learning for use in subsequent conceptions.</td>
</tr>
<tr>
<td>Assessment of student learning is viewed as separate from teaching and occurs almost entirely through testing.</td>
<td>Assessment of student learning is interwoven with teaching and occurs through teacher observation of students at work and through exhibitions and portfolios.</td>
</tr>
</tbody>
</table>

By understanding what a constructivist classroom is like, educators can develop engaging activities for students to involve them with active meaning-making experiences. Authentic and personally intriguing curriculum will bring out in-depth learning. Also, since constructivism recognizes the central role of the learner in the learning process, it implies the importance of focusing our research on the learners. In this study of students’ interpretations of their online experiences, the findings will help educators understand students’ perspectives and develop more relevant online activities that promote meaningful learning.

Limitations of the Study

The study is limited in scope to three middle schools in Ohio: one rural, one small town, and one suburban. The results of the study may be relevant to other middle schools, but the generalization beyond these schools may be limited to the extent that other schools are different from the three middle schools in this study.

Another limitation is that the study relied primarily on student self-report. Students were sometimes reluctant to reveal their true experiences or they might have inflated their experiences to impress their peers.

Organization of the Study

The dissertation is divided into five chapters:

Chapter One includes an overview of the problem and the rationale of the study. The chapter raises research questions, introduces the methodology, and discusses the significance of the study and also the limitations of the study. In this section, the researcher also defines the term “constructivist technology use”.

Chapter Two contains the literature review along with the issues of young people and the Internet, gender differences and the Internet, the Internet as an innovation, safety, ethics, and digital divide. This chapter examines the literature that addresses these issues and provides the rationale for a study on how middle school students are using the Internet both at home and at school.

Chapter Three contains a detailed review of the methodology used in the study. The chapter includes the research design, the research settings, participants, data collection, data analysis procedures, and trustworthiness of the study.

Chapter Four concludes the results of the study, which leads to the discussion of the research findings.

Chapter Five contains the analysis and interpretations of the data, and provides suggestions for further study.
Chapter Two: Literature Review

Introduction

The problem of how young people are using the Internet is related to various kinds of issues. What does the theory of uses and gratifications say about children’s use of the Internet compared with other media use? What does the research say about how young adolescents are using the Internet? Does research say how middle school and high school boys and girls are using the Internet at home and at school? How does the research cover the issue of gender differences? Is the Internet an innovation different from other technologies? How can the Internet be used at school? Are middle school students aware of the issue of privacy and ethics online? How does the digital divide fit into the picture?

Uses and Gratifications Theory

Introduction

To understand the media’s impact on its users or audience, uses and gratifications theory is an audience-centered approach which intends to explain “something of the way in which individuals use communications, among other resources in their environment, to satisfy the needs and to achieve their goals, and to do so by simply asking them” (Katz, Blumer, & Gurevitch, 1974, p. 21). Literature about uses and gratification related to media use include the major assumptions, sources of gratifications, needs, and media attributes related to gratifications. Not much was found in the literature about the young people’s use of the Internet in terms of uses and gratifications. This study of middle school students’ media use, particularly the
use of the Internet, would like to fill such a gap to investigate the students’ perspectives in terms of using the Internet as a media.

Major Assumptions

According to Katz, Blumer, and Gurevitch (1974, pp. 21-22), there are five major elements in the model of uses and gratifications:

1. The audience is active and the media use is goal-directed.
2. Media choice lies with the audience member’s need gratification.
3. The media compete with other sources of need satisfaction.
4. The methodology of the model often focuses on the data supplied by individual audience members themselves.
5. Value judgments are suspended while audience orientations are explored on their own terms.

The essential assumption of uses and gratifications is that people’s selection and uses of a certain communication channel is closely related to their personal goals. People are active media users who can evaluate different communication channels based on their own goals, and they select a certain communication channel believing that it will gratify their needs (Katz, Blumer, & Gurevitch, 1974).

The Problem of Needs

Katz, Blumer, and Gurevitch (1974) suggested that more study should be done to examine social and psychological needs, different levels of needs as suggested by Maslow (1970). In his book, Maslow established the theory of a hierarchy of needs. According to Maslow (1970), there were mainly five categories of needs that
motivated individuals to satisfy themselves: physiological needs, needs for safety, needs for love, needs for esteem, and needs for self-actualization. These needs were listed from lower needs to higher needs.

Katz, Blumer, and Gurevitch (1974) suggested that students’ uses and gratifications could be studied backwards from gratifications to needs, instead of from needs to gratifications.

Mendelsohn (1974) agreed that needs as motivating forces for media usage and gratification is useful to explain mass communication behaviors. When it comes to media use policies, Mendelsohn contended that minorities and less advantaged people’s needs were often ignored. He suggested that research should address “fresh and imaginative modes for fulfilling needs, wants, and expectations that for whatever reason the mass media have either overlooked or neglected in the past” (p. 317).

Sources of Gratifications

Katz, Blumer, and Gurevitch (1974) sorted out three distinct and yet related sources of media gratifications: “media content, exposure to the media per se, and the social context” (p. 24). According to the authors, each medium has a unique combination content, attributes, and exposure situations. Attributes include print vs. broadcasting modes of transmission, iconic vs. symbolic representation, and reading vs. audio-visual modes of reception. Exposure situations include at home vs. out of home, alone vs. with others, control over temporal aspects of exposure vs. absence of such control.
**Media Attributes**

Media have different attributes that can satisfy people’s needs. There are disputes about whether media attributes are intrinsic or perceived. Most researchers find it worthwhile to investigate the public perception of the attributes of a certain media because uses and gratifications are more about active audience and their goal-directed use of the media.

According to the literature, computers can provide a variety of uses and therefore can satisfy different personal goals of the users. According to Perse and Dunn (1998), “interactivity and demassification, two attributes of computers, enable people to actively and easily select specific kinds of content and pacing to satisfy particular communication needs” (p. 437).

When people choose to use computers, they think it can be useful to some of their needs. Rogers (1995) contends that the continued adoption and innovation of computers suggest that computer users perceive computers as useful machines. Multimedia, with its interactivity can be used to experience greater entertainment, excitement, and escapist gratifications.

**Media Use in General**

Both quantitative and qualitative methods have been used in the studies of uses and gratifications. In quantitative studies, researchers measure gratifications sought and gratifications obtained. Palmgreen and Rayburn (1985) concluded three major models of gratifications measurement: the measurement of gratifications obtained, the measurement of the discrepancies between the gratifications obtained and the
gratifications sought, and measurement of expectancy value. Several studies were
done based on these models (Palmgreen, Wenner, & Rayburn, 1981; Rayburn &
Palmgreen, 1984; McLeod, Bybee, & Durall, 1982). A recent study by Dubos (1992)
conducted a study on why organizations choose certain communication channels
(face-to-face, written memos, and electronic media). The study supported the notion
that gratifications obtained accounted for the most of the relationship in the
transactional models. Discrepancy model was also partially supported. People chose
different communication channels because of their different functions provided. But it
was not always true that people chose a certain channel because it provided more
gratifications than others.

Motives for Internet Use

Perse and Dunn (1998) applied uses and gratifications theory in their studies of
the motivations for people’s media use, particularly the use of multimedia and the
Internet. A national survey of 1071 adults was conducted and study found that people
used home computers mostly for entertainment, escape, habit, and to pass time. The
study also found that people used the Internet mainly for entertainment. The authors
suggested further studies be done to investigate ritualistic use of home computers and
the internet use.

Valkenburg and Soeters (2001) reported a survey of 194 children ages 8-13. The
study was conducted to examine childrens’ motives for using the Internet, and their
positive and negative experiences with the Internet.

Results from MANOVA showed that for motives such as affinity with computers,
entertainment, online social interaction, and offline social interaction, younger children and older children did not differ much. Older children more often reported using the Internet for information seeking. In contrast, younger children more often cited using the Internet to kill boredom.

Results also showed that older children more often than the younger children reported finding information about sports and their idols as positive experiences. Older children also more often than the younger children cited e-mail as a positive experience.

About 73% of the children reported that they never had any negative experiences on the Internet. About 10.3% children reported virus or computer crash as negative experiences. Violence and pornography were cited as negative experiences by 4.1% of the children. About 1.5% of the children reported sexual harassment as negative experiences, and 1% reported other kinds of harassment. Violence was more often reported by the younger children, while online harassment was slightly more often mentioned by the older children.

The study revealed that the Internet, unlike the traditional media, did not provide children with a common experience. The authors argued that the Internet was still very individualistic and fragmented to provide children with the common experience necessary for social interactions related to its content.

Surveys and Interviews were conducted by Stafford, Kline, and Dimmick (1999) and the results showed that 61% of the people reported using email for interpersonal relationships, 31% reported gratification opportunities as the reason, 30% for personal
gain, and 25% for business reasons. Among the reasons, gratification opportunities are an emerging reason. The authors defined gratification opportunities as the use of a medium based on the belief that the attributes of that medium can allow the user to obtain more gratifications than other media. People mentioned that e-mail can satisfy their interpersonal needs better than telephone, postal system, or face-to-face interaction. E-mail was described to be “less expensive, quicker, simpler, and more convenient” (p. 663).

Papacharissi and Rubin (2000) conducted a study on motives of Internet use, and also how users’ own social and psychological characteristics affect their uses of the Internet. The study was done in a college. A total of 279 students were surveyed, among which 164 were female and 115 were male. Five major motives were found: information seeking, entertainment, convenience, pass time, and interpersonal utility, with mean scores from higher to lower in order. The study found that users who avoided face-to-face interaction, or found it less rewarding, chose to use the Internet to fulfill interpersonal needs.

Summary

To conclude, uses and gratifications theory is a robust theory about media uses. The theory addressed the problem of needs in media uses, and discussed media attributes, sources of gratifications from media, and motives for Internet use. Yet literature of uses and gratifications covered little about youth and Internet use. It would be interesting to make an investigation on this issue.
Young People and Internet Use

Introduction

Literature discussed young people and the Internet use from different perspectives, including Internet access at home and at school, young people’s Internet use habits, frequency, and some use patterns. Yet literature did not focus on the middle school age group to discuss the young people’s Internet use in details.

Internet Access at Home and at School

Former research found that more and more middle school students are using the Internet both at home and at school. Young people’s access rate to the Internet has been rising every year.

Tapscott (1998, p. 15) predicted an emergence of a "Net Generation" who are fluent with digital technology including Internet use. The young adolescents nowadays are digital-savvy and the Internet has become one part of their life styles. They are listening to music online, chatting online, shopping online, and watch movies online. According to Tapscott, when the young generation are more technologically-savvy, the schools will have to change. Tapscott predicted a more learner-centered schooling to accommodate the "Net Generation."

CNN, USA Today, National Science Foundation, and Gallup (1997) conducted a survey of 740 children aged 13 through 17, mostly middle school and high school students. The survey was designed to find out children's familiarity with and use of modern technology, particularly computers and the Internet. The researchers also conducted telephone interviews through Gallup Interviewing Centers across the
country. The study found that 55% have had the opportunity to use the Internet, and 59% would prefer to live in a house filled with high-tech equipment and appliances when they are adults rather than a "simpler" house. Also 67% say they have a computer at home, yet the percentage with an Internet connection is not mentioned in the findings. Teens were asked in the survey to say whether or not they expected each of ten events to occur "in their lifetime," and 82% think Americans will vote for President on the Internet.

National Public Radio, Kaiser Family Foundation, and Harvard University Kennedy School of Government (2000) conducted a poll on American citizens of all ages and found that all ages of people think that computers and the Internet have made Americans' lives better. Despite the dangers they see, people are buying computers at a fast pace, they are hooking up to the Internet from home, and, for the most part, they like what they see. A separate survey of children age 10-17 showed that they are even more positive than adults, and nearly all of them have access to modern technology at school.

San Jose Mercury News and Kaiser Family Foundation (2003) conducted a survey of 804 randomly selected young people at Silicon Valley ages 10-17 and their parents. The results showed that among the 10-17 year-olds, 88% have a computer at home, 79% have Internet access at home, 39% have Internet access from more than one computer at home, 24% have Internet access from their bedroom, and 37% have a broadband connection.

About 95% of the respondents reported having Internet access at school. Among
them, 66% reported access in a computer lab, 66% in a library, 4% at their desk, and 40% from somewhere else in their classroom.

According to a report released by US Bureau of the Census (2002) in *World Almanac & Book of Facts*, 64.1% of the children ages 6 to 11 have computers at home, and 24.7% of them are using the Internet. For children ages 12-17, 69.5% have Internet access at home, and 47.9% are using the Internet. The figures seemed lower than those most recent studies by San Jose Mercury News and Kaiser Family Foundation (2003).

*Use Patterns at Home and at School*

Poftak (2002) reported the UCLA (2002) project, “Surveying the Digital Future”. The survey of UCLA (2002) of 193 respondents ages 12-17 over 2,000 households revealed that young people spent on average 7 hours and 36 minutes online per week at home. They spent on average 1 hour and 36 minutes online per week at school. The average hours spent online per week at friends’ or relatives’ home was 1 hour and 6 minutes.

San Jose Mercury News and Kaiser Family Foundation (2003) found in their survey that on average students spent 5.5 hours per week online. Among the respondents, 15% spent 10 hours or more a week online, 17% spent 5 to 10 hours a week online. The rest spent 5 hours or less.

The same study found that the most common Internet activities for school were: doing homework online, creating a classroom presentation on the computer, sending or receiving e-mail from a teacher, and creating Web pages as part of an assignment.
A study on the Internet use at school by the U. S. Department of Education was reported in Electronic Education Report in an article entitled “Student Internet use rises in popularity behind word processing and CD-ROMs” (1999). The study focused on how teachers are using the Internet to direct their students. Results showed that word processing and CD-ROM use are the most common uses, followed by directing students to conduct research on the Internet. Computer drills and learning games were the next most frequent uses of the Internet in classrooms.

According to Becker and Ravitz, (1999), National School Network, sponsored by National Science Foundation, surveyed 153 k-12 schools in the United States. Among the 441 responding teachers, 130 were middle school teachers (grades 6-8) and 170 were high school teachers (grades 9-12). In these schools from 1994 to 1997, Internet-related projects were conducted for teachers and classes of students, mainly in communications and collaborations. The majority of the respondents reported changes toward more constructivist teaching. Elementary teachers reported more changes than middle or high school teachers.

Kiesler (2000) surveyed students and their parents about household Internet use at home. The survey showed that over 70% of the households needed technical support to set up computers and Internet connections. The study also interviewed teenagers in the household, and found out that the more they contacted the help desk or gave technical support to others, the more they were likely to use the Internet for a long period of time.
The literature also found that the young people at the secondary schools are more and more Internet-savvy, but their Internet use at school is not catching up with their knowledge of the digital world. Levin and Arafeh (2002), researchers on a Pew Internet & American Life Project, conducted a nation-wide study of 136 students from 36 public middle schools and high schools from across the country to examine their attitudes and behavior related to using the Internet. Focus groups were used to gather data: 12 focus groups were public middle and high school students who reported themselves as heavy Internet users; 2 focus groups were students who reported to be light Internet users. There was a moderator, and a researcher who was operating video cameras, tape recorders, or took notes. Each group began by completing a short survey. The focus groups were briefly divided by gender when possible. The study found that Internet-savvy students have far more different ways of using the Internet for learning than a typical teacher could imagine.

In that regard, students employ five different metaphors to explain how they use the Internet for school:

- The Internet as virtual textbook and reference library. Much like a school-issued textbook or a traditional library, students think of the Internet as the place to find primary and secondary source material for their reports, presentations, and projects. This is perhaps the most commonly used metaphor of the Internet for school—held by both students and many of their teachers.
- The Internet as virtual tutor and study shortcut. Students think of the Internet
as one way to receive instruction about material that interests them or about which they are confused. Others view the Internet as a way to complete their schoolwork as quickly and painlessly as possible, with minimal effort and minimal engagement. For some, this includes viewing the Internet as a mechanism to plagiarize material or otherwise cheat.

- The Internet as virtual study group. Students think of the Internet as an important way to collaborate on project work with classmates, study for tests and quizzes, and trade class notes and observations.

- The Internet as virtual guidance counselor. Students look to the Internet for guidance about life decisions as they relate to school, careers, and postsecondary education.

- The Internet as virtual locker, backpack, and notebook. Students think of the Internet as a place to store their important school-related materials and as a way to transport their books and papers from place to place. Online tools allow them to keep track of their class schedule, syllabi, assignments, notes, and papers. (Levin & Arafeh, 2002, p. ii-iii)

The gap between the school and the students in ways of using the Internet is widening. Students found opportunities to use the Internet at school limiting and boring. Students expect more engaging activities concerning Internet use. Pressure for school change is emerging.

Similarly, Hird (2000) reported a gap between the middle school students using the Internet at home and those using it at school. An ethnography of 34 eighth-grade
students in an urban private middle school was conducted. Data sources included staff
and student interviews, classroom observations, and online student discussions. The
result showed that the students' knowledge of the Internet extended well beyond their
school technology use, which was limited to web searching. In school, students did
not use the Internet communication they relied on for constructivist learning outside
school. For students, the value of the Internet as a learning tool lies in online
communication around shared information. Students rarely used the Internet for
purposes other than finishing assignments and projects in school. One student
commented on his Internet use in a project:

Well, sure, we uh used Yahoo. We put in, we typed in different names of house
styles or parts, names of houses and it brought up a bunch of sites with useful
pictures on it… That’s the extent that we used Internet for that, for that one… It
wasn’t really using the Internet, no. I do really use the Internet for other things.
(Hird, 2000, p. 126-127)

The literature review also found studies on how young people are using the
Internet for school work under their teacher’s instruction. Albright, Purohit, and
Walsh (2002) described the new literacies that are happening in New York City's
Chinatown, where 85% of students are on free or reduced-priced lunch. The purpose
of the study was to look at Internet Communication Technologies (ICT) or chat rooms
to see if "ICT readily complimented the goals of conventional literacy instruction and
if there were unexpected consequences in its use" (p. 694). The writer reported that:

Between online games, Internet surfing, and chat rooms, a significant number of
students spend even more time online than in school each day. Students not only go online to visit websites, but also actively participate in chat rooms, where participants converse with others in real time under real or assumed names.

(Albright, Purohit, & Walsh, 2002, p. 694)

The researchers reported the following findings: use of chat rooms reproduced the conventional classroom behavior, and forms of school discourse (for example, mimicking teacher-led discussions). The researchers also found that online conversation by the students while doing homework was similar to face-to-face talk in the traditional classrooms (interruption, completing other people's sentences, acting as a chorus). Though students were using the chat room at home for their homework, they were confined to the conventional way of classroom communication because when the homework was used for performance assessment, the students tended to follow the traditional communicational styles that they were familiar with.

A gap not only exists between the middle school students and their school, but also between the students and their parents. Taylor (2002) reported that parents and their children see the Internet differently. Two studies examined Internet use by Canadian youth. Participants in one study were more than 1000 parents, and in the second study 5600 students aged 9-17 years. Results revealed that young people see the Internet as a communication tool whereas parents value it as educational tool and that parents' view of their management at home differs from children's view of their parents' involvement. While 80% of parent participants reported talking quite a great deal to their children about Internet activities, less than 25% of student participants
agreed to such a statement. Most young people reported that they did not agree that their parents talked about the Internet with them.

The literature suggests that school and parents have ignored young people’s own knowledge of the Internet and digital technology, and the adults are forcing their own notions of Internet education on the youth. As suggested by Levin and Arafeh (2002), middle school students feel that they are not using the Internet in a creative way for learning. When the students are living daily with the Internet, the school cannot avoid the new technology, and at the same time, the school must know the students’ needs in order to promote more student-centered learning.

Tapscott (2001) suggested that since more and more young people are becoming digitally savvy, education with this "Net Generation" has to shift from instruction to construction, from teacher-centeredness to learner-centeredness. The changes require teachers to learn new tools, to have new approaches, which is a great challenge for some teachers, according to Tapscott (2001).

Summary

Literature about youth and Internet use did discuss the young people as a whole group in terms of their Internet access situations, their use patterns, time and frequency of staying online, and so on. But middle school students as a particular group were not discussed separately in depth.

The Internet as an Innovation

Introduction

Literature held different views about whether a new technology such as the
Internet is really a different innovation than technology such as TV or video. Some doubted the Internet really had a great impact on classroom teaching or learning. Others were determined that the Internet had a positive impact on education in general. Yet literature did not go to the students to listen to their interpretations.

**Different Views about the Internet**

Is the Internet different from other innovations? According to Cuban (1986), when TV, radio and movies were introduced to the classroom, people were saying that they were going to be very important for education. In fact, not many of these technologies are really effectively integrated with the classroom teaching and learning. Will the Internet be different from the other innovations? If not different, why are the teachers reluctant to adopt this new technology?

Tapscott (1998) hails the new technology of the Internet and believes that the generation growing up digital will promote an educational reform and that education will become more student-centered. He goes even further to predict that the new generation, learning with the computer and the Internet, will become more democratic and responsible citizens.

Cuban (1986) is more prudent. The author has written an interesting history of how teachers have interacted with technological innovations in schools from 1920 to the late 1980's. He provides an historical outline of the introduction of film, radio and instructional television into the schools and demonstrates the remarkably similar and low impact of each invention on actual classroom practice. Similar reasons were given for the low integration of radio programs, such as lack of radio receiving
equipment, school scheduling problems, and programs not related to the curriculum. In each case there were small groups of teachers who did integrate these new technologies but for most teachers they found no good reason for using them. Cuban concludes that no one was paying attention to the teachers' point of view. Teachers will embrace innovations such as new forms of grouping, chalkboards, and textbooks when they solve what they consider to be problems. Teachers' needs are anchored in the classroom, an arena largely foreign to researchers and policy makers. He concludes that technologies will be adopted to the extent that they solve classroom problems and when their benefit to the teacher outweighs the cost of learning to use them.

Cuban’s (1997) description of Stanford professors using computers in their classrooms over the past two decades reveals a pattern of limited and unimaginative instructional use of computers. Surveys and studies from the 1980s until the recent decade confirm such a pattern. Lack of resources can no longer explain such a trend of limited use of new technology in the classrooms. According to Cuban (1997), techno-enthusiasts should consider the following to reframe the problem:

1) Teaching as work differs from manufacturing, repetitive clerical tasks, and low-skill manual work, which have all been automated to enhance productivity.
2) Most techno-reformers are addicted to seeing schools as having only one purpose: to prepare students for the technological workplace.
3) Why should teachers and professors chuck what they ordinarily do when the new technology is constantly changing? (p. 3-4)
What would teachers say to the issue of using the Internet at school? Do educators need to reframe the problem concerning Internet use in classrooms?

There are disputes on the social implications of the Internet use on society. Optimists such as Tapscott (1998) contend that interactivity of the Internet can lead people to more communications and there would be more connections among people. Pessimists such as Kraut et al. (1998) argue that online engagement will isolate people from real world interactions. Communities will be neglected. Bower (2002) contends that the Internet is flexible, where people adapt themselves to their own purposes, including good purposes and ill purposes.

Studies were also done to examine Internet use against traditional media use. Dvorak (2003) reported a UCLA survey on Internet behavior. The survey results showed that people did not surf the Web and watch TV all at the same time. According to the survey, the more a person used the Internet, the less he or she watched TV.

On the contrary, Poftak (2002) found out when young people were online, they were involved in multitasks: when they were surfing the Web, they were listening to the music from the radio, and talking on the telephone all at the same time.

**Summary**

Literature did not have a consensus whether the Internet as an innovation really had a significantly different impact than other technologies. Does it really play a positive role in education, particularly in middle-level education? Not much was found in the literature to cover the middle school students’ interpretations.
Gender Differences and the Internet

Introduction

Literature about gender differences and the Internet suggested that the development of the Internet brought much fewer differences between the genders. It also suggested not much significant differences among young boys and girls in terms of their Internet use. On surface it seemed that boys and girls were doing the same things on the Internet, and yet are there any differences between what they are really doing? In other words, are boys chatting about the same things as the girls are doing? Are they playing the same games? Do they go to the same websites?

Gender and the Internet Use

Morahan-Martin (1998) addressed the issue of gender and the Internet. The author wrote that the computer and the Internet started as a masculine culture at the very beginning, which has deterred women from adapting themselves to the new technology. Girls are drawn to the Internet because it offers a new channel for communication. Girls are especially interested in chat, and games are becoming appealing to them more. The author also cites Tapscott (1998) to say that a whole new generation is growing up with the Internet, where gender differences are narrowed. The author predicted that, though more universal Internet access, low prices and user-friendly interfaces are diminishing the gap of gender differences, some differences will still continue.

Miller (2001) expressed similar theories to Tapscott’s. According to Miller, underrepresentation of females in technology fields were said to be the result of lack
of role models, access, learning styles, social expectations, and the absence of
gender-sensitive computer games. The World Wide Web has made a variety of
functions available to both genders at school and at home. The study suggested that
gender differences in the technology field are narrowing significantly.

Results of a survey of Internet users (Weiser, 2000) supported the notion that
gender differences in Internet use patterns are diminishing. About 297 males and 387
females responded to the survey consisted of 19 items with 9-point Lickert scales. The
results showed the narrowing of the gaps between the two sexes in Internet use
patterns. Differences still existed despite the narrowing. Females used Internet mainly
for interpersonal communication and academic assistance. Males enjoyed more
flexible use of the Internet than the females. Males reported using the Internet for
shopping, listening to audio broadcasts, searching for romance, pursuing sexual
relationships, reading news, playing online games, and so on.

Article entitled “Internet Trivia” (2000) in Internet Week also noted that women
users were increased faster than men users of the Internet. The article reported that the
number of people with home Internet access increased from 97 million in February
1999 to 119 million in December 1999. During this time of period, female Internet
users increased by 32%, and male users increased by 20%.

The study also reported sites with a majority of women visitors: toysrus.com,
etoys.com, ivillage.com, women.com, coolsavings.com, kbkids.com, egreetings.com,

Harcourt (2000) interviewed women who were close to her, and found there was
a tendency for women to use the Internet to combat violence and struggle for autonomy and self-determination.

Flanagin, Tiyaamornwong, O’Connor, and Seibold (2002) collected data from 127 men and women in 22 computer mediated task groups. During the computer mediated interactions, group members kept anonymity. Mixed sex interactions were afforded. The results examined variables such as group cohesion, group trust, group task independence, and satisfaction with group process. The results showed that female enjoyed anonymity more than men. Whereas women avoided social cues such as their sex type, men sought to reveal their sex in the interaction. Men did not pretend to be women online, yet some women did pretend to be men.

The Technology Student Association (2002) surveyed middle school and high school students to find out their Internet-use habits. Among the 675 students, many of the boys reported using the Internet to check sports news and automotive interests. Girls reported that they used the Internet mainly for communicating with family members and friends.

Shaw and Gant (2002) based their study on the research that revealed that men preferred to use the Internet to collect information and women used the Internet mainly for interpersonal communication. The researchers studied males and females who were engaged in the same Internet activity (using WebChat online). Variables of depression, loneliness, self-esteem, and social support were measured. Participants were college students who experienced five structured chat sessions. No gender differences were found in the study. The researchers concluded that online chatting
did not elicit gender differences in terms of the effects of the Internet use on individual people.

Valkenburg and Soeters (2001) also found gender differences in their study of the children’s Internet use. The study found that only boys were interested in sensational content of the Internet such as violence and pornography. Though boys and girls did not differ in their interest to play or download computer games, they do play different kinds of games. Only boys and no girls cited downloading cheats or codes as positive experiences. Cheats or codes are hidden key sequences or passwords that a game player can use to take advantage of the game. For example, “Big Daddy” can be a code used to be a very powerful shooter. The researcher found this result confirmed the conclusion that boys were more interested in violent contents, because cheats and codes were closely related to action and violence games.

Both boys and girls reported the following reasons for using the Internet: doing school research, using instant messaging, sending and receiving e-mails, chatting, peer-to-peer music sharing, listening to music, checking news, playing games and shopping. To the question, “Do you feel the Internet is a necessity in your life?” 69% of the girls and 63% of the boys answered yes.

Robbins (2001) reported that Internet activities can change the situation of women’s underrepresentation in computer technology careers and university majors. The study tried to find out if the Internet could change the situation. The research described the online activities of young adolescent girls aged 12-14. Eight girls were interviewed, and six personal websites were examined. The author came to the
following conclusions:

(1) Online technologies offered the informants multiple ways of negotiating social relationships; (2) Internet use supported the informants' engagement in personalized, self-directed, and self-initiated learning; (3) Support from parents, siblings, and peers provided the environment for each girl to develop confidence and competence in Internet use; and (4) The informants' use of the Internet reflected women's ways of knowing. (p.1)

Bernt, Bernt, and Turner (2003) and their NSF project, Getting the Media Message, are conducting a nation-wide study of the impact of the media environment on middle school students' career choices. The underrepresentation of women in IT careers may be influenced by the media that are accessed by middle school students. What is the current media environment for middle school students? How is the environment influencing girls' career choices? In a pilot study at one school, a survey of over 200 middle school students showed that girls cite chat and email as their reasons for liking the Internet, while boys cited games as their primary reason.

More girls reported that they preferred print to Internet than boys. Boys use the Internet at school more than girls do. The pilot study yielded a list of favorite websites of the students, including boys and girls. The following is a table that shows the list of websites that both boys and girls liked with some more preferred by boys, and some more preferred by girls. As you can see, girls loved chatting and boys were crazy about cheats and codes. Boys loved to play games, and girls loved cartoon sites such as Disney.
Table 2

**Favorite Websites**

<table>
<thead>
<tr>
<th>Websites</th>
<th>Girls</th>
<th>Boys</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yahoo.com</td>
<td>51</td>
<td>19</td>
<td>70</td>
</tr>
<tr>
<td>Chat (ICQ/yahoochat/cyberchat/teenchat)</td>
<td>18</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Nick.com</td>
<td>8</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Zoogdisney.com</td>
<td>12</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Hotmail.com</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Mtv.com</td>
<td>9</td>
<td>6</td>
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**Summary**

Though literature reports that girls seem to be interested in the communicative features of the Internet and boys are more attracted by the games online, there are no more detailed or in-depth descriptions of what boys and girls are really doing online. What are they chatting about? What kind of games are boys playing? How are these
activities facilitating or hindering middle school students’ learning? These questions need to be addressed by researchers.

*Children’s Psychology Online*

*Introduction*

With the arrival of the Information Age, computer use and Internet use are becoming part of the world’s culture. Educators are not in a position to ignore the impact of the computer and Internet on students’ growth and development. The young generation that is growing up with computers is developing a kind of relationship with computers and the Internet, which is new and different from the generations before. Educators need to understand this new relationship to adjust their instructional techniques to meet with challenges of Information Age. Literature discussed children’s relationship with computers and the Internet and yet did not study the middle school students as a group.

*Children’s Relationship with Computers and the Internet*

Four books contributed to such an understanding: Sherry Turkle’s *The Second Self* (1984) and *Life on the Screen* (1995); Don Tapscott’s *Growing Up Digital: The Rise of the Net Generation* (1998); *Psychology and the Internet* edited by Jayne Gackenbach (1998). The authors of the four books look at the issue of psychological development of children/students working online or with computers from different perspectives, throwing light on both the positive and the negative sides of the development related to the computers and the Internet.

As a psychoanalyst and a sociologist, Sherry Turkle studied the computer culture
and the relationship of the computer and human mind. Both *The Second Self* and *Life on the Screen* look at how computers influence how people look at the questions of identity and the self.

In *The Second Self*, Turkle states what she is interested in her study: “instead of asking what the computer does to children I ask what children, and more importantly, what different kinds of children make of the computer” (Turkle, 1984, p.96). Turkle finds that computers are not merely a rational engine. Instead, it has a “second nature” that arouses our own subjective minds, and helps us to rediscover our nature as human beings. The computer is “an object that fascinates, disturbs equanimity, and precipitates thought” (Turkle, 1984, p.13). The thought Turkle means is the thinking about the self; It is about what we are, and what we can be. She argues that “we are insecure in our understanding of ourselves, and this insecurity breeds a new preoccupation with the question of who we are. We search for ways to see ourselves. The computer is a new mirror” (Turkle, 1984, p.306).

Turkle notices three stages of relationship between children and computers. When children are younger than 7, they develop metaphysical questions about computers. They want to know whether the computers are alive and how computers are feeling. For example, children playing with computer toys are likely to think the computer is alive because it is able to cheat. When children are older, they have developed a sense to control situations, and they want to master computer games or programs. However in adolescence, children use computers to reflect about the self. Computers and the Internet technology provide “a chance to experience who they are not, a style of
expressing who they are, and experiment with a part of the self that is not dominant” (Turkle, 1984, p.138).

Like The Second Self, Life on the Screen is a book about how computers are causing us to re-evaluate our identities in the age of the Internet. Turkle asks similar questions in her second book: who are we and who are we likely to become as computers play an increasingly important part in our lives?

While probing the relationship of children and computers, Turkle argues that: “Today’s children are growing up in the computer culture; all the rest of us are at best its naturalized citizens” (Turkle, 1995, p. 77). When adults look at computers, we have presuppositions that they are not alive. Children growing up with computers will think and feel differently about computers.

Like in The Second Self, Turkle sees the computers’ evocative nature in Life on the Screen: “computers are evocative objects for children, provoking them to find new reasons for what makes things alive and what is special about being a person” (Turkle, 1995, p.78). To children, computers are psychological objects, which can think and have personalities, and which are somewhat between persons and animals (Turkle, 1984, p. 83).

Turkle explores how computer networks like MUD are altering our notions of self, identity and even sexuality. Turkle finds that we also have a life on the computer screen which is not unreal in many senses. There is a blurring of boundaries between real and unreal, and between life and machine. She says that “the use of life as a key boundary marker between people and machines has developed at the same time as the
boundaries of life have themselves increasingly contested” (Turkle, 1995, p.178).

For Turkle, life on the screen is in fact very helpful in transforming our lives and children can benefit from understanding their virtual selves. Turkle contends that, “We don’t have to reject life on the screen, but we don’t have to treat it as an alternative life either. We can use it as a space for growth” (Turkle, 1995, p.263). She clarifies her points by arguing that, “If we cultivate our awareness of what stands behind our screen personae, we are more likely to succeed in using virtual experiences for personal transformation” (Turkle, 1995, p. 269).

Despite the similarities, the two books of Turkle approach the issue of children’s psychological development from different perspectives. In The Second Self, Turkle comes to the issue of self and identity mainly from a psychoanalytical point of view, though she also goes into research and resources in psychology, sociology and philosophy. Turkle comments on Freud and the followers of Freud and she is moving from a view of centered self to a more decentered self. She defies the notion of ego where self is a reality in a “heroic battle off id and superego” (Turkle, 1984, p.291). Turkle argues that children would regard computers as a self apart, or the second self: “They (children) become players in their own game, makers of their own mysteries, and enter into a new relationship with the computer, one in which they begin to experience it as a kind of second self” (Turkle, 1984, p. 92).

Life on the Screen goes a step forward on the notion of decenteredness of self. In this book, Turkle approaches the issue of identity and self from a postmodern perspective. In The Second Self, life in computers is only part of the self. Here the self
is multifaceted and decentered, and virtual selves are just facets of the self that embody the value of fluidity and ability to adapt. The simulation of reality substitutes the real and life on screen is meaningful for us because “Without a deep understanding of the many selves that we express in the virtual we cannot use our experiences there to enrich the real” (Turkle, 1995, p. 269).

Postmodern self is more fragmented and it is constantly under construction, deconstruction and reconstruction. Computer culture promotes such fragmentation and construction of self. In Turkle’s words: “The Internet has become a significant social laboratory for experimenting with the construction and reconstruction of self that characterize postmodern life” (Turkle, 1995, p.80). Turkle uses windows as a metaphor to describe the decentered selves. Real life and virtual life are both only different windows of parallel selves (Turkle, 1994, p.14). Children growing up with computer culture are more likely develop postmodern selves and become more comfortable with virtual realities of self-fashion and self-creation. They would explore different facets of selves and construct or reconstruct their experiences through playing with the boundaries between living and non-living, and between person and machine.

Like Turkle who notices that a new generation of children is growing up with computer culture, Tapscott in *Growing up Digital* focuses on studying the kids who are a computer-savvy generation so as to understand how their use of digital technology is reshaping the way society and individuals interact. Tapscott coined the term “Net Generation” for children who were born between 1977 and 1997, and the
author defines the term as a loud “echo” of the “baby boomers” (Tapscott, 1998, p. 21-22). Many of the first generation of baby boomers were growing up with television, but quite a number of the Net Generation was the first generation that was immersed in computers and digital media. While television is a passive media, computers and digital media are empowering the young kids “to question, challenge and disagree” (Tapscott, 1998, p. 88).

Tapscott generally agrees with Turkle’s viewpoints of multiple selves. The book uses quotations from Turkle’s *Life on the Screen* about the windows of self and life. Tapscott sees that “the Net permits children to experiment with morphing their own identities” (Tapscott, 1998, p. 95). Like Turkle, Tapscott thinks that children working on the Internet are developing all kinds of relationships and communications to expand selves. The notion of oneness of the self is outmoded. Children growing up digital “may be the first generation to accept and effectively manage the many selves that flourish within us” (Tapscott, 1998, p.97).

Unlike Turkle and Tapscott, Elizabeth Reid disagrees that the projection of self on the Internet can remain fluid and decentered all the time. For Reid, “fragmented projection of self can become fixed and invariable” (Reid, 1998, p.29). This fixation forms usually along the line of the disinhibited aspects of the selves of the Internet users. While Turkle and Tapscott both contend that the self in cyberspace is fragmented and multiple-faceted, Reid argues that virtual communities will allow and encourage a holistic projection of the self into the virtual landscape (Reid, 1998, p.40). In other words, children who are working on the Internet are likely to be greatly
influenced by the personae they created to grow into a personality of hatred or violence in reality.

Adam Joinson defines disinhibition as a state where behavior is not constrained or restrained through self-consciousness, anxiety about social situations, or worries about public evaluations (Joinson, 1998, p.44). Children working online are likely to behave in ways they do not in real life, and as a consequence, Internet-based behavior could go array from moral values or even laws. Joinson also sees that it is possible for Internet-based behavior to transfer into real life, which will cause moral or political problems, or lead to crimes (Joinson, 1998, p.53).

The authors of the four books hold different attitudes toward the effects of the psychological development of children working with computers or on Internet. Turkle and Tapscott are basically optimistic about the effects. Turkle did not make any value judgments or political implications of the effects. The two books by Turkle emphasize the malleability of children’s personalities by working online, and the building of the selves is adaptable to real life experience, and in a sense will help us to enhance confidence and ability to express ourselves, or nurture freedom of imagination to question the world and ourselves. When children are doing this online, they are reaching out and breaking down walls and “they develop better relationships and more communication with different aspects of their self” (Turkle, 1995, p.14).

Turkle also contends that the Internet can be therapeutic for children with problems. For example, MUD (Multi-User Dungeon or Dimension) can provide rich spaces for both acting out and working through, where acting out means staging old
conflicts in new settings repeatedly, and working out means a moratorium on action to 
think about our habitual reactions in a new way (Turkle, 1995, p. 200).

Turkle did talk about the dangers online such as the virtual rapes online and she 
regards the dangers as a challenge to parenting in the new era. Parents should discuss 
online experience with their children and they need to know enough computer 
networks to do so (Turkle, 1995, p. 228).

Tapscott also emphasize the positive effects of the digital media on our children. 
Apart from the empowerment of the children to think, and the use of computer to 
enhance their confidence, children growing up digital will enter a new world of 
collaboration, emotional openness, sharing of ideas, innovation and less hierarchical 
work atmosphere.

Unlike Turkle, Tapscott does not ignore the political downside of the Internet use 
by children. Tapscott discusses the possibilities of a digital divide: the unfairness of 
gap between the haves and have-nots of digital media. Tapscott suggests an effort by 
libraries to narrow such a gap.

Reid and Joinson both emphasize the downside of Internet use by children by 
talking about the disinhibited self of the children, where children are facing the danger 
to develop a character that is harmful to society. Violence and hatred may prevent 
children online from having flexible social interaction. Joinson also acknowledged that 
the disinhibition may have positive effects in the areas of self-help, education, 
research, electronic commerce and community building where students can take 
advantage of openness and frankness (Joinson, 1998, p.53-60).
To conclude, the four books reveal the two sides of a coin when they discuss the issue of children’s psychological development working with computers or on the Internet. Turkle and Tapscott help us see the positive side where children can be empowered to think for themselves, where they can experiment with their selves on the Internet to adapt to the real world, and where they can break down walls and create a sense of community. Reid and Joinson remind us of the disinhibited self of children working online, where kids are likely to develop hatred or violence, which may increase possibilities of crimes in the real world. Educators should keep both sides in mind when they are integrating computer technology into the classroom, so that the positive sides can be enhanced and the negative effects can be reduced.

Journal articles also reported on Internet psychology. Kraut et al. (1998) suggested that more involvement with the Internet interactions will reduce face-to-face interaction and lead to less social connections and social support.

Different researchers held different views about whether the Internet will cause loneliness or not. While Kraut et al. (1998) conducted a survey of 89 participants and found that people went online made them lonely, Amichai-Hamburger and Ben-Artzi (2003) found that the opposite direction held true. It was revealed that lonely people went online, not the online experiences made people lonely.

Chen and Persson (2002) did not replicate the same results in their study of the young people’s well beings related to Internet use. The study showed that younger adults scored higher on personal growth and purpose in life than older adults. More older adults felt that they gained more in autonomy and environmental mastery.
Swickert et al. (2002), on the other hand, found in their survey of 206 participants that there was only a marginal relationship between computer use and personality. In other words, shy and lonely people went online nearly as often as the more extrovert people did.

Gross et al. (2002) investigated the relationship between well-being and social aspects of the Internet. Internet uses of 130 students of grade seven were examined and their well-beings were measured. The study found that even though Internet use was growing, students still spent most of their after-school time on traditional activities such as peer interaction. Online communication was motivated by the desire for companionship. Null association was found between time spent on the Internet and psychological well-being.

Summary

Literature about children’s psychology with computers and the Internet discussed children’s multiple identities on the Internet. However, the literature did not take the middle school students as group to have a close look at their psychology with the computers and the Internet.

Privacy and the Internet

Introduction

Literature found that children of all ages needed privacy protection while using the Internet. Some researchers promoted using filtering, while others argued that filtering will not solve the problem, but rather limit children’s minds. Laws and codes were also developed to protect children’s safety online. Yet literature did not look at
the middle school students and investigate what the young people were feeling about
the issue.

*Children's Privacy Online*

In the study of Hird (2000), students talked about “Adult Internet Phobias”,
where they felt that they were constantly under suspicion when it came to the use of
the Internet. The adults were passing the message to the students that whenever the
parents were absent, the students would lose sense of right and wrong. Internet
pornography was one major source of “Adult Internet Phobias”, according to Hird
(2000). Students reported annoyance or indifference when they encountered
pornographic sites inadvertently. The students resented “Adult Internet Phobias”, but
at the same time, they knew the potential dangers and they approached the Internet
with caution.

According to Goodale (2001), children longing for privacy can make them
vulnerable to dangers. One good example was that a boy who was 14 years old
established a relationship with someone who he thought was a teenager, and it turned
out that this person was an adult pedophile.

National Public Radio, Kaiser Family Foundation, and Harvard University
Kennedy School of Government (2000) conducted a poll on American citizens of all
ages and find that all ages of people think that computers and the Internet have made
Americans' lives better. The study found people's fears and concerns about technology
use. There are concerns about Internet fears: Americans' worries about potential
dangers of the Internet include the possibility of dangerous strangers making contact
with the youth (85% say this is a "major" problem); the availability of pornography to children (84%); and information on how to build bombs (73%). There may be justification for some of these worries; nearly a third (31%) of young people aged 10-17 from households with computers (24% of all the participants aged 10-17) said that they had seen a pornographic web site. Among the findings, there are also:

Children were more enthusiastic about and comfortable with computers than the adults. Young people without computers were more concerned that they are missing something than adults are. Many of the young did see pornography on the Internet. (Almost one-third (31%) of the young adolescents aged 10-17 with computers at home have seen a pornographic website, even if by accident. This is truer for older users: 45% of those 14-17 years old compared with 15% of those 10-13 years old.)

Parents are more likely than their children to think they have rules in place about what their children can do on the computer.

Children’s Online Privacy Protection Act (COPPA) was passed in 1998, issued in 1999 and enacted in 2001 (Federal Trade Commission, 2002). The act triggered the use of filtering in schools to ensure online safety. With the Children’s Internet Protection Act passed, school libraries were also under the pressure to protect students’ safety online (Conn, 2002). National Center for Education Statistics found in 2001 that 98% of the public schools had drawn up acceptable use policies to define rules of Internet use. 74% of the schools were suing software to filter about 2.1 billion Web pages (Gonsalves, 2003).

Dangers do exist online. How do we keep the students from being hurt when they
are using the Internet for learning? Nellen (1998) argues that the teacher should be the filter. Filtering software sends wrong messages to students to say that the school or the parents do not trust them. Students could not make their own decisions. A right way, according to Nellen, is to teach the students to take responsibility and use an Acceptable Use Policy to restrict the students' behavior online.

McKenzie (1998) also promotes more constructive use of the Internet. Schools are trying to catch up with the Information Superhighway, and billions of dollars were put into the Internet projects, yet there is no credible evidence that the Internet enhances student thinking skills, math or reading unless with carefully designed learning programs. The author suggests ways of raising the young generation to make their own judgments concerning issues that matter to them.

Marcroft (1998) asks: Should educators allow unrestricted Internet access or deny access completely? And he reports that neither choice is a good one. Even the most innocent students can inadvertently stumble across sexually explicit sites. He argues that filtering is necessary for children's safety.

Pittman and McLaughlin (2000) think that teachers and parents must realize the dangers of the world of the Internet. Teachers are the ones who are responsible for choosing, operating, and maintaining filtering applications in classrooms. The article introduces laws about children's online privacy protection, and introduced resources for parents and teachers to get more information about providing a safe online environment for children. The article also provides strategies to protect children's safety online and introduced filtering software packages.
Poftak (2002) contends that the Internet has increasingly become part of preteens and teens' daily life. It is naive to separate the Internet from learning and teaching nowadays. However, the challenge is how to keep a balance between ensuring students' safety online, and at the same time allowing them freedom to explore new places and learn in creative, innovative ways. The author provided implications for schools and suggested strategies to encourage self-initiated learning.

In the first year report of University of California at Los Angeles (UCLA) Internet Project (2000), it showed that 76% of adults reported that children's grades remained the same after Internet use, 26% reported improvement in grades. Parents reported that they kept an eye on their children while they were using the Internet: 32% used filtering software, 66.8% allowed children to use the Internet upon permission, 66.3% limited the children's number of hours online; and 88% kept an eye on what the children were doing online. The third year report (2002) confirmed that most adults saw what their children were doing online.

Summary

Literature did notice the danger of children’s safety online, and researchers held different views on filtering the Internet. Not enough information was found about middle school students’ interpretations of this issue. This study would like to talk with students and listen to their voices.

Ethics and the Internet

Introduction

Cheating is not a new phenomenon, and yet cheating on the Internet is new. What
impact does the Internet have on the issue of ethics? Why are young people cheating
on the Internet? What in the Internet contributes to building a culture of cheating
among the young people? How do educators cultivate honesty in this digital era?

Literature discussed the seriousness of digital cheating and plagiarism. Again, not
enough information was found about the issue from the students’ point of views.

_Digital Age and Deterioration of Ethics_

The literature revealed that in recent years, more and more young people at
school were practicing cheating and things were getting worse each year. Who’s Who
(1998) conducted their 29th annual survey among the high school students nation-wide
and found that 80% of the students admitted that they had cheated on school work in
general with or without the help of the Internet, and it was a four point jump from the
figure gained from 1997’s annual survey by Who’s Who.

Josephson Institute of Ethics (1998, 2002) conducted several surveys on young
people’s ethics. In the 1998 survey, the institute studied over 20,000 middle school
and high school students in the United States. The result showed that 70% of the high
school students reported that they had cheated on an exam in the past year. For middle
school students, the percentage of cheating was 54%. Overall, the cheating rate was
rising from the former years.

The 2002 survey by Josephson Institute of Ethics confirmed the theme that things
had been getting worse each year in the past decade. From 1992 to 2002, the number
of high school students who admitted that they cheated on an exam in the past 12
months had increased significantly from 61% to 74%. The percentage of students who
admitted having cheated two or more times increased at a very slow rate: 1992 – 46%; 2000 – 44%; 2002 – 48%.

Curiously, the survey showed that gender, student leadership, and personal religious convictions had no substantial impact on cheating. Roughly equal percentages of boys and girls cheated. The survey showed that girls cheated and lied as much as boys, but they were significantly less likely to engage in theft or other dishonest practices and they had more positive attitudes toward ethics.

All the surveys by Who’s Who and Josephson Institute of Ethics reported that young people were developing a more lax attitude toward cheating. The 29th annual survey of Who’s Who (1998) revealed that 53% of the students said that it was no big deal that more students were cheating these days. In the survey of the Josephson Institute of Ethics (1998), though majority of the students admitted that they had cheated at least once in the past year, 91% of the students reported that they were satisfied with their character and ethics. There was an inconsistency in what they believed and how they acted.

The deterioration of ethics among young people seems to be closely related to the Internet, according to the literature. Lathrop and Foss (2000) reported three reasons for why young students chose to cheat: (1) Cheating is easy with the technology such as the Internet; (2) The percentage of being caught is low (10%); (3) Those who got caught did not get severe punishment (p. 1).

The first reason is a very important reason, according to Lathrop and Foss (2000). Students from one class can create their web site to share ideas and copy from each
other the answers for the homework (p.12). There are websites that provide free essays for students to plagiarize reports and term papers. Examples are:

www.al-termpaper.com; www.academicpapers.com; www.bignerds.com;
www.cheater.com; www.cheathouse.com; and so on (p. 22-24). Electronic encyclopedias online or on CD-ROMs were also a source for plagiarism (p. 20).

Besides, the young students would use all kinds of digital devices to connect with each other, including Palms, calculators, pagers, etc. Emails and chat rooms on the Internet are also used for plagiarism (p.12-13).

Why do students choose to cheat? Renard (1999-2000) also reported that the Internet provided cheating opportunities and there were three main types of Internet cheaters: the first type was those who cheated unintentionally; the second type was those who cheated sneakily; and the third type was those who were lazy and had to cheat desperately.

Internet has contributed to the convenience of plagiarism and cheating. Walter (2001) reported the PEW study on teens’ Internet use. The study found that most of the students (71%) preferred the Internet to library as the source for their most recent school project. Among the 754 students surveyed, 94% reported using the Internet for homework, 41% reported using the Net for e-mail and instant messaging, and 18% knew “someone who has used the Internet to cheat on a paper or test” (p. 4).

Another important reason for students to take cheating for granted is that they thought the teachers were not caring about it. Strichers (2001) reported that a recent survey of 4,500 high school students found that 47% of student respondents believed
that their teachers sometimes chose to ignore students who cheated. Among these respondents, 26% believed that teachers did not want to go to the trouble of reporting suspected academic dishonesty. The survey also found that the Internet was a major source for cheating. About 54% of respondents reported that they had used the Internet to plagiarize other people’s works.

Teachers reported they caught students cheating. Bushweller (1999) reported that in a national survey of 356 high school teachers conducted by The American School Board Journal in 1998, 90% of the teachers said cheating was a problem in their schools, and half of the teachers said that they encountered students who cheated in most of their classes.

How can the teachers combat the dishonesty related to the Internet? Renard (1999-2000) suggested that teachers needed methods to alert and detect cheating, and yet the most effective way to reduce cheating should be to involve students by providing interesting assignments. Another important thing, according to Renard (1999-2000), was to teach the students how to document sources.

Lathrop and Foss (2000) went into great detail to recommend ways to combat student cheating and plagiarism in the Internet era. The strategies include use high-tech defense against high-tech cheating. Blocking, filtering, and rating systems can be used. The authors also suggested that parents needed to be alerted and helped to build their children’s ethical model. Schools needed to make strict policy to deter cheating and plagiarism.

Most studies in the literature chose high school students as the subjects of the
study. Few studies were conducted on how middle school students were using the
Internet for cheating. What are they cheating for if they cheat? What are their attitudes
toward plagiarism? How do they decide to cheat? The literature did not provide a
clear picture for younger adolescents.

Summary

Literature found the relationship between the digital age and the deterioration in
the sense of ethics among young people in terms of plagiarism and cheating. Middle
school as a very important transitional stage in people’s lives should not be ignored by
researchers. Current literature found no concentrated address to middle school
students in terms of their perceptions of digital plagiarism and cheating.

Digital Divide and the Internet

Introduction

Broadly speaking, the digital divide is related to issues of gender, race and class.
The issue of gender differences in the literature was discussed earlier in this chapter.
What about race and class? Studies showed that more and more people are gaining
access to computers and the Internet. Does that statement apply to all ethnicities and
all kinds of income groups?

Literature about Digital Divide and the Internet

Jung, Qiu, and Kim (2001) argued that digital divide did not merely refer to
ownership of Internet connections. Digital divide existed also because of the
differences in Internet-related skills. The authors contended that even those who
possessed Internet connections could be at a disadvantaged situation to gain
Internet-related skills. The authors suggested that racial, gender, or age groups might be digitally divided in that sense.

Kaiser Family Foundation (2000) released some facts about the digital divide. The fact sheets said that among children aged 2-18 from high-income families ($40,000 a year and above), 81% had computers at home, and 58% had access to the Internet. For children of the same age group from the low-income communities (less than $25,000 a year), 49% had computers at home, and 23% had access to the Internet. Kids Count (2002) reported that the access rate of children to computers and the Internet is closely related to the income of the family per year. Children from the higher income families had higher access than children from lower income families.

![Figure 2. Percent of Children with Home Computer and Home Internet Access by Family Income: 2001](image)

From “Kids Count”, 2002, p. 3.
The Corporation for Public Broadcasting (2003) reported that by the year 2002, for children ages 6-12 in the United States, 55% of Caucasians, 36% of the Hispanics, and 31% of the African-Americans used the Internet at home. For children ages 13-17, 69% of the Caucasians, 59% of the Hispanics, and 37% of the African-Americans used the Internet at home. The report also found differences of Internet access for families of different income levels. Generally speaking, higher-income families had higher rate of Internet access at home.

Global Kids (2002) did a digital divide survey from 2000 to 2002. The survey was intended to find out the Internet use by young urban minorities. The researchers chose public high schools in urban New York City as the subjects, and the schools were located in the areas of Bronx, Brooklyn, and Manhattan. In these schools 94% of students are youth of color. Most of them are Blacks and Hispanics. The survey found that 74% of the respondents reported to have computers at home, and 66% reported to have Internet access at home. The percentages were lower than that of the white youth as reported by Kids Count (2002), where 83% of non-Hispanic white children have computers at home. On the other hand, percentages of the minorities in the Global Kids survey (2002) were higher than that of the Kids Count (2002). In the Kids Count (2002), 46% of the Black children had computers at home, and 47% Hispanic children had computers at home.

The literature also reports that urban and rural schools have less access to computers and the Internet than suburban schools. Means, Penuel, and Padilla (2001) in The Connected School reported a study on urban public high schools that were
integrating computers and the Internet effectively to empower the students. In the study, the researchers did a comparison of the six urban schools with two suburban schools, and found that the suburban schools had well-to-do neighborhoods, attracted more support from the district and succeeded in passing more bond issues. The suburban schools had better infrastructure, and their teachers got more technical training. The teachers were less pressured to meet the national standards, and they had more time for engaging students in more meaningful technology use. Means et al. (2001) also reported that higher income or higher achieving schools tend to place the students in control of the computers, while the urban low-income schools tend to let the computers have control.

Greenstein (2003) contended that each user of Internet technology always has a physical location. Based on this knowledge, a study was done to examine the Internet participation in rural and urban areas. In 47 out of the 57 major urban areas studied with a population more than 1 million, 90% of the establishments participated in the Internet. On average, larger metropolitan statistical areas had higher participation rates than lower metropolitan statistical areas. In rural areas, more populated establishments enjoyed higher participation rates. The adoption rate of the Internet in the rural area was generally speaking, lower than that of the urban area.

Summary

Literature noted the existing digital divide related to Internet use, particularly digital divide among people of different socio-economic backgrounds. There was a gap about middle school students’ situations. This study tended to fill in the gap to
study the middle schools to see whether such digital divide existed, and what were the students’ interpretations of the issue.

Ohio Public Schools and the Internet Use

Introduction

There are some researchers done in Ohio about Internet use in public middle schools. Literature discussed Internet use mainly from teachers’ and administrators’ points of views. The young people’s interpretations of their online experiences at schools were not fully discussed in great details.

Researches about Ohio Public Schools

Albejadi (2000) conducted a study to examine the extent of Ohio public teachers’ use of the Internet in classroom activities; and to investigate the relationship between teachers’ attitudes toward the value of the Internet, administrative support, and time. The study investigated 149 public school teachers that varied in teaching grade level and locations throughout the State. Interviews were conducted with six classroom teachers who rarely used the Internet in teaching. The results indicated that not many teachers use the Internet in teaching/learning activities even though all public schools in the survey had an Internet connection. Findings also showed a significant relationship between the level of Internet use and the availability of Internet access in classroom, the problem of Internet access, teachers’ attitudes toward the value of the Internet for classroom activities, and teachers’ own Internet proficiency. These findings reveal that Internet utilization in schools can be improved by providing teachers with reliable Internet connection in their classrooms, time, and professional
development programs. The study was from the teachers’ perspective, and it was mostly quantitative.

Franklin (2002) and Sexton (2002) reported on Virtual Middle School Project (Phase II) that was sponsored by OhioSchooNet with support from Technology Literacy Challenge Fund. Franklin and Sexton conducted interviews with six participating middle schools in the Virtual Middle School Project. All the participating schools provided online courses for students during the summer vacations. The researchers talked mainly with teacher participants, technology coordinators, and media specialists. Franklin and Sexton reported themes including students, teachers, content, communication, assessment, graphics, digital equity, and so on. The study found that students were empowered while involved with the project, where they worked independently online and developed problem-solving skills. The researchers reported that administrative support was essential for the success of the project, and teacher training needed to be earlier and more in depth. A good curriculum framework is important. Teachers working as a team led to better implementation of technology. The study did report on students’ motivation improvement while working online. On the other hand, students’ own perspectives of their online experiences were not studied in great depth.

**Summary**

Literature examined Internet use at Ohio public schools from teachers’ perspectives. Little was discussed from students’ own point of view. This study tended to expand the current researches in Ohio to include the student’s voices into
the big picture so as to explore a thorough understanding of middle school students’ online experiences at Ohio public middle schools.

Conclusion

The literature review about middle school students’ using the Internet found that further research needs to be done to understand the differences between girls and boys in middle school concerning how they are using different features of the Internet at home and at school. Fewer studies were done to examine the middle school students in terms of ethics and safety online. Not much has been done to see what the students really need and to what extent the school can meet their needs so as to make Internet use at school more engaging.
Chapter Three: Methodology

Introduction

The purpose of this study is to investigate how middle school students are using the Internet at home and at school. The following research questions will be addressed:

1. What are the experiences of middle school youth when they access the Internet at home and at school, and what meaning do they give their online experiences?

2. Do boys and girls have different online experiences? Do they interpret these experiences differently?

In this chapter, the researcher will explain the research design that is used to collect data and analyze data so as to answer the research questions. This methodology chapter is divided into the following topics:

1. The research settings
2. About the researcher
3. Research design and theoretical framework
4. Data collection
5. Data analysis
6. Trustworthiness

The Research Settings

Based on the school categories developed by the Ohio Department of Education, three public middle schools in Ohio were selected as the settings of this
study. It must be pointed out that Ohio SchoolNet has a great impact on Ohio school districts in all levels. The three schools selected for the study are demographically different. One school is located in Southeastern Ohio, which belongs to the Appalachian area. This is a rural school of Ohio. The students in the school are predominantly Caucasians. There are few minorities in the school. The second school selected is a small town public middle school. The school is located in Eastern Ohio. The third school selected as a research site is a suburban public middle school. The school is located in the West-central Ohio, also known as Miami River Valley.

About the Researcher

I am a doctoral student of Instructional Technology at Ohio University. I first found the intriguing effects of computer and the Internet in the 1990s. The Internet just entered the life of the Chinese families. I happened to be one of the fortunate people who got access to the Internet. I found the Internet’s transforming power of widening a common person’s scope of knowledge and richness of choices. I explored the BBS of the Tsinghua University and Sichuan University and found all kinds of information about higher education in China and in the United States. I used to be an English lecturer at Southwestern University of Finance and Economics in China. During the time that I was teaching Comprehensive English and Intensive English to undergraduate and graduate students, I already found that the information that I accessed through the Internet helped me provide my students with real-context learning, which to me is extremely important for second-language learning.

I am mostly impressed by the potential educational capacity of the Internet during
my study in the United States. By educational, I mean both experiences inside and outside of the classroom. The Internet is a huge reservoir of resources, and also it is a great communication tool that can help guide my life: including my study, my marriage, my living and so on. To me, the Internet can bring a society a great many changes. It is the researchers’ responsibilities to find out what these effects are and can be. When I read the “Net Generation” described by Tapscott (1998), I felt that it will be worthwhile to understand the young people’s online experiences and get a few clues to such effects.

Since the summer of 2002, I have been working for a National Science Foundation Project, “Getting the Media Message”. In the past year, I had opportunities to visit middle schools and investigate what media environments surrounded the middle school students. Many students reported that they have Internet access at home and they are using the Internet at school. The project reported boys’ interest in games, and girls’ interests in communication. The results made me more curious about the students’ own perspectives of interpreting their own online experiences.

Research Design and Theoretical Framework

This study is designed to be a qualitative study with an interpretative phenomenological approach. Focus groups, semi-structured interviews, and observations were used to collect data. The triangulation of these three sources of data helped ensure the trustworthiness of the findings.
**Phenomenological Approach**

Phenomenology is a school of philosophy derived from German philosopher Edmund Husserl. The utmost purpose of phenomenology is to study the phenomenon of human experiences in various acts of consciousness, particularly cognitive or perceptual acts. Phenomenological approach does not seek to gain mere facts or causes of certain incidents; rather, phenomenological research is aimed at revealing how people are making sense of different incidents in their everyday life. Put in the words of Bogdan and Biklen (1998, p. 23):

> If you were interested in the dynamics of the encounter, in the behavior at accidents, in the ways people make sense of such incidents, and in the arguments they construct in explaining them, the “just the facts” approach would not be very illuminating.

Since a phenomenological researcher pursues the meaning of the phenomenon constructed by the participants during their experiences, the researcher is concerned with “the subjective aspects of people’s behavior” (Bogdan & Biklen, 1998, p. 23). As Van Manen (1990, p. 11) writes:

> Phenomenology is a *human* science (rather than a natural science) since the subject matter of phenomenological research is always the structures of meaning of the lived *human* world (in contrast, natural objects do not have experiences which are consciously and meaningfully lived through by these objects).

One remarkable feature of phenomenological approach is intersubjectivity:
“Subject and object are integrated—what I see is interwoven with how I see it, with whom I see it, and with whom I am. My perception, the thing I perceive, and the experience or act interrelate to make the objective subjective and the subjective objective.” (Moustakas, 1994, p. 59) This study of the middle school students will examine with whom they are together online and how their relations with their peers online affect their meaning-construction.

Phenomenology and ethnography are similar in many ways. Both approaches adopt qualitative methods to gain the perspectives of the participants. Denzin and Lincoln (1998, p. 64) clarified the differences between these two approaches:

If the research question concerns the meaning of a phenomenon, then the method that would best answer the question is phenomenology. If the question concerns the nature of that phenomenon, then the answer is best obtained using ethnography.

The research question of this study is about the meaning of the Internet experiences to the middle school students. Based on Denzin and Lincoln’s definition, the study is a phenomenological approach. The specific questions will include: What do middle school student often do online? What does the Internet mean to middle school students? Does it mean easy papers? Why? Does it mean having more fun playing games? Do the young people like those games because they make killing look exciting? Or does the Internet mean more fun because the girls can get all sorts of goods to smooth their face, thin their waist, and dye their hair in different colors? All in all, the study is trying to form a picture of the subjective world of the middle school
students in terms of their consciousness of their Internet experiences. The goal of the study therefore justifies the phenomenological approach.

The Internet exists together with computers and computing itself is suitable to approach through phenomenology, because it is also part of human experiences:

Computing or intelligence in its deepest sense is derivation of subject and object from intersubjectivity. Intelligence or computing cannot be a purely externalized process that researchers can incarnate from existential and social involvement and delegate to a machine. The computing object is an object for involved individuals, never a cold machine that can duplicate our intelligence. In other words, intelligence or computing is ours, and not only the external, incarnate process. (Kazanjian, 1998, p. 74)

The Role of the Researcher

A phenomenological researcher’s goal is to gain other peoples’ perspectives and understandings of certain phenomenon. And yet the researcher is a human being with his/her own consciousness, including biases. The researcher needs to start from his/own perspectives, and then try to immerse herself into the world of the subjects of the study. Hammersley and Atkinson (1995, p.9-10) describe the researcher that is familiar with the social setting: “even where he or she is researching a familiar group or setting, the participant observer is required to treat this as ‘anthropologically strange’, in an effort to make explicit the presuppositions he or she takes for granted as a culture member.” As a researcher, I have become familiar with the middle school setting because I have visited several middle school research sites where I am
working for the National Science Foundation Project, Getting the Media Message. Despite the work experience, I am an international student of Ohio University, and that makes me still “anthropologically strange.” As a researcher, I will be considered an outsider. I recognize that I need to look at the case from my own perspectives to interpret what I saw.

**Data Collection**

Multiple qualitative methods were adopted to gather data from middle school students, their teachers and media specialists/librarians, and also their parents. Focus groups, semi-structured interviews, and observations were the major methods used in the study.

**Focus Group**

The study used the method of focus group to collect qualitative data. Focus group is a kind of group interviewing where people share ideas in a comfortable environment. The researcher decided to use focus groups to understand the habits and patterns of middle school students’ using the Internet. The study involves the categories of gender: girls versus boys. It was beneficial for both categories of middle school students to share ideas of how they are using the Internet and get better understanding of the issues of ethics, safety, and meaningful use of the Internet. The researcher was able to listen to the peer groups and get the first-hand information about how the middle school students are using the Internet and understand how the boys and girls are experiencing the Internet use and constructing meanings out of it.
What is a focus group?

Krueger and Casey (2000) define the term that:

A focus group is a special type of group in terms of purpose, size, composition, and procedures. The purpose of a focus group is to listen and gather information. It is a way to better understand how people feel or think about an issue, product, or service. Participants are selected because they have certain characteristics in common that relate to the topic of the focus group. (p. 4)

Greenbaum (1998, p. 2) acknowledged three different types of focus groups: a full group that involves 8 to 10 participants, a minigroup that contains 4 to 6 persons, and a telephone group where individuals participate in a telephone conference call. All these three focus groups share some common characteristics. The first common feature is that there is a moderator to conduct and stimulate the group discussion. The second feature is that “a reasonably homogeneous group of participants is selected, based on specific criteria” (p.2). The third common characteristic is that all the groups are audiotaped to keep a record.

The focus groups this study used shared one clear topic: the Internet use by middle school students. The subtopics include safety, ethics, digital divide, meaningful use for education, and so on. The participants were reasonably homogeneous because the students were all middle school students, and they belonged to the same age group. The groups were formed according to gender, too. Girls and boys were invited to participate in different focus groups. All the focus group interviews were audiotaped and summarized to keep records as sources of data.
Why use focus group interviews?

Krueger and Casey (2000) listed the following conditions suitable for focus group interviews:

1. You are looking for the range of ideas or feelings about a certain thing.
2. You are trying to understand different perspectives between groups or categories of people.
3. You are trying to uncover factors that influence opinions, behaviors, or motivations.
4. You know ideas will emerge from a group, not from one individual.
5. You want to test ideas, materials, plans, or policies.
6. You need information to design a large scale quantitative study.
7. You need information to help interpret the quantitative data already collected.
8. The intended audience places high value on capturing the comments or language used by the target audience. (p. 24)

The conditions 1, 2, 3 and 4 are applicable for this study. The purpose of the study includes understanding how the middle school students are feeling about their Internet use: are they frustrated with the Internet use in the school? Do they feel it OK to cheat or plagiarize digitally through the Internet?

Another purpose of the study is to understand the patterns using the Internet by the middle school boys versus that of the girls. The researcher wants to know feelings from both of these categories of people: boys and girls.
Besides, the purpose of the study is to understand the middle school students in
general, and as a result, individual interviewing cannot reveal layers of opinions and
diversity in views. Focus groups can help solve such a problem. By putting several
boys or girls together, and let them interact with each other, a synergy can be formed.
Individual interviews can not sum up to form such synergy.

Greenbaum (1998, p. 9-13) listed nine appropriate uses of focus group research:

1. New product development studies.
2. Positioning studies.
3. Habits and usage studies.
4. Packaging assessment.
5. Attitude studies.
6. Advertising/Copy evaluations.
7. Promotion evaluations.
8. Idea generation.
9. Employee attitude and motivation studies.

Though Greenbaum was talking in terms of business research and consumer
behaviors, some of the categories can be applied to general social studies. This study
of middle school students’ using the Internet is a study of habits and usage. The
Internet here is not studied as a new product, and instead, it is studied as an
educational tool for educational purposes. This study also intends to generate ideas
from the young. As users of the Internet for education, the middle school students
have problems or unfulfilled needs while using the Internet. Focus group interviews can be structured in such way to elicit their discussions about these problems and unfulfilled needs.

*The size of focus groups.*

According to Krueger and Casey (2000), the traditional size of a focus group is ten to twelve people. And for a focus group for noncommercial topics, the ideal size is six to eight people (Krueger & Casey, 2000, p. 73). The authors suggested that a focus group with more than 10 people is hard to control and would limit people’s opportunity to share ideas.

Greenbaum (1998, p.2) mentioned two different sizes of focus groups: 8 to 10 people in a full group and 4 to 6 in a minigroup. Greenbaum suggested that to get more in-depth information, a small group is ideal. According to Greenbaum (1998, p. 3), a focus group session usually lasts for 100 minutes, and for a smaller group, each participants can have more time to talk and interact, and the researcher can get more information from each participant. Since the number focus groups of the study is big, and the participants are children whose concentration spans are short, the researcher decides on a 60 minute session for each focus group.

This study of the middle school students aims to get in-depth information about how young people are using the Internet, and a smaller size is suitable for the topic and purpose of the study. The researcher decides that minigroups were used for the focus group interviews. Each focus group was made up of 6 students.
The number of focus groups.

Krueger and Casey (2000, p. 26) recommended that for one type of participant the researcher needs to plan three or four focus groups. There are mainly two types of participants in this study: girls and boys. It follows that the suitable number of focus groups will be six to eight focus groups for the whole study. Krueger and Casey also recommended that the consistency of a group is very important, therefore, focus groups with single sex will have better effects than those with mixed sexes, because with single sex group, students are more likely to be open on their views of the other sex, and they are more likely to report their experiences faithfully without distortion.

The number of focus groups will also be determined by saturation. According to Krueger and Casey (2000, p. 26), saturation is the point when the researcher has heard the range of ideas and is not getting new information. In this study, when six or eight focus groups are done, the researcher needs to determine whether the study has already reached to the saturation point. If not, more focus groups will be used to gain more ideas or information.

Selecting participants.

According to Krueger and Casey (2000, p. 79), the researcher needs to set “screens” to select the participants. The screens, the authors explained, are the characteristics of the participants of the focus group. The screens in this study for a girl’s focus group will be a girl (screen one) of grade six to eight (screen two) in an Ohio public middle school (screen three) who has Internet access at home and at school (screen four) and uses the Internet quite often (screen five). The screens for a
boy’s focus group will also the same screens except that the first screen will be “a boy.” These screens will ensure the homogeneity of the focus group so that the participants share common characteristics.

Elimination is needed because certain people will be unlikely to contribute meaningfully to the focus group discussion (Greenbaum, 1998, p. 47). According to Greenbaum (1998, p. 47), the following factors can be considered for elimination:

1. Attitude problems toward the group or the topic
2. Excessive shyness
3. Language problems
4. Hearing problems
5. Extremely poor eyesight

The study is not focused on people with disability, and language and clear responses are needed. Consequently, the factors suggested by Greenbaum (1998) will be considered to eliminate certain students. To make the elimination decision, the researcher discussed with the teacher who knows the students well.

To encourage the participants, the researcher attended the focus group as a listener, and kept personal contacts with the participants, and sent personal follow-up letters to the participants, and left contact information for them in case they have more information to tell.

*The moderator*

A student of Ohio University who knows the k-12 education was invited to be a moderator of the focus groups. The researcher developed a moderator guide
(Appendix A) for the moderator to use in the focus group interview. As recommended by Greenbaum (1998, p. 37), the moderator guide will include an introduction, a warm-up part that get the middle school students into the general issues of the Internet use, a detail section about what information the focus group is intended to find, a key content section where inputs from the participants are needed for the topic, and a summary that concludes the guide.

Before the focus group interviewing, the researcher contacted the moderator and discussed the purpose of the study and the agenda of the focus group interviews. At times when necessary, the researcher worked with the moderator together to be two moderators in the group. Krueger and Casey (2000) describe the possibility of two moderators. When each person represents a different expertise, there can be two moderators in a focus group.

The moderator will be the one who initiates discussion and guides the direction of discussion. A moderator is not the one who talks from the beginning to the end, but the one who can stimulate the participants to share ideas, and also elicit inputs that are related to the topic.

Greenbaum (1998, p. 51) suggests that the moderator stay at the facility for 15 to 20 minutes after the last focus group session is over. Some participants may come up and express their overall feelings about the session and such information is good data and will add meaningful perspectives to the focus group. The moderator in this study will follow this suggestion.
The facility.

One teacher from each school who participated in the project took care of the rooms that were used for the focus groups. The researcher made sure that food be provided for the discussion sessions. The researcher cooperated with the teacher in the management of the room and the food.

Roles of the researcher.

The researcher was an attendant of the focus groups and a listener. At times the researcher was a moderator when needed. The researcher developed a moderator guide for the moderator. The researcher worked with the participant teacher and the moderator to locate dates, places, and time of the focus groups. The researcher recorded the focus group on audiotapes. The researcher developed abridged transcripts for the interviews based on the tapes.

The reason of using audio taping instead of video taping lies in the fact that middle school students may feel embarrassed before cameras. If videotaped, the students can be too much aware of their appearances and their exact wordings, and it is difficult to get their natural articulation of their experiences online. By using audio tape-recorder, the students will soon forget about its existence and will talk more freely than before a video camera. In order to get everyone’s voice clear, more than one microphone was used so that voices of all the participants of the focus groups could be taped and recognized for transcription. Also each focus group was kept in a small size so that less embarrassment can be ensured, and more detailed descriptions of the students could be heard.
Pilot study.

In order to make sure of the orientations of the focus groups, the researcher planned to do a pilot study in a middle school. Since the research is an open-ended research, and the two research questions may elicit a set of sub-questions. The researcher decided to use a pilot study to see interesting themes emerging and that helped adjust the design of the study.

Six boys and six girls were asked to participate in two sessions of focus groups respectively. Each session will last for about one hour. The sessions were audiotaped and transcribed right after the study.

Data analysis was done concurrently with the focus group sessions and the transcription. The results helped the researcher find relevant themes and adjust interview questions for further studies.

Interviewing

Interviews were adopted to gain certain perspectives from the teachers, media specialists/librarians and parents about the topic of middle school students’ using the Internet. According to Punch (1998), there are basically two types of interviews, structured and unstructured. Rubin and Rubin (1995) on the other hand, justify the use of semi-structured interviews in qualitative research, particularly when the study is under the influence of a theory. In this study, constructivism serves as a framework and there are several important issues at hand before entering the interviews, and the interviews are intended to find out what are going on with the young people and the Internet. Therefore, the interviews had structures around the issue of gender.
differences, school-home gap, ethics, safety, digital divide, and so on. At the same
time, the interviews need to be open to unexpected events because the experiences of
each student are different and the interviews were conducted to find out as much as
possible the construction and reconstruction of meanings of the students. The
interviews were therefore semi-structured in nature.

Once the type of interviewing is determined, practical aspects of the interviews
need to be discussed. Punch (1998) clarifies three aspects: interview respondents,
managing the interview, and recording. For interview respondents, Punch (1998,
p.180) calls attention to some major issues:

- Who will be interviewed and why?
- How many will be interviewed, and how many times will each person
  be interviewed?
- When and for how long will each respondent be interviewed?
- Where will each respondent be interviewed?
- How will access to the interview situation be organized.

Punch (1998) states that the researchers needs to do certain investigation in order
to find the suitable informants that are familiar of the issues under study. The media
specialists/librarians are familiar with how middle school students are using the
Internet at the school and they are good informants from their point of view, and some
teachers may be using the Internet frequently with the students at the school. The
participants included media specialists/librarians from the three middle schools and
three teachers who were familiar with students’ online experiences at school. The
researcher contacted the principals of the schools and asked for their recommendations for teachers. Parents were interviewed. It is necessary to interview parents because they observe their children’s online experiences and have the knowledge to the middle school students’ perspectives. Six parent participants whose children are different in gender were interviewed.

Rubin and Rubin (1995) suggest that the setting for the interviewee should be relaxing, and the recorders present in between will increase nervousness. Also the surrounding should be quiet without noises, because the recording needs a quiet background to ensure quality. The researcher, with the help of the teachers, found such a room to conduct the interviews.

For the issue of how to manage the interviews, Punch (1998, p.180-181) provides a checklist of five headings:

- Preparation for the interview-the interview schedule;
- Beginning the interview-establishing rapport;
- Communication and listening skills;
- Asking questions-the sequence and types of questions;
- Closing the interview.

For the semi-structured interviews, the interview schedule includes the preparation of a set of protocol questions for the interviewer to enter the interview. According to Rubin and Rubin (1995), a protocol will ensure the direction of the conversation to be relevant to the issues concerned. The researcher needs a certain control of the interview and yet at the same time should know not to control too much.
The protocol questions are there, but the researcher should be flexible so as to leave the questions open-ended for the interviewee to talk about their experiences in depth. A set of protocol questions is designed for middle school teachers (Appendix B), media specialists or librarians (Appendix C), and parents (Appendix D), respectively. The protocol was adjusted along with the observation and the first several interviews. Relevant questions were emphasized and added. Irrelevant ones were reduced. The original general protocol questions are attached at the end of the paper.

To start the interview, the interviewer should know to establish rapport. The researcher should notify the interviewee the purpose of the study and be open about the use of the interview later in your report. The researcher should learn to share his or her experiences so as to stimulate the atmosphere of conversation. The interviewees would open their heart to talk about their own experience (Rubin & Rubin, 1995).

Communication and listening skills are crucial for the success of an interview. The interviewer needs to listen for data (Rubin & Rubin, 1995). When the interviewer talks about the experience, the interviewer should be sensitive to the information that is related to the understanding of the issue under research. One important skill is to find controversies in the talking and ask follow-up questions to clarify the real meaning and it is usually rewarding to solve the controversy. Another skill is to sense what is missing in the interviewer’s account and ask probing questions to get data. The communication skill also includes the skill not to hurt the feelings of the interviewee and not to endanger the situations of the interviewee in any way.

Language is essential for the interviews because the data is all in words.
Rubin and Rubin (1995) suggest that the closing of the interview should not be a sudden stop. The researcher has just established a relationship with the interviewee and has talked bosom to bosom with the interviewee. The researcher should not make the interviewer feel being used. Instead, the interviewer made schedules for future contact and asked follow-up questions. The strategy is that the researcher should keep on the relationship because it is precious for the researcher and the interviewee.

The interviews were recorded by a tape recorder. The researcher was the interviewer and a transcriber was hired to transcribe the audiotapes. The transcripts and the audiotapes were kept in the researcher’s home and were not available to people other than the researcher and the transcriber.

Participant Observation

Participant observation was used because it is central to qualitative data collection (Punch, 1998). The core of phenomenology is to understand the meaning of actions and events. There are complex meaning systems and people in each society are using the meaning system to adjust their behaviors. Participant observation can help interpret the construction and reconstruction of such meaning systems and the behaviors of people. Schools are mini-societies. Participant observation can help to immerse the researcher in the real life of the social setting so as to learn and understand people’s habits and also decipher the social structure that binds the people together (Punch, p.188).

One important issue of participant observation is how distant the researcher should be. Based on the extent to which the observer intrudes into the natural setting
during data collection, the observer can be a complete participant, a complete outsider, and a partial participant (Denzin & Lincoln, 1994). In order not to obstruct the natural setting too much, the researcher decided to be a partial participant. The researcher took part in some of the events of the middle school such as using the computers at the media center, attended classes using the Internet, and helped conduct discussions with the students.

When observing, the researcher should “take the role of the other, to go ‘native’, to obtain the insider’s perspectives by becoming part of the natural setting” (Punch, 1998). However, the researcher should also keep a distance from the setting from time to time so as to reflect on it and interpret the experience from the researcher’s point of view (Denzin & Lincoln, 1994). The strategies of this study focused on the writing of field notes to note down the natural setting as detailed as possible so that the students’ perspectives could preserve for reference, and at the same time, the researcher wrote reflections as an outsider to clear the thoughts and interpret events from a researcher’s points of view.

Ethical issues are also important in observation. Before observation, the observer introduced the purpose of the study and told them frankly what the study is about. The observer also asked for permission to use the conversations. In this study, the researcher got permissions from the students, their teachers and their parents (Appendix E and Appendix F).

Like the interviewing, the entrée and the retreat should be gradual and the contacts with the people under observation should be kept even after the research is
done. The field notes should also be confirmed by the people to make sure that the presentation is closest to the meaning of the people being observed (Denzin & Lincoln, 1994).

**Triangulation of Data**

Besides the data obtained through interviewing and observation, other data formats were used to increase the validity of the study. These formats include fieldnotes and transcripts of the tapes of the interviews and focus groups.

Apart from documentary data, pictures and videos were be used to record the events going on in the school. Artifacts made by the students for the project were collected for evidence.

Triangulation is important for phenomenological approach because “phenomenology is concerned with wholeness, with examining entities from many sides, angels, and perspectives until a unified vision of the essences of a phenomenon or experience is achieved” (Moustakas, 1994, p. 58).

**Data Analysis**

**Qualitative Data Analysis**

What is data analysis? Yin (1984, p. 99) defined the term data analysis: “Data analysis consists of examining, categorizing, tabulating, or otherwise recombining the evidence, to address the initial propositions of a study”.

Bogdan and Biklen (1998) defined qualitative data analysis in detail:

Data analysis is the process of systematically searching and arranging the interview transcripts, fieldnotes, and other materials that you accumulate to
increase your own understanding of them and to enable you to present what you have discovered to others. Analysis involves working with data, organizing them, breaking them into meaningful units, synthesizing them, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others. (p. 157)

Bogdan and Biklen (1998) suggested the researcher do analysis in the field and outside the field. The researcher usually enters the field with several general questions. Bogdan and Biklen suggest that shortly after the entrée into the field, the researcher needs to assess the set of questions and try to find out which questions are more relevant than the others, and reformulate the direction of the work. Such reformulation is in fact going on throughout the field study. Data analysis of this study followed this style of examining relevance and reformulating directions of study every two weeks. The analysis of the field notes and the interview transcripts began right after the data collection to see which chunks of ideas are more obvious than others, so as to adjust the protocol questions and conversation topics along with the analysis.

Qualitative data analysis begins with coding (Punch, 1998; Rubin & Rubin, 1995). Coding is to put tags, names or labels against pieces of the data collected. The coding is more based on data. Codes in this study may included: games, cheating, safety, plagiarism, digital divide, sports, hobbies, homework, etc. In this study, the researcher started from familiarization with the data collected, and then grouped and listed data through codes with the help of the qualitative coding software.

The next step is to eliminate constituents by asking if the constituent is needed:
1. Does it contain a piece of experience that is sufficient for understanding it?

2. Is it possible to label it, without ruining the formulation presented by the participant?

The next step is synthesizing. After the coding, the data with the same codes will be put together to get a bigger picture of the theme.

The last step of data analysis is to prepare the themes for the final report. The researcher has to know the goal of the analysis and locate the findings and implications of the study. The goal of data analysis is to find themes to explain the research arena and to put together to present to the reader in an understandable way. The pieces of data should be able to tie together. To find the implications, the researcher needs to see why the work is important, and what are the findings of this study different from that of other researchers? Can the findings suggest new theory or solve a social problem? The researcher in this study followed the above coding process and found first-order themes that emerged from the study and then did interconnections among these themes and found out more general themes, or second order themes for the whole study.

**Trustworthiness**

The trustworthiness of a qualitative study includes the issue of credibility, validity, and transparency (Rubin & Rubin, 1995). To increase credibility, member checking and peer-debriefing can be used. Member checking in this study is a process that asks the participants of the interviews and observation to verify the correctness of the transcripts and field notes. In this study, the researcher contacted teacher participants
and parents and asked for their feedback about the fieldnotes and the understanding of the interviews.

Validity can be ensured by multiple sources of data formats, data collection methods or multiple researchers. In this study, multiple sources of data were used. Interview transcripts, field notes, documentations, videos, pictures and artifacts are used to increase the validity. Multiple research methods were also used. Group interviewing, individual interviewing, and observations were used to collect data. In order to increase the validity, the methods and framing of the study was checked by professors and peer PhD candidates of instructional technology at the same university.
Chapter Four: Findings

As indicated earlier, today’s young people are growing up digital. Children are using computers and the Internet as part of their lives. How are young people, particularly middle school students, using the Internet at home and at school? Are there any gender differences in terms of their Internet use? How do middle schools students interpret their online experiences at home and at school? The researcher visited three schools of the state of Ohio (School N, School G, and School L) and conducted six focus groups of boys and girls who were in grades 6 through 8. The researcher also interviewed teachers, principals, media specialists, and parents in these schools to look for answers for the research questions, so as to understand the phenomenon of young people’s Internet use through multiple perspectives. Apart from the focus groups and semi-structured in-depth interviews, the researcher also observed the students’ Internet use at school by attending their classes and observing their media center applications. The researcher also went to the websites the students talked about and visited the websites of the three schools to get information about the students’ Internet use environment. Data collected were categorized and the following themes emerged from the data analysis: young people are Internet Savvy at home, and their Internet use at school is limited. There is not much difference between the boys and girls in terms of their Internet experiences. Schools are better equipped in terms of technology, but digital divide still exists among regions and families of different backgrounds. Schools are still catching up with the savvy-ness of the young people. Some teachers are practicing using the Internet to promote active learning, but the
number of teachers who are doing so is still small in scale. Because of the savvy-ness of the young students, young people need protection in terms of online safety and privacy. Another important theme is that digital technology facilitates students’ learning, but at the same time makes plagiarism easy.

The research found that students were using the Internet at home in versatile ways, whereas their ways of using the Internet at school were comparatively limited to doing research. There were leading teachers who were practicing ways of using the Internet to engage students’ learning, and yet many teachers still found it difficult to transform their philosophy of teaching to integrate the new technology. Only slight gender differences were reported, where girls tended to be more social in using the Internet, while boys tended to engage in searching for their hobbies or playing games online. Both boys and girls loved games, but boys tended to play more violent games than girls. Young people were already at ease with using the Internet, and the Internet was reported to be a natural part of their lives. The middle school students of the schools the researcher visited reported that they loved the Internet as a tool for their research. Most expressed their preference of the Internet to printed resources, with only a few saying that they loved both. However, how to search online is still a big problem for the students. The students were reported to have trouble narrowing down topics, or differentiating valuable information from trashy information. More and more students were having computers and the Internet access at home, but there were still families who did not have Internet access. Rural area students tended to know fewer ways of using the Internet than students of the suburban area. Students reported
that sometimes they used the Internet on their own in their own room without being watched. Parents reported caring about their children’s safe use of the Internet, and many of them had rules for their children. Yet parents also reported having no idea what their children were doing online. Some of them did not know what good rules or strategies they could employ to keep their children safe. Most students knew the dangers of the Internet, and yet some of them still reported crossing the line for fun occasionally. A couple of the students reported flaming people by sending inappropriate emails to people they did not like. Students showed some knowledge of what plagiarism is. Their teachers reported that the school was trying to teach their students to avoid plagiarism, but some students still missed the point. A couple of students reported that they tried once or twice to copy other people’s work and submit it as their own. The students at the focus groups also reported that they knew some peer students who plagiarized. Teachers also reported that they found cases of plagiarism from time to time.

Settings

School N

School N is located in a suburb of Dayton, and is one of the top schools in the district, particularly in terms of good test scores and attendance. It is a public school that enrolls 6th grade students. The surrounding elementary schools (at least five such schools) are the sources of the enrollment. The school has about 500 students, among which about 50% of the students receive free or reduced-price lunches.

As described by the teachers that the researcher interviewed, the neighborhood is
a mix of white collars and blue collars. A few, but not many families have lawyers or
doctors, but there are quite a number of nurses and educators. There are also families
who are engaged in manufacturing. As one teacher explained, the neighborhood used
to be a place of manufacturing, and now it is more wide-ranged.

The ethnicity of the school is not very diverse. Students are primarily white, but
the school does have 3% African-Americans, 1% Hispanics, 3% Asians, and a very
small figure of Native Americans (less than 1%). In the focus groups at the school, the
researcher talked with a couple of Hispanic and Asian students and they were active
participants in the focus groups.

Like all other middle schools in the school district, including 6th, 7th, and 8th grade
levels, school N has all its classrooms equipped with computers. Each classroom has
about four networked personal computers. There is a lab at the media center, where
the library is, which has about 30 workstations with Macintosh computers. This is the
only lab for the whole building. Teachers can schedule to bring a class to the lab. If
students are working on a project, they are also allowed to use the computers on their
own with special permission.

The school was suffering from budget cuts at the time of my visit. The
employment was not terribly affected because some employees retired. The school
district paid attention to the educational technology of the middle schools, and yet
there is not enough funding to expand technology use. Principals and teachers are
concerned about meeting the technology standards set by the state of Ohio, and they
integrated technology into their curriculum. In fact, students have been learning
computer skills since 5th grade, when they learned keyboarding and other skills.

School G

School G is a public school located in a rural area at the foot of the Appalachian hills. The school has grades 6 through 12. About 13% of the students receive free or reduced-price lunches. The students of the school are primarily white students, which comprise 94% of the student population, but there are a number of African-Americans in the school, too. The percentage of these students is 5%, which is comparatively speaking, higher than most of the surrounding schools of the area. However, there are few students from other ethnic backgrounds. Students of Native American, Asian, or Hispanic origins are small in number, each consisting less than 1% of the total student population of the school.

This school has two buildings connected together, with one newer than the other. Upon the researcher’s visit to the school, the hallway of the buildings was decorated by trophies the school won from sports and academic programs. The school has a very strong sports team. It has won a great many trophies for its sports achievement, quite a number of them from football matches with other schools. The faculty and staff are very proud of their achievement.

There are two major labs in the school, which are located at the media center area. Each of the labs has about 30 computers for faculty and students to come and use for class. The library/media center also provides laptops. There is a cart that contains 15 laptops. Teachers can borrow the laptops for their personal use or for class. Students, when permitted through a certain procedure, can also use the laptops. They can carry
the laptops to their classroom to use. The laptops can access the Internet through a wireless hub. For each classroom, the teacher has at least one to four computers in the classroom. Students needed to work in pairs or groups to finish their research work if they use the computers in the classroom. As the teacher explained, the students were very good at working in turns, and most of the time, the computers were enough for classroom use. If the teachers needed to have more computers, they could either borrow the laptops or schedule one of the labs for his or her class.

School L

School L is a public school located in a small town, whose students are from both the town and from the rural area around the town. The school has about 1000 students, all from 6th to 8th grade. About 34% of the students receive free or reduced-price lunches, and the school is almost all white, with few Native American, African-American, or Hispanic students. Students who are white comprise 99% of the student population.

Since the state of Ohio tests students of grades 4, 6, and 9 using state proficiency tests, the 6th graders of the School L were concentrating on proficiency tests. At the time of my visit, the students just finished their proficiency tests, and some students were having make-up tests that day. The Media Center was not so busy any more, but was still fully used at the time by students and teachers.

There are about five labs in this school. There is one lab that is particularly set for the Computer Literacy class. Each student of the school is required to take a semester of Computer Literacy class before they leave the school. A certificated
teacher is teaching the class. At-your-own-pace Keyboarding is the main content, and
the teacher also teaches Internet search methods, occasionally cooperating with the
math teacher or other teachers on joint projects.

The other four labs are available for teachers to use. As explained by the media
specialist, two labs are primarily for the sixth graders to practice their various levels
of reading and math. She described them as doing “drill and kill.” The students go
there everyday to use the software to prepare for their proficiency tests. The principal
also told the researcher that last year (year 2003), 4th graders and 6th graders did not
do terribly well on the proficiency tests, and he expected that this year (year 2004) the
school had done a much better job.

There is only one lab that is completely for the 7th and 8th graders to use. Teachers
of these grades can also schedule the two labs for proficiency testing at a later hour of
the day. However, mostly they schedule the lab that is supposed to be for them to use.
Besides the lab, there are three sets of laptops on carts, with 15 laptops on each cart.
These laptops are also equipped with wireless Internet. The morning when the
researcher visited the school, she happened to get a chance to see how the 7th graders
use the wireless laptops to do research for their reading/literature class. Besides the
labs and laptops, every teacher has a computer on his/her desk.

The principal of the school was pleased with their technology plans and
technology status quo. The school has received enough funding in recent years to get
enough computers and technology support. The funding comes partly from grants,
and partly from federal support. “Raising the Bar” is one of the grants that this middle
school got to start a real computer boom. The district technology coordinator has been working hard to promote the integration of technology into the curriculum of the whole district. With his assistance, the school is acquiring more technology. The media center owns a digital camera which can be used for both still images and video clips. The technology coordinator was also working on a program with a few leading teachers at the middle school to pilot projection units that the school district would like to use next academic year at the new high school buildings.

The principal also explained that their school is the only school of the district that required the teachers to post their lesson plans on the school website. It turned out that the parents welcomed such a change, because they could go on the school site and search for a certain teacher’s class schedule and assignments. If their child misses a class, it is much easier for them to know how to catch up. The online lesson plans also make it easier for the parents and students to see where the students are in terms of their performance in a particular class. The researcher went on the school website, and found that the site contains all kinds of information. One particular section is for the teacher’s lesson plans. The researcher typed in a teacher’s name, and the search brought out the lesson plans of this teacher’s class. There is a whole section about how to do an Internet search. There are also links to SchoolNet, InfoOhio, and so on, where the teachers can find more information about using the Internet for their classroom instruction.

*Savvy at Home*

Students of the three schools talked about their using the Internet at home. The
students reported multiple ways of using the Internet at home. They expressed their comfort with using the Internet and their love for using the Internet for both academic purposes and for entertainment.

1. *Instant Messaging*

Students of three schools reported that they used AOL or MSN Instant Messenger to chat with friends or family members. A few students, both boys and girls, used ICQ for chatting. Girls talked about chatting in more detail than boys. Teachers, parents, and boys also reported that the girls loved chatting more than the boys did.

Students also reported that they used IM to get help for their studies. Boys and girls both reported that they would use Instant Messenger to ask questions for their homework, and for their general studies. Girls at School N talked about how they used Instant Messenger for that purpose:

*S4:* *When I do my homework sometimes, I just go to AOL and ask sometimes.*

*S5:* *It’s like on IM, you can type in “Help,” a person will talk to you (about) things, how to find things.*

The boys and girls at the focus groups showed awareness of protecting themselves on Instant Messenger. They knew that strangers could somehow get their addresses and send messages to them, but they knew how to block these people, and how to ignore them.

Girls from School L talked about authorization:

*Student 2:* *You have a lot of people to deal with. You just hit “search, ” and you look up people. Just type in their name and it will search on...*
Student 4: Automatically.

Student 2: And you can choose. One year starting up as a program, you can choose whether you want anyone to be able to add you, or you can have them authorize you. You have to, you have to get them to be OK to add you to their Web.

Girls from School G talked about the ignore list:

S1: I will just go ahead and ignore them.

S2: Yeah, I did that, too.

S3: We have an option that we can put them on an ignore list so that they cannot keeping contacting us.

Boys of School N talked about blocking strangers in Instant Messenger:

S6: some people like search for you. They can search on AOL Instant Messenger. They can type in your first name or something, they can search for people with a name like Andy or something. Then they can find your address and they instant message you.

S2: You can always find a way to block him. Like you go on the Internet and find out his ID, and you can block him, and he should not be able to talk with you again.

S5: When they talk to you, if you want to shut their mouth, you can email them something, just to shock them. Not to kill them, but just enough to shock them.

(laugh)

S6: If somebody put up a different surname and IM you again, you already
blocked him. There’s also IP address, you can block their IP, so they can’t get on 
AOL from that computer. That will be very handy.

2. Search Engines

Students reported that they use search engines very often. The search engines they 
reported using include Google, Yahoo, and ask.com, with Google most frequently 
mentioned. They reported that they used search engines to find information for 
homework or for personal interests such as sports, cars, movies, and so on. Students 
reported that they loved searching for information. They told me how amazing it was 
to type in something and then got a wealth of information about the topic. A girl at 
School N commented:

Student 2: It’s amazing what all you can have to look up on the Internet. You can 
think of something, just randomly, and think opposite, if you don’t have it on the 
Internet, you go search it with another word. Pretty much everything. Like people.

Yet the students also mentioned the difficulty they sometimes encountered in 
terms of using search engines, because they could not find the exact information when 
it came to a specific research topic. Despite the fact of overwhelming information 
they sometimes got, they generally reported that they loved searching online.

3. Games

Both boys and girls reported that they loved to play games online when time 
permitted. They reported that they played games such as sports games, mind games, 
puzzles, language games, and shooting games. Girls reported that the boys seemed to 
play more violent games involving guns and shooting.
4. **Music**

Students also reported that they would go online to search for music and download the music to play some other time. They would either search for songs through search engines, or simply go to the band sites to get music. Both boys and girls talked about listening to music online.

5. **News**

Students reported that they would go online to read news to see what was going on in the country or in the world. They loved to check the news online because it is fast and up-to-date. One site they mentioned is CNN.com. They did not limit themselves to CNN though. One girl from School G talked about viewing news:

    S2: You can actually get on like world news. My parents are actually from Europe, so they need to know what is going on there, and it won’t show on American news, so they usually go on the Internet and you can get the newspapers everyday.

6. **TV Schedules**

Students reported that they would go online to check TV schedules on certain channels. They would go to the sites of these channels to check what would be on for that month, and then find their favorite programs to watch according to the schedules.

7. **Weather Forecasting**

Students also reported that they would go to the Web to look up weather forecasts or weather reports. This was reported to be a daily habit.

8. **Theatre and Movies**

Students reported that they would go online to find out the movie theatre
schedules as well as read reviews, and if there were movie trailers available for the
newest movies, they would click to watch them online.

9. Online Shopping

Students from all three schools reported that they went to sites such as
ariparsel.com, eBay, ware.com, and sites of department stores to buy things of all
kinds, including shoes, T-shirts, and so on. Girls seemed to be more interested in
shopping online than the boys, because they talked about shopping in more detail.
Boys talked about going to eBay or department stores to buy shoes or computer parts.
Girls mentioned going shopping online for clothes, daily necessities, and also window
shopping.

Girls at School G talked about their online shopping experiences:

S2: I will go to get clothes, and something, from the store websites.

A: Do you go shopping online? You all do?

S1: I do.

S3: I do.

S5: ‘cause you can see the malls on the Internet that you can’t really go. You just
go to the Internet and shop.

S2: Sometimes you go to a store, they don’t have certain clothes any more, so they
just have it on the Internet. You can go to the Internet and you can buy from there.

A: How do you do your shopping? Using your parents’ card?

S2, 3, 4: yes.

S4: I will search the site and let my mom type in the credit card information. I will
find stuff, and my mom will take care of the rest of it. You know.

The girls at School L said that they would go online and purchase things. And they loved doing it:

_Student 2_: ware.com.

_A_: Ware.com?

_Student 2_: Yeah. It’s like a ware or something.

_A_: Oh, ware.

_Student 5_: It’s having these things for you to buy, this or that.

_A_: What are really on there, then? Any details?

_Student 5_: Just some goods.

_Student 5_: Yeah. All kinds of daily stuff.

_B_: You will do the purchase? Are you prepared for this?

_Student 2_: Yeah.

_Student 4_: I don’t hesitate to get more.

_Student 5_: I am all ready. (Laughter.)

Girls at School N also talked about shopping online at sites such as airparsel.com, where they could get good deals during the Christmas season.

Some of the girls also reported that they sometimes went online simply for window shopping. The girls at School L talked about going to car sites for window shopping:

_Student 2_: I go like I don’t trade on dot coms. I just look for cars. I’ll find a car that I like and I’ll go to use it to try Dad. I’ll go like, “You’ll have to buy me this one.”
A: It’s still too early?

Student 3: Yeah. Just try.

Student 2: I just go like, “Will you buy this for me?”

Student 4: I won’t be using a car within four years.

Other students: Yeah. (Laughter.)

Student 4: Just enough time to talk with them once in a while.

10. Personal Web Pages

Some students talked about their own personal Web pages. Girls of school L talked about their own websites for their modeling program. Boys at School N reported that they created simple personal Web pages:

A: Do you guys have your own personal Web pages?

S6: Yes. I do.

S6: You can get a website. They have like websites that will give you free website. Like they host your websites for you and give you directions how to use it. You can do whatever you want with your pages.

A: What did you do with your Web pages?

S6: I have codes on my video games. You can get codes for your video games, and I put them on my pages.

S3: I have a bunch of stuff on my home page, like comic, music, sports calendars.

Some other children talked about having images and information about their idols. Some of them knew using HTML codes to create backgrounds for their Web pages.
11. Favorite websites

Some students told me that they did not have a favorite website, because they let the search engine guide them to wherever it led them. Others did mention a few websites that they discovered which they found interesting. These sites included sites that contain educational information, sites for shopping, sites for news, sites for hobbies, and sites for entertainment. Websites that students talked about in their focus groups included:

- mathmaniac.com
- geographic.com
- edhelper.com
- www.metrolibrary.com
- cnn.com
- eBay
- ESPN
- Neopets
- Airparser.com
- Ware.com
- Homework.com
- Rotten.com

Mathmaniac.com, metrolibrary.com, geographic.com, edhelper.com, and homework.com are sites that can help the students with their studies, where they can do exercises, play games to learn, and find samples of compositions. They could also
get suggestions on how to study, and find information about the solutions to certain homework assignments.

Girls at School N talked about metrolibrary.com:

*S5: I get on the Internet, the library Internet. Citymetrolibrary.com. they have different subjects and you can click on it, and sometimes they pop up more websites about it and you can click on what you want. You can get a brief review on the subject, understand it before you memorize it. Like my teacher last year asked us to get on the teachers guide and sometimes it has stuff about memorizing things. So we get on and we did proficiency tests. Then it provides ways how to remember it, not how we remember it.*

One particular website was frequently mentioned by the girls of the three schools. The girls reported that they went to Neopets.com. This site is a place where someone can go and pick a pet to adopt, and then try to earn neopoints to buy food at pet stores to feed their pets. The owners of the neopets need to explore shops to find toys, furniture and other things to make the pets happy. Owners and neopets live at Neopia, a globe that has different continents. The pets can explore different lands of Neopia to have adventures, and earn neopoints. There are also outer spaces for the pets to explore. Pets can get employment, can adopt their own petpets, and are equipped with different weapons and magical powers. The owners have to buy books for the pets to read so as to raise their level of intelligence. The pets have to explore to get stronger. If you have earned accumulated enough neopoints, you need to learn how to open a bank account to save your money and get the best interest rate. If you have bought
some interesting and valuable things for your pets, you need to learn how to put them into a safety deposit box. Otherwise, creatures at Neopia will steal your points or stuff. The owner has to go to auctions to sell stuff or buy stuff. If they keep exploring, they can get free foods or toys from different places if they are low in neopoints. The owners can also open a shop to sell what they have so far.

The girls at School N described their experience with this particular site:

Student 2: I go to, eh, Neopets, a lot, not a whole lot, but I used to go a lot. I don’t go as often now. But…. There is like you can have an adoption. Like all my pets. Like you can feed it with stuff. (Laughter.) You are like a daddy or something.
(Laughter again.)

Student 2: It's like for kids who don't have a pet. I have a pet, but I like going there.

It's like playing games. Buy stuff for it.

A: What kind of animals?

Student 4: They got like odd animals. You create animals. They're kind of like antelopes. Weird. You just pick one and you've got to name it.

A: And you have to feed them and …

Student 2: Yeah, you have to play games to get Neopoints, and use Neopoints to buy food, clothes, furniture. You are going to have a house, and you live in it.

Student 3: I bought a bunch of clothes. They are cute little ones.

For the most part, though, students reported that they did not go to a particular site; they just let the search engine decide where they could go. As girls of School G said at the focus group:
S6: I usually just search on the Internet. I don’t go to a particular website. I just search and it will bring me to certain websites.

Students sometimes confused the search engine with a website. Some told me that their favorite website is Google. Boys of School L had this conversation:

S2: My favorite website is Google.

A: Google? And ... I know that google is where you go and do a search. Any other particular website that you are interested in?

S2: I go to Google to do everything. (Do Everything.) I do search...

S1: I just type in “www” whatever.

12. How Often Do the Young People Go Online?

Almost everyone said they went online everyday. Only a couple of students said that they used the Internet several times a week, or mainly on weekends. The reasons they provided for not using the Internet so frequently was either because there were too many kids in the family to share one computer, or the computer lost Internet connections recently. One girl from School G commented on how often she used the Internet:

S2: I use my computer a lot. I am like using the computer 24 hours a day, and my parents are using like one hour a day. (Laugh)

Girls of School L had the following conversation:

Student 1: I do it almost every night.

Student 3: I use the Internet about several times a week to every day.

Student 6: I do it every day.
Student 4: I don’t get on that often. My brother gets on the Internet every night for like two hours, like talk to his girl friend (laughter.) But when he is not on, I get on and it’s like once a week.

13. How Many Computers Do They Have at Home?

It is surprising to find out that the majority of the students in the focus groups have more than two computers in their home. One interesting thing is that they sometimes forgot to count the laptops as a computer, but when others mentioned laptops, they realized they had laptops at home, too.

Here is a typical story of how many computers were in the homes of the girls from School G:

S2: We have four at my home. My mom has her own that she uses it for her computer class. My dad has a laptop that he uses it to go on soccer websites or things like that. My sister, she is in college, she has her computer. She uses it everyday. And I have a computer of my own, and I usually use it to chat with people.

S6: We have a computer that the whole family uses. And then my brother has a laptop that he can use for algebra, and other school stuff. He can take it back and forth from school.

Some kids reported that they had only one computer at home or only one computer that has Internet connection. One girl of School L reported that,

S2: we have a computer that are so many displays. I just use it for my school projects. That one has the Internet connected. But the other computers don’t go to the Internet. (Aha). So we use the one that has the Internet.
14: Where Do They Use the Computer at Home?

The students reported that they had computers at various places at home. The computer could be at the family room, the office room, the computer room, or their own bedroom. There were a number of students who reported that they were using the Internet in their own rooms.

Limited Use at School

Students and teachers reported that students were using the Internet for their studies at school. For most of the time, the students used the Internet for research, or for their project brochures. Students also used the Internet to prepare for proficiency tests. The students found Internet use at school limiting and to some extent, boring.

1. Mostly the students used the Internet at school to do research. Both the students and the teachers reported that the students would use search engines such as Ask.com, and google.com to do research. Or they went to websites the teachers recommended to find out information for a certain project. They did research for almost every subject, including Black History, English, French, Science, Math, Spanish, and so on. At the girls’ focus group of School N, the students talked about their projects:

Student 4: We have an actual class of Computer Lit where we get to know how to get online to search something we found out, some pretty neat thing, or some famous people, like to find out their birthdays.

Student 1: We can put them on a slide show, like each year we had this exhibit.
Student 2: Yeah. Or PowerPoint presentation.

B: In what classes will you do PowerPoint?

Student 2: Pretty much all classes. For our grade, like last year was Math, and this year was Science.

Student 5: I made a presentation for Science.

Student 4: I made like Constellation.

Student 3: Or Planet.

Student 4: Six graders also did (presentations for) science.

2. Students also reported that they used the Internet to find images for their PowerPoint presentations or project brochures. Their teachers confirmed the students’ enjoyment of searching for images. The language teacher at School G commented that the students were pretty “artistic” in terms of Internet use because the students were making their reports looking beautiful. The teacher also suggested that the students were paying too much attention to the visual part of the report and not paying enough attention to their verbal expressions.

3. The media specialist at School L reported that the sixth graders were constantly using two computers labs to practice their basic skills in math, reading, and so on to prepare for proficiency tests. This was confirmed by the students at the school. The same thing was true for the other schools. As was noted by the science teacher at School N:

Y: You can download the previous tests from the Internet. You know, the state of Ohio provides copies through PDF files. The answers are all there. We use
them in the classroom, so... we do have... teachers (who) have access to a company that provides different activities and stuff for us to use. I don’t know, that’s really just primarily to use the Internet to print out activities, for activities in the classroom.

4. The students had some complaints about using the Internet at school. They reported that they could not go to certain sites because of filtering. As reported by the boys at School N:

*S2: We like, we did some report for a person in history class. We went to a classroom. We looked up, we like, clicked on the person’s name and we can’t get it through to get the person’s picture. It stopped and it said that the page cannot be shown.*

5. Students found that use of the Internet at school had limitations. Students reported that they felt the use of the Internet was somewhat limiting. They sometimes complained that the computers were old, or they could not get what they wanted from the Internet. As noted by boys of School G,

*S4: (I like to) study at home.*

*A: Study on your own?*

*S4: Yeah.*

*A: Why is that?*

*S4: You don’t have to work with these old computers.*

*S5: For here at the school, you know when you are using the computer or the Internet, it is the teachers who tell you what to do most of the time. You can*
never have a free day. At home, you can search for whatever you want.

The theme was echoed by the boys at School L,

S2: At school if your teachers asked you to go to a website, they won’t let you put on certain pages. Even if you don’t like, if you go to like a website, kind of like bad...

S6: They won’t let you get images that are bad to your computer.

S1: Like you are at home, and you get on the Internet. You can go to rotten.com. Like when I am at school, I can’t get rotten.com linked. It won’t let you.

S5: Like at school, each use get filtered. Like if you go to ebay, you can get all these images and stuff on there, like cars or something in there. But I went on there to search for car images at school, there was nothing bad. But I tried to go on eBay, it wouldn’t let me on there. There’s a block on my logo. It’s like wherever I go, it seems that I can’t always get what I want.

Girls at School G also had similar complaints,

S2: At school, we are not allowed to go to like chat rooms, emails to friends, or playing a game.

S3: Using the computers at school is restricted. They are blocking, you can’t always go everywhere.

S4: At school, you can only type in a website, and that’s where you go. (All speaking at the same time). Then if you go to other places, you are in trouble.

Not as comfortable as home.
Teachers of the three schools also confirmed the students’ complaints about old computers, not being able to play games, and so on. Teachers of School G had a conversation,

LT: Mine constantly complain about that they need updated computers. They have ancient computers to do the project and things. Other than that, there are no complaints.

AT: I would imagine that they are getting into the game rooms, chat rooms.

MS: Kids complain that they can’t play games.

AT: Yeah. They can’t play games, and they can’t get into a chat room. They are doing a little mumble rumble.

LT: Occasionally they gave me websites they went on to get music, you know, game site, things like that. They went over all of those. But at school, it is educational research that they need to do. (laugh)

6. At school, the students were not allowed to use Instant Messenger or email. Yahoo.com is blocked in almost every school. As the researcher tried to access yahoo.com on one of the schools’ media center computers, it gave an error message saying that the site could not be contacted. Girls at School N commented on not being able to use Instant Messenger at school:

S2: But it’s still like it’s kind of get on your nerves sometimes, because you want to chat and you wait hours until you get home in order to chat.

Others: yeah.
7. The students, however, reported that they could understand the limitations despite the inconveniences sometimes. One girl of School N said that it is understandable that the school put on such limitations, “because at school, you don’t come to school just to have fun. At home it’s just at home”.

Young People’s Perception of Computers and the Internet

The research indicated that middle school students showed their capabilities with the Internet, they regarded the Internet as something very familiar and they lived with it every day. Though students reported that books had merit, most of them preferred the Internet to books when it came to doing research for their homework.

1. Teachers, parents, media specialists, and the students all reported that the middle school children were using computers and the Internet naturally and they were quite at ease with the Internet use. As one parent at School L noted,

D: My twelve-year-old girl is much more comfortable with the Internet than her father is now. Because she uses it so naturally. It’s a good thing. (Laugh).

A teacher at School N also reported her observation,

M: They are very comfortable with technology. They are not intimidated by it. I am always doing something, and I don’t know how I got there. Yesterday my email came up, it wasn’t the way it always looked. And my student teachers pushed the right button that changed the whole format of my screen. And I didn’t know what happened. I didn’t know about technology, but it is not the way it is supposed to look. So one of the guys came up and fixed it. The kids are awesome. I mean they know more about PowerPoint than what I know. I
know how to do it, but it takes me a very long time, because I didn’t learn until I was an adult. I didn’t do it until I was in graduate school.

Girls at School N talked about how they learned to use the Internet,

S5: For Internet. It’s like nobody taught me and I just learned. I am like going on it, and...

S1: Play around.

S5: Yeah. I kind of like figured it out myself.

S3: It kind of like happened to me.

2. Some students talked about how their grandparents or parents were clumsy in using computers and the Internet. Others talked about how their parents were skilled at computers and influenced their use of the Internet. A girl at School N talked about her parents conducting a web conference, and she could get online to see them. The students reported being comfortable with the computer either compared with their parents, or due to their parents. As reported by girls at School L:

Student 1: My mom and brother got the computers hooked. But I got the Internet for her. If she needs to look, I will help her.

Student 3: I will find it.

Student 2: My dad, like he works for the concrete, so sometimes he will get on to look up different things, different companies and stuff. My mom only gets on to check emails. But if she wants to get on to look up something, she will have one of us do it for her, because she does not know how to deal with the whole computer thing.
Student 4: My mom does not like computers at all. She is kind of afraid of it, I guess (laughter from others), kind of too grand for her.

Girls at School N also reported that they sometimes had to help their parents use email or other features of the Internet. As reported by one girl:

S5: After I told my mom how to use the Internet, she emailed my baby pictures to some of my friends’ mom, you know, the baby pictures of me. Oh, my gosh! (laugh)....

A: You don’t like the picture?

S5: No, not my baby picture. It was like... (laugh) lying there, drinking a bottle. I don’t like that.

3. The students and teachers reported that students loved using the Internet and computers and they found the Internet use more engaging than paper and pen.

A language teacher at School L described her observation:

R: As soon as I ask them to do something on the Internet, it is automatically more fun to them than if I ask them to do any other way (Laugh), which amuses me because I could do flashcards on paper in class. Or I could do it on the computer. If I do it on the computer, then it is somehow more fun. In fact, it is the same exact thing.

When I first started teaching French, we had a project where the students pretended to have trip to Paris, and we got on a travel book, and we looked up things in the travel book. Later I started having the kids do it from the Internet.
The kids are more engaged in the project. It’s much more fun to them on the Internet than it was using books. The same information again, but it’s more fun.

It’s got better pictures. They are graphical, and organized.

4. Most students reported that they loved the Internet for their study. The students the researcher talked to loved Internet use and the majority of them reported that they prefer the Internet to print when it comes to research for their projects. Only a couple of the students reported loving both books and the Internet. They provided various reasons for their choice. The Internet could provide up-to-date information, and it was fast to get what you wanted, and it provided more information about a certain topic. Girls of School G:

S3: I somewhat like both, because you can have different kinds of information either way. Or sometimes a magazine will come out and I can read and get something, too.

S5: I think books are usually more in-depth. But the Internet seems to have more information, but everybody can post it.

S6: Most of the time I prefer to go to a website, because the Internet is more up-to-date. Like the encyclopedia, it has more new things there for the kids to go to and find out.

S1: Me, too. Like new things are coming up. If you go to a library, the printed encyclopedia is all out-dated. So it is not really very useful any more.

5. Students reported themselves to be multitasking. Students were not afraid of using the Internet, and they reported using the Internet in such a natural way
that they sometimes would use Instant Messenger, phones, and other devices all at the same time. As described by one girl of School G:

*S4: I will be talking on the phone with my friends and I will be checking my email messages. If my mom or sisters happen to be there, I will be talking with them on the Internet, or with my friends. Sometimes I got confused with whose message and who I am talking with, and it was like: “What are you talking about?” (All laugh). I just sent wrong stuff to the wrong people.*

6. The students reported that they did not think the communication online was so much different from everyday face-to-face communication. The girls, particularly, felt that they did not find it so different. They could communicate in their own languages, and talk about what they were doing. As reported by girls of School N:

*S5: Not very different from what you talk like face to face. I mean, it’s like what you talk with a girl.*

*S2: Yeah, just what you do. Yeah.*

*S2: When I type, I just don’t say “you”, I just type like letter U. (all agreed). R instead of ARE.*

*S3: I do that, too.*

*S1: I use smiley icons.*

*All: Yeah. Yeah.*

*S2: Somebody I know, somebody told us, actually like, GTG, means like “got to go”.*
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S5: I use that “TTL”, talk to you later.

A: You guys have your own languages.

All: Yeah.

7. To the children, the Internet is not merely a place for fun. As they reported, the Internet could be both entertaining and educational. However, there was a risk of getting too much entertainment and forgetting about learning things. As commented by one boy at School N:

S6: For the research, you can go ahead and search for stuff. If it’s for entertaining purposes, then you just go and search without worrying about anything. For entertaining games, it’s the same. 'cause you are so busy concentrating on the stuff, and you forgot to learn anything. You forgot what you were doing.

8. Children reported that they sometimes chatted with friends for too long and sometimes they played on the Internet for too long, and so the parents would set a time deadline for them. The parents also reported that they were afraid of hurting the children’s vision when they used the Internet for too long.

Gender Differences

Teachers, parents, and students talked about differences between the boys and girls in terms of using the Internet. From their reports, there were not many differences between the two gender groups. Both boys and girls loved using the Internet and they used the Internet to do similar things. Differences lied in what games they played and what they talked about through chatting, and what sites they
were accessing. Girls seemed to like communicating with friends about everyday life, and they tended to love games or sites about living that are closer to their real lives. Boys tended to play more violent games, and view sites that were related to their own particular hobbies.

Teachers

Some teachers reported that students did not reveal obvious differences in gender in terms of using the Internet at school. They reported that the students were usually involved in the same activities, and the same projects, and they did almost the same activities in the classroom. One teacher at School L noticed that both boys and girls could be competitive in terms of using the Internet and computers:

*R: They all like to use it. The kinds of things they like to do may be slightly different. You know the girls like the competitive games just as much as the boys do. The things like in our French class, I often have a whole set of review activities they can choose from, and all of them like the jeopardy ones where they ... one of their classmates can get to compete to see who gets the most points. Even on the non-competitive ones, they will sit next to somebody else and see who can get the most points faster. I think both the boys and girls can be very competitive. They like competition type of activities. So I have not noticed that much differences between the boys and the girls. If I just give them free time to go on the Internet, what they would do would be different. But now we cannot classify that.*

Other teachers reported small differences, though. One language teacher of School
N did notice the difference between the boys and girls in his observation that the boys tended to use the computer more. It seemed to him that the boys were more likely to play games than the girls. Another teacher who taught English and French at School L reported that the boys liked to explore with different websites, such as cars, sports, and so on, whereas the girls were more likely to chat with friends online. Some teachers noticed that boys were using the Internet more. The teachers at School G had this conversation,

LT: I think the boys are more into it, the ones I have.

AT: Yeah. A lot of times I will have the kids paired up, you know like boy and girl. A lot of times it’s the boys who will not only get on the Internet and search, you know, they use Microsoft Word, or they want things to look like certain ways. I’ve noticed it, because that has happened a few times.

MS: Right. The Internet searching is better, and it also happens to the actual typing skill.

Students

In the focus groups, the girls seemed to know more about the boys than the boys knew about the girls. When the researcher asked the girls to gossip a little about what the boys were doing, the girls at each school tended to be excited to talk about the boys. In their eyes, the boys were more likely to do something bold, for example, the girls at School G reported that the boys were talking with strange girls online. That was confirmed by the boys when the researcher talked with them later. The boys said they liked to meet friends on the Internet through ICQ, where they could talk with
people from different countries. One boy reported that he talked with some people from Turkey, and he met a few girls online, too.

The girls at School N said that the boys were playing different games. The boys were playing games of killing and shooting, which the girls did not like to play. The girls liked to play some sports games online, too, but mostly sports such as chess, golf, or car games. The boys loved basketball games instead. As reported by the girls of School N:

S4: Boys like to play war games with guns or stuff like that.

S6: They like to play games that kill somebody.

S5: They will get on swears.com.

S4: That will be funny, I walked into a room, there’s the boys looking at boys.com. It’s like what are you doing?

In contrast, the boys felt reluctant to talk about the girls, and they either said that they did not know what the girls were doing, or they thought the girls were probably doing the same things as they were doing. But when the researcher posed a question to the boys of School L by asking them if the girls talked about playing games online, the boys said no. They did not think the girls talked about games, whereas the boys themselves would exchange news about game sites, and new games among the circle of the boys themselves.

The boys at School N admitted that the boys were dumber than the girls in terms of talking with people. One boy said that the girls loved chatting online, and he reported that “the girls passed notes in class” to show how girls liked to communicate.
Are Students Safe Online?

The research found that students are using the Internet in versatile ways, including chatting online, meeting strangers online and doing shopping online, which increased their chances of being victims of online fraud or crimes. The research found that the students and parents lacked enough knowledge about how to protect the young people’s safety and privacy online.

Strangers Online

The students of the three schools reported that it was very easy to get in contact with strangers or be contacted by them when they were on Instant Messenger or ICQ. Some reported experiences talking with strangers online. Boys at School G reported,

A: Did you ever talk with strangers online?

S1: Yes.

A: Yes?

S1: a little bit.

....

S1: Kind of having fun talking with them I don’t know, they are just people around Ohio.

A: Are these people older than you or about the same age as you?

S2: Both.

S6: I talked with people from other countries before. It’s like, you know, the ICQ. People are looking for things like computer and stuff, you know. So I talked with people from Turkey, and other countries.
Some students would talk with people and meet with them occasionally. Girls of School N talked about making friends online:

A: Did you ever meet with some stranger who sent you a message or something?

S2: Oh yeah. A couple of times.

S6: It went spontaneously until I liked it. We exchanged names and something like that. It’s not that a big deal. But you don’t really want to get lost just like that, probably.

S2: My parents don’t want me to talk with anybody, because they think that I will get lost.

The students also had the awareness to protect themselves by not talking to strangers. As discussed in the section about Instant Messenger, the boys and girls knew about authorization, the ignore list, and blocking IDs or IP addresses. But there were temptations, too. In the focus group with the boys at School N, the boys talked about strangers seeming nice:

S6: I personally don’t mind talking to strangers if they are nice.

Several together: Yeah.

S5: But even if they are nice, you still don’t want to give them your address or anything. They can act, like, that they would get your address. You don’t want them to come to your home or anything, ‘cause you don’t know what will happen. You can talk with them sometimes, but you don’t want to give them your information.
Spams

Students reported that they encountered spam messages very often. As girls at School L talked about in their focus group:

Student 2: I have an email account of my own, and I will get on and I will get all these inappropriate things, and I just clear my folders, 'cause there are just a bunch of inappropriate things on there. They just send me these things. I don't know how they get to know my address. But they do ...

Student 4: They can spy and get your email address, and you don't know how they get to know your emails. They usually have strange names and send you junky emails, and I usually just ignore them.

Some spam messages could be inappropriate for their age. As the boys of School L reported:

S1: One problem about talking to strangers is that, I chatted with them once on the Internet, and they thought that I was 18, and the next day I looked up my email, and I found a bunch of people sent me emails talking about sex and stuff like that. And they've got these web cameras that you can hook up and you can like look at the people online.

A: What did you do then? Did you tell your parents about it?

S1: No, I just didn't go into it.

S2: I did. I reported it to my parents. I never get my email address. I just canceled my email account.

S5: Once I talked to my parents, and my parents talked to their lawyer about it.
Try to take legal actions or something.

S6: I'll forward it to people I don't like.

Pop-ups

The students reported that they encountered pop-ups very often when they went online. As noted by the girls of School N:

Student 2: Yeah. Sometimes you're on the Web doing research and you got all these pop-up windows.

Student 4: Yeah. I hate Pop-ups, like advertisements. Like: “Winner, if it doesn’t crash, you win one million dollars!” (Laughter)

Several Others Together: Yeah.

Student 1: Usually they tell you that you win one million or a package of something.

Student 4: My dad actually thought that he won and told everybody to be on this site. (Laughter)

Student 3: Usually they just tell you that you have to do this, buy this or that.

The students sometimes got pop-ups that asked for personal information. They usually just ignored it, but some boys seemed to be playing with it. As reported by the boys of School L:

S1: Once when I was in there, I went to a certain page, something just popped up and said: “You have just entered a secret Webpage” or something like that.

S3: Sometimes you get the pop-up window that asks for your email or address.

A: Do you give your address?
S3: No, I just ignored it.

S6: I may fill in some made-up information, though. (S3: Yeah, I did that too…) I put in some website just for cheats. You just made up a name or home address.

S3: I did it once, but it won’t go through.

The teachers noticed the pop-ups in their classroom use sometimes, as reported by the teachers of School G:

MS: One of the problems when we are doing the research is that the students say that they have a monkey they’ve got to chase. They will click on something, and it just pops up, and it won’t go away. You just tell them that maybe you got some virus. You’ve got to clean it up. Or all these little ads that keep popping up when they are doing the research, yeah, that can be really distractive for them, because they got totally off what they are supposed to do.

AT: They have to chase their monkeys. (Laugh)

Students also found the pop-ups “annoying,” as commented by a girl from the suburban School N:

S6: When you are still typing a paragraph, and they are popping up. It’s like you can’t even type in anything because it’s bad if you hit on it. It’s like annoying.

Boys of School L also reported a similar frustration. The pop-ups they saw looked like certain surveys:

S3: There have been some nasty things, even when we are doing Accelerated Reader and things like that. We are taking a test after we read a book, and the computer was not working. ... it comes up with a survey thing.
S6: Like “Are you a woman or man?” ”What’s your age?”
S3: Yeah, stuff like that.

Parents' Trust and Restrictions

Students reported that they would go online by themselves very often. Sometimes they used the Internet in their own rooms. A girl of School L explained why:

Student 2: I like to do it on my own because my brother, he is 16 now, and he likes to bother me. He’ll be watching TV, and I am using the computer, and he will come in and gets on his sister. Sometimes I will lock the door, and I lock myself in there so that I will be a little (away from him)...

Students talked about how their parents should trust them and let them use the Internet on their own. A girl of School L said that:

Student 6: Yeah. Like at first, my dad used to use it with me to make sure that everything was going all right. But then he kind of got to trust me and now he doesn’t come down with me. And just let me get on it whenever I want.

Student 1: My dad just let me do what I am doing.

Student 2: My dad will sometimes come and ask me: “Hey, what are you doing?” I just tell him, “I’m talking with my friends.” He will say, “OK”, and turn off and walk out. (laughter)

Student 5: My mom will sometimes sit beside me and watch me for ten minutes.

A: For ten minutes?

Student 2: My mom and dad tend to check on my brother more than they did me, ’cause he’s more likely to go somewhere to talk with strange girls (laughter).
Students also reported that their parents set rules for them at home. Girls of School L reported:

Student 2: My mom has a rule, and I think I cannot be on after 9:30.

A: What about the other guys. When you are using the Internet, do your parents come and check on you?

Student 4: Yeah.

Student 5: My mom did.

Student 6: Yeah.

Student 4: Sometimes they do.

Student 3: My dad tended to not allow me to be on the chat room. I will just leave Yahoo after 10.

Some students reported that their parents were worried about them sometimes. As described by girls of School G:

A: When you are chatting online, or when you are using the Internet, are your parents worried about you?

S2: Sometimes.

S3: Sometimes. It depends on what time you are online. When it comes to chatting, they are like freak out sometimes, you know. (Laugh)

A: They will just come and check on you.

S3: Yeah, they will just sneak to your back and see what you are typing, how people are replying.

S3, and 4 and 5: Yeah. (Laugh)
S4: I will just type it shorter when they come. (Laugh)

The children also reported that they had their own way of dealing with their parents when their parents tried to limit their Internet use. The girls of School N talked about their ways:

S1: My parents, they are worried about my vision. They think that after an hour, you have to rest your eyes.

S6: My parents set up the time limit. After certain period of time, it won’t do anything except turn it off.

S2: What I do is to let it turn off, and then go back on again.

S3: Sometimes I am chatting with my friends, and my mom does not want me to, and I just told her that “Mom, I am doing my homework.” So I will put up something like I am doing something important. Once she believed it, I just went to Instant Messaging.

Parents reported that they were watching over their children when they were using the Internet, and they showed their concerns about what the children were actually doing online. As noted by one parent at School L:

D: So the Internet is good, but you are right, some of the students are going to sites that their parents don’t know. They do shopping, you know. In my household, our computer is in a family room, and there is a dog in that room. But the children are on the computers. That’s our family rule. They are in front of us. They know. I think parents need to be vigilant. We don’t allow the children to shut the doors. They get on the Internet a lot.
Filtering

Teachers, media specialists, and parents all agreed that filtering was necessary for the children. As commented by the media specialist at School L:

*T: Everything goes through them (the filters). Other than that, the other filter is simply the teacher. Somebody is there, moving around, and just watching, doing those things. My own personal feeling: I think we need to filter. That’s probably not a librarian thing. A lot of librarians do not like that. But I have four kids, there is difference between what I think is acceptable and what the mother down the street thinks is acceptable.

Teachers and media specialists reported that they would watch the students while they were using the Internet at school. In their words, the school needed human filtering. The math teacher of School N explained that it is the district Internet use policy to have at least one adult in the room when the children were using the Internet at school:

*M: I mean I know one of our district policies is that they are not allowed to be on the Internet unless an adult is in the room. Even though we have many filters to keep out the bad that is on the Internet. But things still go through. And we want to make sure that there is always an adult there to say that you can’t go there, to help them get out of that situation.

Acceptable-Use Policy and its Problems

Media specialists and teachers reported that the school had the parents and the students sign a form of AUP in order for the children to use computers and the
Internet at school. They reported the problem of getting some parents to agree to the AUP. Some parents did not like to have their children use the Internet. As the language teacher at School L commented:

R: Some of them, despite the fact that we say that we promised that we provided filtering so the students can not see pornography or any that kind of thing here at this school, some of the parents are still worried about what their children might see through the Internet. They might do something bad on the Internet. So they won’t allow their child to be on the Internet. They cannot do that stuff at school because of the filters. But there are still parents who are worried. They can’t talk to strangers. They can’t email or chat. The student accounts are blocked from doing that. But the parents are still saying that I just don’t want them to do that.

The media specialist at School L was the one who was involved in the process of AUP. She described her insistence on AUP:

Every student has to sign what we call Acceptable Use Policy. I am the holder of those. I am very at it. I really go after that. I don’t want them on the Internet if they don’t have one of these. I know that the parent knows. We do use the Internet. We do our best to have them on safe educational site. It is filtered. If not, there could be a flip, which we had had. So I am very at them. The kids that are using the Internet must have signed all the forms, because we know that they are going to use the Internet in the class. They have to trust us that we are doing our best we can to make sure that they are not on an inappropriate place. And because it is filtered, most of the time they can’t get there.
The schools did encounter certain refusals to sign the AUP. There was a case of a parent of multiple children at School L who refused to sign AUP each year when the child entered the school district. The media specialist tried hard to persuade him, and this year, when his youngest son entered the school, he finally signed the AUP. The media specialist explained the pressure the parent probably felt:

*T: This time he signed. The third child, the third year this kid has been here. Finally got signed. I mean this kid went to our Computer Literacy class. If they were not allowed to use the Internet, and they had to do alternative assignments with a dictionary, an encyclopedia, or something else. Something that is not on the Internet.*

Teachers of School G reported another kind of problem in terms of AUP. They said that they did not encounter any problems with the signature, but they suspected that quite a number of students signed the AUP by themselves:

*A: Have all the parents signed AUP for the students to use the Internet?*

*MS: It’s supposed to.*

*A: Have you found any problem? Some parents refused to sign it, for example?*

*MS: The kids sometimes may have signed for the parents, I am sure.*

*A: Sometimes…*

*MS: Sometimes the older kids they do not bring it back home and they just signed it. Well, when you give them a warning and ask them to get it back at the end of the school day, you know, chances are the kids signed it. The name on it, I am sure it is not their Mom’s or Papa’s. (Laugh)*
LT: Normally in high school, kids do that. Junior high they don’t.

A math teacher of School N explained the importance of Internet use and her insistence on having the children use the Internet despite occasional complaints or refusal from the parents:

A: Did the parents sign the AUP?

M: We don’t do it each year. We do it when they entered the school district. We had a blank form that we have them sign when they entered. It’s like some of these kids have been with us since kindergarten. Their parents don’t even remember that they signed that form. We had one parent this year said that he did not want the student to use the computers because it will do bad to her eyes.

A: How do you deal with that kind of situation?

M: Well, there was no medical documentation that says that it is hurting her eyes, so ... she will have to use it at times, because that’s part of the curriculum.

According to the state standard, students will need to be able to access information from the Internet, from the computer. I mean it’s in the state standard so it’s like I am saying I am not teaching your daughter a part that is required, I can’t do that. I just think that maybe her daughter plays too much at home.

Some Teachers’ Are Getting There

While schools are making efforts to catch up with the savvy young students’ natural learning environments, some teachers were practicing using the Internet as an engaging tool to encourage independent thinking and active learning among the students. It was also echoed by the students in some students’ statement in the focus
groups, these teachers’ practices stimulated the students’ interest in learning through using the Internet.

**Personal Website**

A couple of teachers I talked with had developed their own personal websites. As the English teacher at School L introduced:

*R: Ok. Well. I have a website that I maintain, if I have homework to assign for the students, I will post it on my website. So I have my homework and notes, etc. on my website. So if the student is absent, they can access the website to see the notes they missed. If they need something for the homework assignment, they can look up on my website and get that information. For parents, all my project description that the kids might be working on a long-term project, that’s very important for the parents to look at. So they can help their children. In class, I also have some review exercises, such as games to go..., linked to places on the Internet where they can play games, or review whatever they are working on. Before my major tasks, I always set up a review game, they so they can get on the Internet and play.*

*That’s usually what I do.*

Teachers will post class notes, lesson plans, and grades online for the students to see. But the majority of the teachers the researcher talked with did not create their own website. School L did Web pages for their teachers, and put up their lesson plans. Only one teacher created her own website, and that was an English teacher the researcher interviewed. The other schools had their teachers’ images and contact information online, but they did not put up lesson plans online.
Research Projects

The teachers of the three schools reported some interesting research projects related to their own content areas. The French teacher of School L reported that she would go to the French site and contact the French teachers in France and ask them about some everyday use of French language. She would then show their answers to her students, which brought so much enthusiasm to the classroom. She made a comment that:

R: It's much more real. They take it, and they believe it better and it means more to them. Not that they don’t believe me (laugh), but it comes stronger when it’s coming from a native speaker.

She also talked about a project for the French class to do a research project to use the Internet to find out how much it would cost them individually to go to Paris for a trip. Here is her description of the project:

In a French class, maybe they are researching information about one of the countries they know speak French, or something in France. We have done a pretty involved research project about Paris, where the kids go online and find different places to see, and things they do when they look at the pictures. What are the prices if you go there? We’ve done the airline tickets to France, how much does it cost. Exchange rates of calculating something worth 100 Euros, put that in dollars.

We did kinds of things like that.

The English teacher of School L also reported that she would go to Amazon.com to look for books of a certain author, and she would show these books to the children
and usually the students would be very much impressed by looking at the long list of books these authors wrote, and they would say, “WOW”! The teacher also reported that she would go to the sites of certain authors and contact the authors directly. She described her experiences of contacting authors:

D: Many of these authors have their own websites, and they allow the children to contact them on the website. I just read one story called “Val” by Janet Valerie. I went on the Internet and found that she died of cancer about three years ago. But I knew that she lived with the artist Stan Mark. So I went to his website and it said “Contact the Artist.” And I said “Oh,” so I contacted him and said that I knew that Janet has passed on, but the kids have a question about one of her characters, could you answer it? And he emailed the children back.

The art teacher of School G reported that they were having a project about oceanography. The project combines arts, language, and science together. She described the project:

We also work on a kind of project of oceanography. We usually have this project each semester. I will have the students get on the Internet and do research, to find out which kind of fish or mammals are eating what kind plants or food, or find out each habitat. They are able to get on there and do their research.

The technology teacher of School G reported that in his computer literacy class he had the students learn how to do research online by completing a live project where students had to do weather reports for a football season, and the students need to find out where the matches were going to be held, and then they had to do weather forecasts for that particular match.
Science teacher of School N talked about going online to look for ideas for a science fair:

Y: Science fair project. Yes. It's optional. Yeah. It's coming up in April. We do go over to the public library. We bring them there and go to the websites, where they look for science fair ideas. They do get a lot of assistance using the Internet. More than probably what we do.

CyberBuddy Project

One teacher talked about a big project called CyberBuddy, where the middle school gifted students paired up with college students at Ohio University and they exchanged reviews of certain famous books such as Roll of Thunder, Hear my Cry. The teacher described the project:

D: I also use a CyberBuddy project. I have OU students sign in as English teachers, and two of my classes of Talented and Gifted, they read. One college student reads the same book as the 8th grade students. And for the project, they email back and forth about this book, and talk that way. They actually do PowerPoint projects that they share with each other on the Internet. And then they need it at the end of the project. They actually use the Internet to email constantly the college student. ....

People on the project cared about safety issues online, and this teacher conducted the emails this way:

The children will email me. I cut and paste and send it to the college students. The
children use their pen names. They don’t use their real names. That way, the security is safe, too. Of course when the college students email back, I cut off their addresses. So the children don’t have their personal addresses. But it’s a good project. We had about 420 emails for the project this year for the 8th grade. So they are very busy.

The teacher found that the CyberBuddy project also gave the middle school students an opportunity to learn a few things about college life, and they knew that in college they were going to be really working hard to finish their research projects.

Sites for Teachers

A few teachers discussed sites for the teachers. For example, the English teacher at School L talked about going to the Purdue Writers Lab to discuss problems with other teachers and get suggestions for a certain content instruction. She also talked about the questionnaire developed by professors in Carolina for teachers to check students’ learning styles. She commented that:

D: The Internet is outdated less quickly than textbooks. Now I can do research on the Internet for the children and plus, the teachers are also exchanging ideas on the Internet constantly, you know, just constantly. There are so many sites for teachers on the Internet now. If the teachers do not use them, they are really missing out on that. There’s so much out there.

Problems Found with Internet Use

During my interviews with the teachers, media specialists, parents, and students, I found that they expressed concern about the problems of Internet use. Some talked
about why some teachers had difficulty catching up with the Internet use.

**Search Problem**

The teachers and media specialists talked a great deal about how the Internet could be overwhelming to students when they use the search engines to do research. Teachers commented that the students did not know how to narrow down a topic. Teachers of School G described how the search engines could be misleading sometimes, particularly for the children:

*AT:* I don’t think they are using the search engine quite as good as they could. They did it really general, you know, instead of getting 10 or 15 websites, they got thousands of websites there. They are not getting anything specific. I am not sure about the other students. I don’t know if it is the same anywhere else, but in my class, they are still too generalized for what they are looking for.

*MS:* There is more to it, I can give you an example, if they type in German Shepherd, they can find this guy named Hansel, who is a Shepherd in Germany, and he’s got his Web page, you know. (Laugh). There are more specifics. If you search for “Mona Lisa”, there’s two girls who are roommates, one named Mona, and one named Lisa, (laugh), they had a Webpage and it showed up. We need to be more specific in our search.

Teachers and media specialists said that without guidance, the students could waste time when they did research online. The media specialist at School L gave an example:

*Because I found that if they come in and I say: OK, give me forty facts on Mars.*
Three days later, they are still looking for three facts, because they are always looking for something better. (Laugh).

The teachers also found that students could not tell what was valuable information and what was not. They did not know which information was true and which was simply distortion. As commented by the English teacher of School L:

D: For example, if I ask them, I say, find some poems about patriotism. I want them to find Longfellow, you know, the great American poets. And they find, you know, anonymous poems from the Internet, thinking that they found great poetry, you know. (Laugh) So I think that we need to keep them in touch with books, you know, with the good stuff. Because the Internet is too watered down, it’s too open.

The art teacher of School G observed that students could easily believe what they saw on the Internet:

AT: I just want them to check the sources. I have one girl, for instance. She told me that John F. Kennedy was not really killed. He was still alive somewhere, you know (Laugh). Right, right. I think the problem with the Internet is that anyone can put a site on there.

Teachers then talked about their strategies for solving the problems. Several of them reported that they provided links that they found very useful for the students when they needed information for their research projects. As described by the English teacher of School L:

R: I usually find some sites myself that I feel might be helpful for them, that I think they contain reliable information, and I provide links. And they go to my lesson plans, and click on the date and click on the links there.
The media specialist at School L recommended certain sites that contain good guides for resources:

T: Are you familiar with the InfoOhio website?
A: Yes.

T: So you are familiar with those educational packages that they can use for free?

I tried to encourage them to start there at least. That’s a good place to start, especially with a lot of Encyclopedia, Discovery, FIR. At least you’ve got some basic things. So you are getting something completed, and then if they want to look for more interesting things, and do a little more surfing. Then at least they’ve got a very good basic start, they know what they are looking for, they can sort of weed out what they don’t need and come backwards a little bit.

Printing

The media specialist of School L talked about the biggest problem she encountered in terms of using the Internet. Since the students could find so much information on the Internet, they developed a habit of printing what they saw on the Internet without reading it carefully or doing any thinking:

They just pick something like, “Oh, I need that” and they print it. This is a problem that the library media people have. What will you do about the excessive amount of printing, when you have only so much paper, so much toner?

Lack of Synthesis

Teachers and media specialists reported that students tended to use the Internet in
such a way that they did not digest or synthesize what they saw on the Internet. In a way, students saw the Internet as a convenience for shortcut for homework. Science teacher of School N talked about the problem that he saw:

Y: Hmm. I think they tend to play too much. They find a wealth of information and they don’t know how to digest or narrow it down to a manageable set of information that they need. They just keep looking and looking and looking. They spent a lot of time just searching, instead of actually focus on a topic that they really need to. That’s the problem I feel.

The media specialist of School L noticed the same problem. She found that the students just passed by the information without really grasping it. She thought this lack of focus was cultural:

My philosophy is that they are very TV oriented, and you can watch TV, and it goes like, “kshoo,“ right? It right passed by you, and you don’t have to hold it in here if you don’t want to.... They try to do the same thing with education, you know. They stopped here, and you are giving them this, and they are going like “kshoo” and they flew by that. Well, wait a minute, what I am saying is that, you need to, you need to attend to what I am saying, and give it back to me in some other form, and so they have some trouble with one-on-one. They also have trouble with technology, because they can surf past, surf past, surf past...

Her observation was echoed by some students in the focus group. One boy in School L said that:

If you only have textbooks, you have to read and it takes awhile.
In other words, this boy was saying that if someone has access to the Internet, then he or she may not need to read what they saw.

*Wireless Internet*

Two of the schools have wireless laptops. Teachers at School L reported that sometimes the laptops would find problems accessing the server. The media specialist also reported that because teachers loved to use the laptops, they had problems with batteries:

*T:* Yeah, yeah. Right. So we just ordered batteries, because they are not charging properly any more, unfortunately. They’ve created a kind of problem. You know how that goes if you have a laptop. So you can imagine what it is if you’ve got, you know, 150 kids handling them everyday for 6 periods. We have two batteries that are coming. Hopefully that will take care of that. The wireless laptops turned out to be probably one of our most popular things. Because a lot of teachers like to have their students in their room, especially when they are doing writing, or researching, and they would be moving around.

*Philosophical Problem*

Some teachers found integrating the Internet into their classroom very easy, yet others found it difficult. The English teacher of School L was a teacher who used technology for her classroom, and she talked about some traditional English teachers:

*A few old-fashioned teachers, some English teachers said, “There is something about holding the pen in your hand and writing on paper.”* I missed that. I think there is something about hitting the keyboard as fast as I can, and that’s what I am thinking. So there is a philosophical difference there (laugh).
Another English teacher found difficulty with students’ getting away from books. She insisted that books are still very important, and that the Internet is a little too fancy for the students:

*I think now we are getting into a “technology era”, where they only want to see things on the screen, you know. Go to the Internet and hunt it, that’s what they want to do. And they also want to print the information and give it to me. They don’t want to use what they found and use their words in paper. Being an English teacher, I have had quite a bit of difficulty with that. As far as using the Internet, they use it extensively. And my problem is getting them not to use the Internet.* (Laugh). *Because I want them to read. I want them being able to do research with books. There’s a lot of old materials there that are not on the Internet. I also want them to clarify the stuff that they do find on the Internet, because sometimes things on there are not true. They have to make sure it is true. But in a book, it is there. But it is very, very difficult to get them doing that. But I get a lot of pretty artistic stuff. (Laugh).*

The media specialist of School L also noted that for some teachers it is difficult for them to change their teaching philosophy from lecturing to facilitating. She commented that:

*T: You know, we are used to being the one who stands in the front as the all-knowing teachers who are supposed to know all the answers. And it is hard to back off, which is what we call “the guide on the side.” You must have heard of it*
in your education class. And I think it’s hard to back off and be that “guide on the side.” Because, you know, the kids are more technologically aware than we are. It is harder for some to take that than it is for others….It’s impossible for a lot of people, you know, to put yourself in a position where you don’t know, where you look foolish, sometimes.

Digital Divide

Among the students in this study, the digital divide between the rich and the poor, and also between regions still existed. Though more and more people gained access to computers and the Internet, there were families that did not have Internet access. In rural areas, ways of using the Internet by students tended to be less versatile than in the suburban areas.

Students’ Access to Computers at Home

From the interviews and the focus groups, the students and teachers reported that more and more students are having computer access and Internet access. Fewer people do not have computers at home. The teachers estimated that in their schools there were about 70 to 80 percent of the students who had Internet access at home, with the suburban area School N reporting a higher rate than that of the other areas. At School N, students said that they barely knew anyone who did not have a computer at home. The English teacher of School L discussed the digital divide:

A: What percent of the kids have computers at home? Do you have any information?

R: I will estimate 75 or 80 percent.
A: Some students still don’t have computers at home.

R: Yes. Some don’t have computers at home. Most of those said they had a family member to go to. For example, I can go to grandmother to use the computer. Or they said that their neighbor down the street had a computer that they can use, but not all of them.

Students’ Access to the Internet at the Public Library

The students and teachers all reported that the children could go to the public library to use the Internet and get information that they wanted. The students talked about how helpful the librarians could be, and how convenient it would be for them to go to access the Internet at the public library. School N is located just across the street from the public library, and so the teachers sent the students there if they need additional resources. Students who did not have computers at home could go there to do research or finish homework.

Teachers reported that some students could not access the public libraries either. As noted by the English teacher of School L:

R: Those who live in town, if their parents can transport them, can use the computers at the library. But a lot of my students are living out in the county, you know. If mom and dad are too busy to transport them into town to the library. Dad has to work until 6, and I can’t go to the library. So most of my students who don’t use the computers are those whose parents cannot transport them to the library, typically.
Teachers’ Awareness

Teachers reported that they were aware of the digital divide, and they usually would provide options for the students to choose when it comes to the ways of finishing their assignments. English teachers said that their students could choose either to type a paper or write with a pen on paper. The English teacher of School L talked about it in detail:

*I don’t require them to do like the Internet thing at home, because if the students don’t have it, it won’t be fair. I would love to be able to require them to do these things at home. But I really can’t.*

Children’s Awareness

Some children told me that they felt that the students without Internet access could miss good stuff on the Internet. The girls of school N said that those who did not have Internet access would miss the fun stuff they were doing, such as Instant Messenger, games, and searches for information. One boy at School G commented that:

*S2: I think it is hard not to have a computer with the Internet. Like for example, if you have a school project or anything, it is harder if you don’t have a computer.*

Some students seemed not aware of any differences between having computer access and not having computer access:

*A: Do you feel that they miss something?*

*S3: Hmm…*

*S5: Not really.*
A: Not really?

S3: They do other stuff.

Regional Differences

The research also found that students of the suburban area tended to know more ways of using the Internet at home. The students of School N, for instance, talked about using wireless Internet, WebTV, online video conferencing, online shopping, online games, online searching, personal Web pages, and Instant Messaging. The students of other schools, particularly the students of the rural area, reported fewer ways than those of the suburban area. Students of School G, for instance, talked about Instant Messenger, games, email, and online searching mostly, and they also mentioned online shopping. Their descriptions of online use were not as rich or as varied as those of the students of the suburban area.

Digital Plagiarism and Online Etiquette

The study revealed students’ understandings of plagiarism is still limited and some of them had not developed the sense of online etiquette.

Plagiarism

Students reported that they knew the basic ideas of plagiarism and yet they reported that some students plagiarized even if they knew it was not right. Teachers reported that students did not grasp the concept of plagiarism very well, and it was too convenient for the students to copy other people’s works in this world that is full of digital media.
Children’s understanding.

Students in the focus groups could give definitions of “plagiarism” in their own words. They told me that their teachers would talk about plagiarism in their computer literacy classes. Girls at School G had a conversation about plagiarism:

A: Do you have your own definition of plagiarism? Do you know what plagiarism is?

All: Yeah.

A: Can you tell me more, what is your understanding?

S3: Taking what somebody’s written and claim it is yours.

S6: Copy from the Internet, or encyclopedia, or other resources, without giving credits.

Students reported that their teachers, particularly English, history, and art teachers were very strict about citing sources for their projects. Boys at School L talked about writing a long bibliography for his art project where he used tens of images from the Internet. He complained that it would take him three hours to finish the bibliography.

Students said that they would not plagiarize, but they reported knowing other people who did it. The students thought the teachers sometimes knew, but sometimes they did not know that the students copied others’ works. As described by the boys at School L:

A: You said that kids like to copy and paste from the Internet to do a project. Do the teachers have a way to check it?

S1: Not really.
S6: Sometimes kids like, if you have to write a poem, for like English class, they will just go to the Internet and copy it word for word. Some of our teachers can recognize the poem.

S3: Some really do that.

A: Does that happen to your class?

S1: Yeah. People like who don’t have anything on mind, they will just go online and copy it word for word.

S3: I don’t go online to copy word for word. But I do go online to search for a poem, trying to get an idea, maybe for like stories of other people.

S2: Most of our teachers are pretty smart. If you copy and paste it from the Internet, it will read like from some professors, you know, it looks obvious.

Teachers’ views.

Although the students reported that they knew what plagiarism was, the teachers did not quite agree with the students’ remarks. Teachers of School G found that the students did not really understand the concept of plagiarism:

MS: Kids don’t seem to understand plagiarism as we do. We tried to let them to understand better. That’s why I am covering the topic that they can’t just copy and paste. But I don’t think they really grasp the concept. We are growing up in a society where you watch TV and you tape it. You download a CD, you just record it. You see something you like, you just go to Xerox it on a machine. It is really hard to get to understand that it belongs to somebody else. We are trying to get them to understand, to get them to use their own words.
The language teacher of School L found that students might not be aware of plagiarism, and that they needed to be taught:

D: At school, we are struggling with the fact that they are using the Internet, that they are not giving the Internet the credit. They sometimes find something on the Internet and bring it in their reports without giving credit to the Internet. So we are working very hard to teach the children: if you get something from the Internet, you must give it credit. You can’t say that it’s yours, particularly with pictures. So they are putting pictures into a project, and I will say, where did you get that picture? On the Internet. Well, I don’t see it in your bibliography. You know, they don’t realize. (Laugh)

Teachers’ guides online.

Teachers also reported that students could access teachers’ guides online, and sometimes they would make full use of it and simply copy the solutions to their homework questions. Teachers of School G reported such a case as seeing students performing too well in their assignments, and it turned out several of them used the teacher’s guide online.

Homework help online.

Students reported places that they could get help for their homework online, such as homework.com, and edhelper.com. One girl at School N knew it was not a good thing to copy from another’s work, but she did it once anyway:

A: Did you find any website that will provide a paper for you so you can use it for your homework?
S3: Edhelper. www.edhelper.com. They have pages for you to print it out. Once I forgot to do my homework to submit to the teacher, and I went on there, and just copied the paper in my handwriting, and she never knows. I only did that once.

Flaming Strangers

A couple of students in the focus groups, particularly boys, revealed a tendency to flame someone they did not like. As a boy at School L declared, he would forward the email spam that he received to someone he resented. A boy at School N also said that to combat a spam, you could just send an email back to the sender, using language to shock them, so that they would not send you spam any more.

Summary

In short, the research found that the middle school students of the three schools were comfortable using the Internet, they were using the Internet very often, and they were using the Internet at home in versatile ways. The students loved to go online chatting, searching for information, playing games, shopping, reading news, getting help for homework, and so on.

The students usually used the Internet for research projects for various subjects at school, and they would use search engines to look for paper ideas, or look for images for their project brochure. Students reported feeling restrained about their use at school mainly because of filtering and the unimaginative way of doing research. They complained about not being able to use Instant Messenger at school. They also showed understanding of the limitations. The students reported that they loved the Internet for study because it is usually up-dated, it contains so much information, and
it is fast and easy. The students loved it also because the convenience of copying and pasting while doing research and finishing homework.

The students reported that their parents cared about them and watched them, but some said that their parents soon developed trust in them, and would simply watch at times, not the whole time. The students had their own way to get around being monitored. Sometimes the students used the Internet alone in their own rooms. Parents showed concern, and they felt they were closely watching the students, but some commented that parents might not understand what the students were actually doing online.

Teachers reported engaging ways of integrating the Internet into their classrooms. Teachers of all three schools provided some examples of using the Internet to motivate their students to learn.

The digital divide still existed to some extent both in terms of Internet access between the families of different income levels and also in terms of regional differences among the rural and the suburban schools.

School staff reported they cared about the safety of Internet use for children, and teachers, parents, media specialists all thought that filtering software and human filtering were necessary for schools.

Only slight gender differences were reported between the boys and girls in terms of Internet use at school. Girls were reported to love chatting a little more than the boys, and the boys tended to play games, particularly violent games, more than the girls. Boys were reported to be more adventurous in terms of contacting strangers.
Students reported that they understood plagiarism, and some showed reluctance in obeying the rules. Teachers thought the students did not quite understand plagiarism the way adults did.
Chapter Five: Interpretation and Discussion

Introduction

The study was conducted to answer the following questions: What are the experiences of middle school youth when they access the Internet at home and at school? What meaning do they give their online experiences? Do boys and girls have different online experiences? Do they interpret these experiences differently?

The study found that the following themes:

1. The students are savvy at home. The students in this study were clearly embracing the Internet as part of their lives, both for entertainment and education. At home, the middle school students were using the Internet to conduct social communication, help study or finish school work, satisfy personal interests, do online shopping, and simply entertain themselves with games, music, and movie clips. The students loved using the Internet despite the fact that they sometimes encountered frustrating experiences such as pop-up windows, junk email, and unwanted messages from strangers. They considered the Internet a useful resource for study. The use of Internet to them is fast, fun, and convenient. They loved the vast amount of information that they could tap into. The students reported that they went to sites where they could find answers for their immediate questions and real problems. They also liked to go to sites that simulate real situations and let them play roles. The students regarded the Internet as a natural communication tool for socialization. They used Instant Messaging, ICQ, and email to communicate
with friends and family. To them, online communication is natural, as natural as face-to-face communication or telephone communication.

2. The students’ use of Internet at school is limiting and to some extent, boring. At school, the students were using the Internet in their classrooms mainly to search for information and images for their projects. The research they were doing online was sometimes overwhelming because they found too much information at one time. The students complained that at school they had old computers, no games, and no emails or instant messaging, but at the same time, they understood that at school they were not supposed to play like at home. Despite the limitations, the students reported that they loved to use the Internet at school. Some teachers were practicing meaningful Internet use at school, yet many teachers were still catching up with the new technology.

3. There are a limited number of teachers who are taking full advantage of the Internet technology to meet the savvy students’ expectations. In this study, some teachers had been practicing using the Internet to promote student-centered active learning.

4. Some regions have better technology access than other regions. Students from lower-income families are still in disadvantage in terms of accessing the Internet and they know fewer ways of using the Internet than other students.

5. Girls and boys did not differ much in terms of their Internet experience at home and at school. Both were using the Internet intensively at home and they shared the same activities at school. Both of them were engaging in similar
activities such as online gaming, chatting, and so on, but the content of the activities do differ to some extent.

6. Digital savvy brings about the problem of plagiarism and online etiquette. Internet access makes plagiarism a click away and students in the study had vague ideas of what plagiarism is. Some of them copied others’ work without knowing it. Others did it because it was easy, even though they knew it was wrong. Some students had the idea that since they not see people face-to-face on the Internet, they could ignore good manners online and flame someone that they did not like.

7. The savvy young people are risking their privacy when they were shopping online and chatting online with strangers. Many of the parents did not know how or did not pay enough attention to protect the young people’s online safety and privacy.

These findings indicate that it is imperative that schools train their teachers to not only know the advancement of the Internet technology, but also change their views of teaching so as to involve students in meaningful active learning with a friendly student-centered learning environment. At the same time, it is important that schools work with parents together to ensure students’ online safety and privacy protection. Students need to be trained to be academically honest in a digital world, and they need to know good manners online when communicating with others. Since both boys and girls are Internet savvy, girls can be encouraged to be academically equal with boys through using the Internet technology and other computer technology.
Interpretation and Discussion

Online Privacy and Safety: Enough or Too Much?

The parents, teachers, administrators, and media specialists of the three schools all expressed their concern about the online safety of the young people at school. All three schools had rigid rules for students to be online. On one hand, the teachers felt that the school was safe for the students to go online. On the other hand, the students felt it restricting to be under constant surveillance, and they felt that they could not always find what they wanted due to filtering. Yet at the same time they described frustrating experiences such as pop-up windows and inappropriate images.

Using the Internet at home, students and parents encountered a similar dilemma, according to the findings. The study found that on one hand, parents were concerned about their children’s online safety, and they reported that they watched their children and set rules for them not to go to certain sites. On the other hand, the students reported that at home they sometimes used the computers by themselves, and their parents trusted them, and they could always find ways to circumvent their parents’ rules to get online to talk with friends using Instant Messaging, or do other things when their parents were not watching them.

Generally speaking, teachers and media specialists believed that students were safer at school than they were at home, because they felt that at school the students were monitored all the time, whereas at home the students could enjoy more freedom. One reason for the differences, which the teachers and media specialists did not mention, is that at school students were not using the Internet as much as they used it
at home, and they were using the Internet in more limited ways at school. Based on the reports, the students were mostly engaged in doing research online at school, whereas at home they could use the Internet for chatting, gaming, doing homework, searching, listening to music, watching movies, and much more.

If schools want to engage students in more meaningful curricula, they can integrate more versatile ways of using the Internet. Since the young people are growing up using computers and the Internet, they get used to the new media of the Internet at home, and if the curriculum can integrate this new media, the students will feel more engaged. As the English teacher of School L recognized, “It is automatically more interesting to do something on the Internet.” The students expect schools to keep up with the new technology for teaching and learning.

Integrating more Internet technology into the curriculum does not mean that safety is no longer important. On the contrary, schools need to pay more attention to online safety and privacy protection when students have more opportunities to use the Internet. As suggested by Aftab (2004), schools need to abide by regulations such as the Children’s Online Privacy Protection Act (COPPA) and pay attention to acceptable-use policies (AUP).

*Children's Online Privacy Protection Act*

To protect children’s privacy online, COPPA has set up special rules for all websites on the issue of collecting personal information from children under the age of 13. Websites are allowed to let preteens use Instant Messaging, discussion boards, e-mail, or other interactive communications only after they obtain permissions from
parents. Meanwhile, if the websites already have personal information from the children, they are not allowed to release it to a third party without getting permissions from the parents and the children. The consent from the parents must be in a verifiable form such as email or facsimile. The organization of the website must provide a toll-free telephone number for the parents to contact and ask questions.

If a school with preteen students has a website of its own, it needs to abide by the rules of COPPA. When the school is creating its own website, it needs to consider if it is going to display students’ personal information online. If the website is going to release a student’s home telephone, home address, or other private information, the school must get consent from both parents and the student of minor age in order to do so. If pictures of students are posted, the students should be shown in groups without giving their names (Aftab, 2004). If the school decides to survey its students online or have the students register for a class online, the school needs to get consent from the parents and the preteen before they do so.

Students reported that they accessed websites that asked for their personal information. Some students tried online surveys that needed their name and address. Students also reported that they shopped online using their parents’ credit card. It is imperative that students know ways to keep themselves safe when they are using the Internet. Teachers and parents can educate the students to be careful about releasing their own personal information online. The students need to know not to release their private information without letting their parents know about it.
**Acceptable-Use Policies**

Freer Internet use is based on good policies and rules. Acceptable Use Policies are very important to ensure more meaningful and versatile Internet use. Schools need to state their objectives of using the Internet, and then set up rules for how to use it at school. Put the objectives and rules in the AUP and state clearly what the rules are and the consequences for violating the rules. All students who decide to use the Internet at school should have an AUP signed by their parents. The teachers and media specialists at the three middle schools in this study reported that they required parents to sign an AUP.

What should the school do if parents refuse to sign the AUP? School L had problems with some particular parents who did not trust the Internet at all, and who refused to sign the AUP. The solution at School L was that the students without a signed AUP had alternative assignments. When other students were looking up information on the Internet, these students had to use encyclopedias or dictionaries, which were awkward to carry sometimes, and which were basically out-dated, as described by the students at the focus group. Eventually, some parents signed the AUP, which was the case of a reluctant parent at School L.

School N had their parents sign the AUP when the child entered the school district. The math teacher reported that after a few years some parents did not really remember that they signed, and they would come to argue about not wanting their child to go online. One parent was particularly concerned about hurting her child’s vision and asked the school not to allow her child online. The teachers continued to let
her online to some extent because the parent had signed the AUP already, and the child did not have any doctor’s evidence showing that she had poor eyesight. The teachers felt that they could not let the child miss a meaningful curriculum without a good reason, particularly when students were expected to meet the technology standards set by the State of Ohio, where they had to master some basic computer and Internet skills. To avoid disputes with parents, schools might consider having parents sign the AUP every year because technology is changing fast and parents may have changed their viewpoints.

School G did not have a problem of getting the signed AUP forms back from the students. But the teachers interviewed suspected that students might have signed the forms themselves, particularly when the older students were asked to return the AUP within a deadline. So far School G had not had problems with parents who came to argue that they did not sign, but there was such a risk if students chose to sign their parent’s name. If something bad happened, the school could be charged for not getting the real approval from parents. To avoid such situations, schools can confirm with the parents through phone calls or e-mail so as to make sure that the parents had actually read and signed the AUP. It is important that the parents read the AUP so they could get a better understanding of online safety and can help their children observe the rules set by the school.

Filtering: Is It Necessary?

Teachers, media specialists, and parents of the schools investigated agreed that schools needed filtering to block students’ access to inappropriate material. Teachers
of School N reported that it was the district’s policy that the schools filter the Internet access and have adults supervise the students so as to avoid inappropriate use of the Internet. The media specialist of School L used the term “human filtering” to describe the close monitoring of the students by teachers and staff members. She argued that schools needed to be responsible to parents to take care of their children, and that both physical and human filtering are necessary to ensure that the students are safe. Parents also reported that they cared about the students’ safety online and they would like the inappropriate websites or materials to be filtered for the students.

Filtering has been a controversial issue for schools for a long time. There are educators who opposed filtering because they felt that filtering blocked access to useful sites along with inappropriate ones. There were also educators who advocated filtering because they felt that security was extremely important for children at school. In these three schools, it seemed that most teachers, administrators, and parents were not ready for the young people to have free access to the Internet without filtering. They were worried that students might access pornography, hate sites, or other inappropriate things on the Internet. Students reported that they loved Instant Messaging and chatting, but teachers and parents were worried because the chat rooms were places where pedophiles might prey upon young people. To them, blocking a few Websites was necessary. It is advisable that if a school decides to use chat rooms or discussion boards, the school should monitor the use closely so as to avoid inappropriate use by students or adults.

Filtering is necessary for safety, but is not adequate alone. No matter what
filtering the school is using, inappropriate material can still get through sometimes. The media specialist reported that once the students were on a research project about the moon, and they searched the sites to learn more about the moon. When some of them typed in the word “moon” in the search engine, a few pornographic websites came up, which were inappropriate for the students, and which were not related to the course subject at all.

Teachers and school administrators need to go beyond filtering to educate students how to avoid inappropriate use, and how to deal with inappropriate material which they happen to encounter unexpectedly sometimes. Students need to be informed of the monitoring that is going on at the school, so that they know inappropriate use will be discouraged or even punished. They should also know what uses are inappropriate and what they are supposed to do once they encounter inappropriate material unintentionally. As the English teacher of School L reported, if students happened to come across inappropriate material, she would ask the students to report to her first, and then she would tell them what they just saw was inappropriate material, and it was OK to shut the site down, and go somewhere else that was safe. Teachers do not have to freak the students out or discourage curious minds by punishing the unintentional access to inappropriate sites. Instead, they can record the Website and report it to the networking administrator so that this particular site can be added to the blocking list of the school filtering system.

*Educating Students to Protect Themselves*

Students need to be educated to protect themselves from being victims of
pedophiles. Since most students reported that they used IM, ICQ, or other chatting
devices, and they also reported having been contacted by strangers, it is necessary to
inform them how to deal with these strangers. Some students in the study reported
that they would talk with strangers on IM and occasionally they would meet with the
friends they had become acquainted with online. Other students also reported being
contacted by strangers, and some of the strangers appeared “nice.” A few students in
the focus groups said that they would not mind talking with “nice” strangers. Schools
need to educate the students that no matter how nice the strangers may be, they could
be people who are trying to do harm to preteens and teenagers. Students should know
that to protect themselves, they should by no means give out their own personal
information. As a boy at School N mentioned, these “nice” strangers may act “nice” in
order to entice the youngsters to disclose private information. The students need also
be extremely cautious if they want to meet someone they have become acquainted
with online. First, they need to ask their parents for permission. Secondly, they should
have at least one adult accompany them to meet this Net friend. The best way for the
young people to avoid the risk of meeting a pedophile is not to meet with someone
they do not know.

To satisfy students’ curiosity of meeting online friends, the school can work on a
few projects that provide a safe environment for the students to meet other people,
such as famous writers, artists, students of another school, students of another country,
or college students. The “CyberBuddy” project of School L was such kind of project
where students discussed literature with college students through their teacher’s email
account and met with some of the college students by the arrangement of the school.

When students are using IM, ICQ, and chat rooms, they need to know how to block the strangers. In the focus groups, students talked about different ways of blocking the strangers. It was really a meaningful discourse where students exchanged their own experiences with one another and learned from their peers. The ways of blocking the strangers mentioned by the students can be summed up as three kinds: using authorization, blocking somebody’s ID, and blocking someone’s IP address. When setting up the IM, the students can use the authorization feature to allow only those people that they know to be on the contact list. Only those who have gained authorization from this student can contact him or her. If in some cases, a stranger found ways to send messages to a student, the student can also put the stranger’s ID on the ignore list to block them. If the same stranger tried to use different IDs to harass a student, the student can find out this stranger’s IP address and block the IP address of the stranger, which means that this stranger can not use this same computer to send out trash email any more. These ways the students in the focus groups used to protect themselves can be applied by other students to protect themselves when chatting online. Teachers may want to hold discussions on how students can protect themselves online, and also suggest safe practices for their students.

*Is the Internet Facilitating or Frustrating?*

The students reported that they loved the Internet as a tool for learning. When students were asked why they loved the Internet, they talked about the fast speed, the vast amount of information, the diversity of information, the currency of the
information, and the ease of navigation and searching, and the convenience of copying and pasting.

The Internet has been reported to be a tool that can facilitate learning, but at the same time it could be frustrating if not handled properly. The students reported that sometimes they found too much information and they did not know which piece of information was better than the other. That could be frustrating when there was only limited time for them to finish the homework. Students also found that the pop-up windows they encountered from time to time were “annoying.” The pornographic sites and spam e-mails that the students accessed could also be shocking and distressing experiences.

Despite the frustrations they encountered occasionally, the students generally reported that they loved the Internet. If the students were taught how to handle searches and deal with spam and pornography, or other inappropriate material, they could enjoy the Internet more. Frustrations can be reduced if the students are better informed. Schools can teach students search skills so as to make the Internet use more facilitating to students’ learning.

Based on the findings, students often could not narrow their search topics, they did not know how to differentiate the valuable information from trashy information, and they did not know how to locate reliable resources, or collect useful links. The technology teacher from School G was already working on guiding students in effective searching. Other schools can develop curriculum that discusses search skills focusing on the problems found in this study.
The search strategies listed below may be useful for students:

1. Narrow the topic

   Students need to know how to narrow the topic down so as to find the information that they are looking for at a faster speed without getting unnecessary information. As the media specialists from School L described, the students were given a topic to search online, and after several days, they were still looking for something better. If students know how to use keywords, how to be specific about what they really want to know, how to use quotation marks if they want the words to appear in the order that they want, and how to think of synonyms and antonyms, they can do a much better job. Suppose the students want to know something about the sun, if they type in “sun,” they will surely get too many Websites that contain so much information for them to read that they will eventually feel overwhelmed and frustrated. If they know that they actually only want to learn about the structure of the sun, they can go ahead and use “structure of the sun” as the keywords and they can get Websites that contain what they need to know. If they want, they can put quotation marks around those words to find sites that have that exact phrase.

2. Differentiate the good from the trash

   As the findings revealed, students sometimes did not know whether the information they found was good or not. As the English teacher of School G noted, some students would submit a poem written by an anonymous poet
online to be an example of great American poetry. When teachers are designing an Internet activity, they need to combine technology use with the content that they are covering. If the content is about great American poets of patriotism, the students need to know some basic information before they go online to do their own search. They need to know the names of Longfellow, Whitman, and others so that they are able to evaluate what they find through the search engine.

3. Get reliable resources

Students also need to know where they can find reliable resources. As the English teacher of School G acknowledged, the Internet is a place where anyone can post something. The art teacher of School G had a student in her class who believed that J. F. Kennedy was still alive because an article online said so. Some educational databases can be a very good start for students to search for reliable information for their study. As recommended by the media specialist of School L, schools can have the students start from InfoOhio, various encyclopedias, Discovery, and other reliable academic resources.

4. Collect useful links

One other search strategy is that teachers and students can collect the websites that contain valuable information to enrich students’ understanding of the content material. Teachers can evaluate a few links, and provide the students with the addresses so that the students could go to these websites and look for information that they want. In addition, the students can be
organized to do a WebQuest to gather websites which they find very useful for their learning for different topics in different subject areas. The students can share favorite links with each other and they can make bookmarks for themselves in case they want to find something to satisfy their individual curiosity after class.

*Online Research: Boring or Engaging?*

Students reported that they loved using the Internet for research, and teachers also reported that students found online research engaging. As the English teacher of School L put it: whenever it comes to computer and the Internet, it is automatically more fun. But does it mean that if a teacher asks the students to do research online, it will then promote meaningful learning? Based on the findings, students complained that the online searching they were doing sometimes felt mechanical. A boy of School L described how online research can be limiting and boring:

*S5: For here at the school, you know when you are using the computer or the Internet, it is the teachers who tell you what to do most of the time. You can never have a free day. At home, you can search for whatever you want.*

From this student’s perspective, the problem is that “it is the teachers who tell you what to do.” To make online researching a meaningful learning experience, it is recommended that teachers incorporate active learning into the curriculum, using online research to promote higher-order thinking, problem-solving, and critical thinking. Adams & Hamm (2000) contended that “in a media saturated world, children should be able to do some active work with electronic media – making sense
of the contents and utilizing the possibilities” (Adams & Hamm, 2000, p. 185). Some teachers of the three schools were already practicing being a facilitator who stimulated students to make sense of what they were reading and viewing. CyberBuddy project was an example where the students used the Internet to share literature reflections with college students. Instead of telling students what to do, the teacher used the Internet as a tool to motivate students to think independently.

When teachers are making lesson plans for their classes that involve online research, it is important that they make sure this online activity can indeed enhance the course curriculum, which means that the online research project can help students learn skills, concepts, ideas, and so on for a particular subject area. Barell (2003) suggests that teachers ask a few questions before they ask the students to use the Internet for research:

- How are their Web browsings related to curriculum content – the concepts, ideas, principles, skills, and attitudes we wish to teach?
- To what degree is their work enhancing their understanding of the major curricular problems – those issues or conflicts that are at the heart of our investigation?
- To what degree will their searches result in abilities that are transferable to other subjects and to their personal lives – for example, critical thinking, inquiry, and problem solving?
• To what extent are their excursions around the Web in pursuit of their own curiosities and interests? How will their lives be enriched by what they are learning? (Barell, 2003, pp. 145-6)

To get students engaged in critical thinking, inquiry, and problem solving, the teachers need to encourage students to be active in their learning. Based on the findings of this study, middle school students of the three schools investigated had a problem in synthesizing or criticizing what they saw on the Internet. Teachers and media specialists noted that the students kept looking on the Internet, and once they found some information, they either cut or pasted it in a report, or they printed it out, thinking that they would read it some other time, which they forgot to do later. What happened was that the students had not really grasped the concepts or ideas of the content through the online research if they simply passed the information without really reading it. Teachers need to help their students understand that they cannot solve a problem by simply clicking the mouse. Magic answers do not come automatically. Instead, the students need evaluation, analysis, reflection, and imagination to interact with what they knew in the past in order to make real sense of the content they are learning.

*Narrowing Philosophical Gap*

Future teachers will be expected to educate students who are technology-savvy. As this study found, students were already familiar with Internet use in their life and they were seeing the computer and the Internet as part of their life. The results of this study confirmed what Levin and Arafeh (2002) found about digital disconnect
between schools and their students. Students were using the Internet for versatile purposes, and yet Internet use at schools was still limiting or even boring. Teacher’s role has to change from being a sage on the stage to someone that can step aside and help students learn. As the media specialist of School L commented, many teachers felt uncomfortable to step aside to be a facilitator. They were used to the mentality of being someone who knows all.

Another shift that is occurring is teachers’ attitudes toward technology. Some teachers did not grow up with computers and they did not see the value of the new technology as the students do. As one teacher commented, some traditional language teacher said that there was something about pens and pencils which they did not want to let go. From the students’ perspectives, there was something about computers and the Internet that attracted them and engaged their learning.

Some teachers in the study had a special regard for books, and they felt that the Internet is not as trustworthy as books. To them, books were carefully compiled and edited, whereas on the Internet anybody can post something. For the students, they loved the vast amount of information on the Internet. Some did say that books seemed to have more in-depth information than the Internet, but that the Internet is fast, versatile, and up-to-date. In fact, there are trustworthy resources online, too. As introduced by the media specialist of School L, teachers and students can use resources such as InfoOhio and online encyclopedias to look for information. Each subject area also has some websites that have good reputations for their reliabilities. ALA has a website that recommends reliable websites for animals, arts, history,
language, mathematics, sciences, social sciences, computers, and so on. The address of the site is: http://www.ala.org/ala/alsc/greatwebsites/greatwebsiteskids.htm.

Some teachers had a problem with students being artistic and creative when they were learning things. To them, literacy equaled words and letters. To students, visual messages were meaningful, and they loved to use media to show their understanding. The students talked about getting images from the Internet for their reports and brochures, and they talked about it with excitement. Future teachers need to know that visual literacy is important to tech-savvy students.

When educators are preparing teachers for schools, one major task would be to narrow philosophical disconnect of the preservice and inservice teachers, help them to be ready for the information era education.

Computer and Internet technology allow teachers who hold constructivist philosophies more opportunity to practice their philosophies in their teaching. The teachers who used the Internet reported that the new technology fulfilled their pedagogical beliefs and equipped them to be better facilitators of learning. Philosophical shift towards constructivism can be enhanced through more Internet use. At the same time, Internet use can be most effective in a constructivist teaching and learning environment.

As Perse and Dunn (1998) mentioned in his theory about uses and gratifications of new media, “interactivity and demassification, two attributes of computers, enable people to actively and easily select specific kinds of content and pacing to satisfy particular communication needs” (p. 437). The same held true for the Internet. If
teachers can take advantage of these attributes in their classes to enhance students’ need for specific content and pacing, the students can enjoy deeper learning.

This study of three middle schools found several features of the pedagogical practices of the teachers that reported using the Internet in their classrooms:

1. The teachers reported using real-world contexts. The School G technology teacher asked the students to conduct a real weather report for a particular football season. The School L French teacher designed a project for students to report on their expenses of a mock trip to Paris based on their research of the attractions in Paris and the prices for air-travel and other means of public transportation.

2. Teachers who were using the Internet for teaching allowed students some independence to explore on their own. The teachers were willing to give up certain authority to let the students lead the direction of their own learning. The English teacher from School L let the students of the English literature class choose a concept of their own. Students who chose the same concept were teamed together. Students used laptops and wireless Internet to explore writers and thinkers who wrote about the concept they were interested in. Some chose “faith,” some chose “loyalty,” and some chose other concepts. Students of the same team helped each other in locating useful links. Students found names such as Robert Frost, Churchill and Confucius and continued looking up more about these people and their works.
3. The teachers who used the Internet reported that while using the new technology they were more comfortable with discussing things that they did not know very well. Teachers reported that they were more willing to be taught by students. The School N math teacher asked her students to show her PowerPoint features and also allowed students to teach each other Internet search skills.

4. Teachers who used the Internet let students follow their own personal prior interests that were related to the subject area. School N math teacher reported that students formed extracurricular interest groups and they worked on their own interests related to their subject area.

5. This study showed that language teachers and art teachers can integrate new technology such as the Internet as well as the math/science teachers. English teachers, French teachers and art teachers of the three schools investigated reported using the Internet regularly to engage their students.

6. Teachers who used the Internet in their classrooms were willing to adopt interdisciplinary activities and collaborate with teachers from other subject areas. School G art teachers conducted an Internet research project of marine animal habitats which incorporated art, English composition, biology, and oceanography all into one project.

7. Teachers who used the Internet assigned long-term complex projects for students. English teacher of School L involved their students in a CyberBuddy project where students exchanged reading reflections through email with
college students. The middle school students read, wrote, and created websites and PowerPoint presentations in this project which lasted for a year. The English teacher reported that by the time of the investigation the eighth graders had 420 emails for the CyberBuddy project.

8. Teachers reported that they allowed students to think for themselves and make decisions by providing them with multiple choices and resources. The French teacher of School L provided websites, books, and encyclopedias for students to investigate information concerning their imagined trip to Paris. The students had to make decisions on how to get to Paris and how to travel to the different attractions so as to visit the places that they wanted to visit within a budget plan. The students had to decide which places to go, and calculate the expenses for the whole round trip. They needed to convert money between the US dollars and Euros so as to make a final plan.

These teachers’ practices were welcomed by students who attended the focus groups. Students reported that they enjoyed these projects doing online research to solve real problems. One boy of School N mentioned that he loved the simulation and authentic projects that were related to computer technology and the Internet. The students reported that they were more motivated when they did online research for a real context.

Engaging students for meaningful learning through Internet use will have to start from philosophical shift. Constructivist practices can make the best use of the Internet to promote meaningful learning.
Isolation or Connection?

The students of the three schools investigated reported that they loved chatting online with their friends, and girls were particularly into the online communication with their friends and family. Some of them commented that they did not think there was much difference between online chatting and face-to-face communication because they had their own smiley faces and special online language. It was obviously fun to them. Yet, when asked whether they were using the Internet at home on their own or together with other people, almost all of the students in the focus groups answered that they were using the Internet alone, not as a group. Is the Internet a social place or is it isolating people?

Dewey (1959) emphasized the importance of group interaction in children’s development. According to Dewey, self-formation is a continuous process, and this continuous searching for identity happens in a social environment, not in isolation. The Internet is an interactive tool, and it could be used in combination with face-to-face communication to provide students with a social atmosphere, and not leaving them in isolation.

Some features of the Internet can be used to enhance social interaction. As reported by the students, they loved chatting online, which kept their friendship close. Besides, students also reported that they loved to go to certain sites such as Neopets.com, which is a virtual reality site where young people play roles to take care of pets, maintain houses, manage personal finance, open small businesses, and so on. The researcher went to Neopets.com to try all of these activities and found that it had
role-playing features. The young people playing it reported that they really learn something about life.

The children in the focus groups perceived online communication as another type of social interaction which is not different from talking on the phone or speaking face to face with each other. The girls of School N described how they felt comfortable using their jargons online to talk with their friends, and they did not think chatting online was any different from face-to-face communication. Girls of School G mentioned that they sometimes multitasked. One girl described how she talked on the phone and chatted through instant messaging all at the same time. To the young people, online communication is a social means to get close to friends, relatives.

Boys, on the other hand, were braver in using online communication to get to know strangers. Subrahmanyam and others (2001) raised the notion of “strong ties” and “weak ties” to describe young people’s social relationships enhanced by online communication. “Strong ties”, according to the authors, refers to relationships with family members, close friends, and relatives. “Weak ties”, on the other hand, refers to relationships with strangers by using listservs, chat rooms, and so on. In this study, boys described how they sometimes talking with strangers online. It seems that girls tended to use online communication for “strong ties”, and boys risked it for “weak ties” more often. One boy of School L said that he would talk with people in Ohio that he did not know before. A boy of School G chatted with people from different countries and thought that he learned different cultures from these people.

Schools can integrate chat rooms and dynamic Websites into their curriculum in
order to form a more social environment so that students could learn things through the interaction both online and face-to-face. Role-playing games, such as Neopets.com, can be arranged in such a way that the students can be assigned a task, such as to draw a pet and put up a gallery for others to visit. The students can also be required to create a Website for their pets and write about their pets’ exploratory stories. Then, the students can arrange an extracurricular activity for story telling. They can actually form a writing club, or arts club, about their pets. The students can then make friends with other pet owners, write e-mails to each other, or use chat rooms with each other to exchange information. In that way, the teachers and parents do not have to worry about the overindulgence of the students with the games. Students can learn skills and concepts relevant to curriculum content and relevant to their personal life.

CyberBuddy is another way to arrange social interactions to extend “weak ties”. If the school administered the students to meet with people of other school districts or colleges, the students can reach out to more people through online communications. If used properly, the Internet can be a social tool which will benefit students’ self formation.

*Gender Equity*

The study had some interesting findings. On surface, the findings of the study indicated that boys and girls did not differ much in what activities they were engaged in. As the data analysis goes deeper, it turned out that though the boys and girls were doing the similar things online, they were actually engaged in different things. Both
boys and girls like to chat online, play games online, go shopping online, and do homework online. But differences were reported in what they chatted about and what kind of games they were playing. When girls were chatting, they were most likely chatting about what they were doing right now and what has happened to them and their friends or family. Boys were more likely to talk about their personal interests, hobbies, gaming, and so on. Both girls and boys loved to play games, yet the boys tended to play more violent games such as shooting games. Girls loved to play games such as chess, golf, and role-playing games on Neopets.com. They enjoyed contents that were related to social interaction, caring, and everyday life. In addition, there was a tendency that boys showed more boldness and openness in their Internet use. More boys reported that they would take a chance to talk with strangers online.

Girls reported that they loved the Internet and computer technology. Teachers also reported that boys and girls could perform equally well while using computer and the Internet. If the girls were given the chance to keep up their computer and Internet skills and were encouraged to follow a career related to computer use, it could help narrow gender discrimination in informational technology careers.

*Narrowing Digital Divide*

As the findings indicated, there were still students who did not have Internet access at home, though that number is shrinking, according to the teachers and parents interviewed. Regional differences were found between the rural and the suburban schools. Though schools at the rural and small town areas did not have problems accessing the Internet, the ways of using the Internet at home and at school were more limited than students of the suburban school.
Public libraries were useful in subsidizing the students who did not have access to the Internet, but the public library service alone was not an adequate solution. As the English teacher of School L pointed out, students who did not have access to computers and the Internet were also those who lived far away from the public libraries and many times these students found it difficult to use the public library after school time.

Teachers can work out a plan to reduce any negative effects that result from lack of access. Some of the teachers interviewed were paying special attention to the students who did not have access to the Internet. When English teachers assigned homework, they provided choices for students to choose from: either use the computer or use paper or pencil to write a report. Students of School N were sent to the public library to go online and do research if they could not do it at home. The public library was just across the street from the school building, and therefore it did help the disadvantaged students to some extent.

Schools can arrange to open their labs for disadvantaged students to use after class. Students reported that they usually use the computers and the Internet as a class at a regular class time. They would occasionally use the computers on their own for special projects with their teachers’ approval. Disadvantaged students who did not have Internet access at home should be given special permission to use the Internet for their homework. The school can arrange a self-study period for such students. The English teacher of School L noted that one boy in her class was from a poor family
background, and yet he was the one who developed interest in using the computer and the Internet, and he would take advantage of any chance to use it at school. Schools can provide an atmosphere to encourage such behaviors, creating possibilities for the disadvantaged students to succeed.

One way to narrow the digital divide between regions is to have collaborative learning among schools. Provide chances for students to meet with students of other schools either online or face-to-face. To get funding for such activities, there are grants available to help schools to use technology in teaching and learning. Schools can seek to apply for a few grants. School L in this study tried to apply for grants and the school received “Raising the Bar” grant to expand their technology use.

Computer literacy classes are another way to combat the digital divide. Any students, no matter what family background they have, can grasp computer skills by taking a class at their school. The students of the three schools investigated all had computer literacy classes. Some schools started earlier than other schools. Students of School N had a computer literacy class when they were fourth graders. Students of the other two schools took the course in 7th grade. When asked where they learned their computer skills, students mentioned family, friends, and then school classes. Students talked about learning typing skills, Internet search skills, using CTRL+ALT-Delete, and so on. The findings indicated that a computer literacy class serves as an equalizer if family and friends can not provide information for computer skills, which is often the case of the disadvantaged students.
Preventing Plagiarism

As the findings revealed, students knew about plagiarism, and they could give simple definitions and they reported that they learned the concept from their teachers. They knew copying words word for word from somebody else’s work without giving credit was plagiarism. They knew that if they used an image online, they needed to include where it came from in the bibliography. From their conversations, they did not know more than that simple definition of plagiarism.

The findings also revealed that the students could grasp the concept well but some of them took advantage of opportunities to plagiarize or make excuses for doing it just this one time. A couple of students said that they did once copy a paper and turned it in as their own because they were pressed by the deadline. Students in the focus groups also admitted that they knew someone who did copy word for word from the Internet to make up their own reports. Teachers reported that sometimes they found students were reading the teachers’ guides online and turned in answers that were provided by the guides.

Students did not understand more complicated concept of plagiarism. They seemed to understand that they could not just take word for word from someone else. The students did not talk about other forms of plagiarism. Some said that to avoid plagiarism he or she would paraphrase the original work of others in their reports. They did not really understand that even by paraphrasing, they need to use their own thinking to synthesize the sources and give credits to the original work.

As pointed out by the technology teacher of School G, students are living in a
world of digital technology where copying other people’s product is so easy. The teachers of the three schools were educating their students about plagiarism, and the art teacher, for example, was very particular about the sources of the images the students collected from different websites. An awareness of what plagiarism is in a digital world is of primary importance because the students are growing up digital.

**Educating Parents**

With the young people getting more Internet-savvy, their parents must be able to communicate with their children so as to make sure their children are safe online. As one parent in this study pointed out in an interview, some parents had no idea what their kids were doing. It is advisable that when schools are educating young people, they also provide information for parents so as to cooperate with parents together to nurture the young people to use the Internet properly.

The study found that some parents cared about their children’s safety online, and they were setting rules for their children. Students reported that their parents would only allow them to use the computers and the Internet for a limited time period. Some said they had to stop using the Internet after one hour. Some said two or three hours. A few parents were reported to set up their computers to automatically shut off after a few hours. Parents were also reported to tell their children not to access certain Web pages or not to give out personal information.

On the other hand, there were students who reported that their parents trusted them and let them use the computer on their own. According to the students, parents sometimes came to watch the children go online only for a few minutes and then went
away. A few parents would ask their children if they had already finished their homework, and then let them use the computers for the rest of the evening without being supervised. A female student also reported that she sometimes would use the Internet in her own room with the door shut because she did not want her brother to make fun of her all the time.

Taylor (2002) reported that 85% of the children and youth surveyed in her study used chat rooms at home without being supervised, and 82% of those unsupervised reported that they had no household rules for online use at home. Thirty-nine percent of the people surveyed (including parents and children) reported that they had rules about talking to strangers.

Parents need to know how to keep their children safe online. Announcing household rules for using the Internet is the first step. Good rules can give directions for the youth which behaviors are appropriate and which are not. Based on the findings of this study, students were likely to speak with strangers who appeared nice, and they might give out personal information by fooling around with online surveys, or going shopping online without consulting their parents. Here are some guidelines that parents can use to set up rules for their children:

1. Report to parents when you are contacted by a stranger.
2. Consult with your parents if you feel shocked or upset with images or information that are posted on certain Websites.
3. Do not meet with a net friend in person when you do not know who he or she really is.
4. When shopping online, you can search for the goods that you like, but let the parents take care of the real purchasing process.

5. By no means should you give out personal information such as your age, sex, contact information, and so on.

6. Avoid talking to strangers, no matter how nice they may appear in the chat room.

7. Do not send your picture to anyone that you do not know.

8. Do not respond to online surveys.

9. When you get unexpected pop-up windows, stop using the Internet and report it to your parents. Let your parents clean up the spyware that may have infected your computer.

Rules are important, but they cannot replace supervision. Parents should not let their children use the Internet alone in a closed room without being supervised. Keep the children in sight when they are using the Internet. Parents need strategies to practice the supervision. Since middle school students becoming teenagers, they want a sense of independence and may resent the supervision.

Parents can also use filters on home computers. Based on the findings, teachers and parents were supporting the use of filtering to ensure online safety and privacy protection. Filters can at least block most of the inappropriate things. There are filters that are particularly designed for minors. Parents can use those filters at home to protect their children. Some researchers such as Taylor (2002) argued that filtering can send the young people a false signal, which makes them more curious to seek out
the inappropriate things. Another concern is that parents can have a false sense of
security when using filters. Teachers, media specialists, parents, and students reported
that sometimes inappropriate things will still come through even with filters. This
means that parents still need to supervise their children when the Internet is used at
home by the children.

Modeling is important in Internet use. The study found that quite a number of
students mentioned that their parents influenced their use of the Internet and computer
in general. If the parents have a disciplined habit of using the Internet, their children
tend to follow such habit. If the parents observe the household rules, their children
tend to observe the rules.

There are some useful resources online that give tips to parents how to make
their home Internet use safe for their children. American Association of School
Librarians has a special section for parents with media-savvy children:

The site contains information about the cons and pros of using filtering, what parents
should know about helping their children use computer technology.

Bushong (2002) pointed out that AASL has a Families Connect section which
gives tips for parents and provides resources that can help their children learn or have
fun in a safe way:

Other sites Bushong recommended include:
1. Center for Media Education—http://www.cme.org. This site contains tips for parents about online safety and privacy protection, including explanations for COPPA.

2. The Children’s Partnership—http://www.childrenspartnership.org. This site contains research and materials that educate parents, educators and other people who are involved with children. Some information includes how to set up rules and tools for families online.


5. Safekids—http://www.safekids.com. This site is particularly focusing on child and family online safety issues.


**Recommendations for Future Research**

There are a few recommendations for future research to extend the work of the present study:

1. Girls’ interest in games. The study has found that not only boys were interested in online video games, but also the girls. Girls were playing games somewhat differently from the boys. The girls talked about games such as
simulation of life, role-playing games, chess, and golf, and so on, while the boys loved gun-shooting games, sports games, and mind games. Future study can investigate more about how to integrate games into classrooms to promote gender equity in the career of game design. What are girls’ perceptions of games? What roles can girls play to contribute to game-making? How does middle school curriculum adjust to girls’ interest in games?

2. Teachers’ online experiences. This study has mainly focused on students’ online experiences. Future research can extend this work and focus on teachers’ practices of using the Internet to promote meaningful learning in different content areas. This study has investigated the philosophical disconnect between the teachers and the students in terms of understanding Internet use. More study can be done on how teachers are using the Internet to keep up with technology-savvy students. What are the successful experiences of using the Internet to enhance teaching? What are the successful ways to promote the philosophical change of teachers to meet with the needs of the Information Age?

3. Urban schools. This study has its limitations in scope. It covered three schools in a rural area, a suburban area, and a small town in Ohio. Future research can study urban schools to see how students of urban areas are using the Internet, and what teachers and educators can do to integrate Internet use into urban curriculum to meet students’ life long learning goals.
4. Roles of technology coordinators. The study considered the perspectives of teachers and media specialists, but did not consider school district technology coordinators. The School L media specialists and principal talked about how the technology coordinator strived to implement change in the school to involve teachers in using the Internet and other technology to enhance teaching and learning. Future research can investigate: what are the roles of technology coordinators in Internet integration into K-12 curriculum?

5. District policies. This study did not focus on policies. The study found that issues of digital divide and online safety need district policies to guide school practices. For instance, School N teachers mentioned that the school district has a special policy about students using the Internet with human supervision. Future study can investigate: What district policies can ensure both students’ online safety and successful learning? What policies can help reduce the digital divide with respect to access, gender, and regional differences?

Conclusion

This study has investigated students, teachers, media specialists, and parents of three schools. It has helped to understand the phenomenon of students’ Internet use, and the meaning students give to their Internet experiences at home and at school. Internet use can be most effective for teaching and learning if the teachers know how to appreciate the medium as the students do and how to comfortably step aside to be a good guide to stimulate students’ engagement in learning. Teachers of the three schools investigated reported constructivist practices such as using real-life contexts,
conducting long-term projects, promoting higher-order thinking and decision-making by way of providing multiple resources and choices, encouraging independent exploration, promoting interdisciplinary learning, and promoting team work and collaboration. The Internet can be a great tool for middle school students if the teachers practice using it in constructivist ways.
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Appendixes

Appendix A: Focus Group Moderator Guide

Appendix B: Interview Questions for Teachers

Appendix C: Interview Questions for Media specialists/Librarians

Appendix D: Interview Questions for Parents

Appendix E: Consent Form for Teachers and Media Specialists /Librarians

Appendix F: Consent Form for Parents/Guardians
Focus Group Moderator Guide

Part I. Introduction

One purpose of the study is to investigate how middle school students are using the Internet both at school and at home. The study will explore the experiences related to Internet use that boys and girls in the middle schools have. Focus groups in the three selected middle schools will reveal trends and problems of Internet use that are related to middle school kids. Issues such as ethics, safety, and digital divide will be discussed.

Another important purpose of the study is to see how boys and girls use the Internet differently at home or at school. This study will examine in detail the experiences of boys versus girls in Internet use, and the different meanings they give to these experiences. How do boys and girls interpret their online experiences? What do these experiences mean for middle school education?

This study will contribute to the understanding of students’ interpretations and it will yield implications for educators and school administrators to balance students’ freedom and restriction online. By understanding students’ perspectives, educators, curriculum designers, and teacher educators will be better prepared to develop meaningful learning activities that exploits the potential of the Internet as an educational resource and that takes full advantage of young people’s online experiences.

Focus groups are a major data collection method of the study. There will be focus
groups in three different schools, with two for each school. At every school, one focus group is an all girl group and the other is an all boy group, and each group is composed of 6 participants. Each focus group session will last for 60 minutes.

Part II. Warming Up

The moderators will share their own backgrounds with the student participants so as to make them comfortable with starting conversations. The moderators can introduce their educational interests and explain why they are doing the research. The moderators can also ask the students to introduce themselves and start to establish rapport with the students and among the students.

Part III. What Are We Looking For?

In this study, the focus group is used to listen to students’ voices of their online experiences so as to see what experiences middle school students have with the Internet and what meanings they are giving to their experiences online.

The moderator will elicit students’ free talking and detailed descriptions of their online activities at school and at home. By using the warming-up materials, the moderator will ask the students’ feedback to different research results. Ask the students to relate to their own daily experiences with the Internet and describe their experiences and understandings.

Part IV. Content

Corresponding to each part of the warming-up, the moderator can ask a few questions to stimulate discussions.
A. Questions for students corresponding to the NSF pilot study:

- What are your favorite websites? Are they different from the results of the NSF Project, Getting the Media Message?
- Do boys and girls differ in favorite Web sites? Why?
- Do you prefer using the Internet to books? Why?
- How often do you use the Internet at school? How often at home?
- How long are you online every day?

B. Questions for students corresponding to Pew Project

- In what ways are you using the Internet? Are they similar to the ways the students used in the Pew Project?
- What are your favorite ways of using the Internet? Why?
- Do you use the Internet differently at home and at school? What are the differences?

C. Questions for students corresponding to UCLA reports

- What effects does the Internet have on your achievements at school?
- Some people say that Internet use is a distraction for learning, do you agree? Why?
- Were there occasions that you gave out your personal information online to someone you did not know?
- Did it bother you to see colorful ads pop up on the screen while you are using the Internet?
- Did porn web sites ever hit you by accident? How did you handle such a situation?
• What did your parents do when you are using the Internet at home? Did they have an eye on you?

D. Questions for students corresponding to Josephson Institute of Ethics Survey

• Did you ever find someone cheating by using the Internet? What did he/she do to cheat? Did you report it to your teacher? Why?

• There are so many papers, images, music pieces, and video clips on the Internet, that it is really convenient to finish a paper quickly. Is it a big deal to copy paragraphs from different sources to form a presentation? Do your friends often do that?

• Do you know the word “plagiarism”? What does it mean to you?

E. Questions for the students corresponding to Kids Count Survey results:

• Are there students that you know do not have computers or Internet access at home?

• Do you sympathize with them? What do you think they have missed without the Internet access at home?

• What could they do to make up what they missed?

Part V. Summary

The purpose of the focus groups is to listen to students’ descriptions of their experiences online so that the researcher could interpret the meanings the middle school students give to their online experiences. As a result, the research is expected
to have important implications for middle school curriculum development. The moderator is supposed to draw out the students’ detailed descriptions. Some research results can be used to warm up the students and stimulate them to share their own experiences. When each session is over, the moderator will stay at the meeting place for 10 to 15 minutes to listen to more comments from the students. The major task of the moderator is to elicit talking and to listen.
Appendix B

Interview Questions for Teachers

1. What subjects are you teaching?

2. How many students are you teaching now?

3. What Internet activities were students involved with in your class?

4. When students described their experiences online in your class, did you notice anything that surprised you? If so, why did it surprise you?

5. When students talked about their online activities, did you notice any difference between boys’ descriptions and girls’ descriptions?

6. In what Internet activities did you find it most difficult to organize the classroom?

7. In what Internet activities did you find it easiest to organize the classroom?

8. Did students complain to you about the Internet use at school?

9. What Internet activities are forbidden in your school and in your classroom?

   Why? Did the restriction arouse any inconveniences for the students’ normal learning activities?

10. Have you noticed any forms of cheating by the students through the Internet?

11. Do your students understand the term “plagiarism”? How do they interpret it?

   Do students copy and paste from the Internet often? Do they think it a big deal to do so?

12. Do your students talk about using the Internet at home? How do they describe their experiences?
13. If students and their parents did not sign AUP properly, what challenges does that present for you as a teacher?
Appendix C

Interview Questions for Media Specialists/Librarians

1. How many computers are there in the media center? Are all the computers connected to the Internet?

2. Do students come to access the Internet at the media center? Do they come individually or as a group?

3. What hours can students access the Internet at the media center?

4. What are students’ favorite online activities in the media center?

5. Do boys and girls do different things online? Why?

6. Have you observed students doing things that concern you? Give examples.

7. Were you ever surprised by what students did online?

8. What impacts does the Internet have on middle school students?

9. Do students feel at ease using the Internet at the media center?

10. Are there any restrictions for students’ internet activities in the media center? Do you use filtering? Do you think that filtering is necessary? Why?
Appendix D

Interview Questions for Parents

1. How many children do you have?

2. Do you have a computer? Where is the computer located at home?

3. How often does your child go online at home? How long will he/she be online every day?

4. What things online interest your child the most? Why?

5. Are you worried about letting your child go online? Or you think it is a good thing to let him go online? Why?

6. Do you watch what your child is doing on the Internet? Why?

7. Do you think what your child does on the Internet helps his/her learning at school? Or is it a distraction?

8. What special things did your child do online that impressed you the most?

9. What special things did your child do online that frustrated you? Or worried you?

10. Do you go online often? Do other family members?

11. What things do you do online? In what way have you influenced what your child likes to do online?
Appendix E

Consent Form for the Teachers and Media Specialists/Librarians

Title of Research: Interpreting Middle School Students’ Online Experiences: A Phenomenological Study

Principal Investigator: Hongyan Ma

Department: Educational Studies, Ohio University

Federal and university regulations require signed consent for participation in research involving human subjects. After reading the statements below, please indicate your consent by signing this form.

Explanation of Study

The study seeks to gain perspectives of teachers and media specialists/librarians on how the students are using the Internet at school. Interviews with teachers and media specialists/librarians will be conducted. Each interview will last for about thirty minutes, and will be audio taped. The interviews will be conducted at the school during school hours when you are available.

Risks and Discomforts

There are no known risks or discomforts. The researcher will reduce any possible risks or discomforts by keeping the records of the interview confidential.

Benefits

Your participation will help educators learn more about young people’s perspectives of online experiences. The findings of the study will help educators develop more engaging Internet curriculum.

Confidentiality and Records

The interview will be recorded on an audiotape, and will be transcribed later. The audiotape and the transcripts will be locked in a safe place, available only to the researcher and her assistants. Names of the attendants will be anonymous in any reports of the study. The audio tapes will be destroyed once the analysis is complete.

Compensation

Teachers and media specialists can get an email copy of the final report of this study if they desire.

Contact Information

If you have any questions regarding this study, please contact Hongyan Ma at 740-589-4496 or at hm442592@ohio.edu or Sandra Turner at 740-593-9826 and turners@ohio.edu

If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

I certify that I have read and understand this consent form and agree to participate as a subject in the research described. I agree that known risks to me have been explained to my satisfaction and I understand that no compensation is available from Ohio
University and its employees for any injury resulting from my participation in this research. I certify that I am 18 years of age or older. My participation in this research is given voluntarily. I understand that I may discontinue participation at any time without penalty or loss of any benefits to which I may otherwise be entitled. I certify that I have been given a copy of this consent form to take with me.

Signature________________________________________ Date_______

Printed Name______________________________________________
Appendix F

Consent Form for the Parents/Guardians

Title of Research: Interpreting Middle School Students’ Online Experiences: A Phenomenological Study

Principal Investigator: Hongyan Ma

Department: Educational Studies, Ohio University

Federal and university regulations require signed consent for participation in research involving human subjects. After reading the statements below, please indicate your consent by signing this form.

Explanation of Study
The purpose of the research is to investigate what experiences middle school students have with the Internet and what meanings they give to their experiences. The research includes two focus groups composed of six female students and six male students, respectively. Please sign at the end if you and your child agree to be on the focus group. The duration for each focus group is 100 minutes. Each session will be audio taped. Focus groups will be conducted at the school after the school ends. The research also needs to interview some parents/Guardians to gain perspectives of students’ Internet use at home. Each interview will last about 30 minutes. Please indicate at the end if you are willing to be interviewed.

Risks and Discomforts
There are no known risks or discomforts. The researcher will reduce any possible risks or discomforts by keeping the records of the interview confidential.

Benefits
Your participation will help educators learn more about young people’s perspectives of online experiences. The findings of the study will help educators develop more engaging Internet curriculum.

Confidentiality and Records
The interview will be recorded on an audiotape, and will be transcribed later. The audiotape and the transcripts will be locked in a safe place, available only to the researcher and her assistants. Names of the attendants will be anonymous in any reports of the study. The audio tapes will be destroyed once the analysis is complete.

Compensation
Parents can get an email copy of the final report of this study if they desire.

Contact Information
If you have any questions regarding this study, please contact Hongyan Ma at 740-589-4496 or at hm442592@ohio.edu or Sandra Turner at 740-593-9826 and turners@ohio.edu
If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

I certify that I have read and understand this consent form and agree to participate as a subject in the research described. I agree that known risks to me have been explained.
to my satisfaction and I understand that no compensation is available from Ohio University and its employees for any injury resulting from my participation in this research. I certify that I am 18 years of age or older. My participation in this research is given voluntarily. I understand that I may discontinue participation at any time without penalty or loss of any benefits to which I may otherwise be entitled. I certify that I have been given a copy of this consent form to take with me.

1) I am willing to be interviewed.  □Yes  □ No

2) I give permission for my son/daughter to take part in the focus group session. I understand that my child has a choice of whether or not to participate in the session and that their participation or not will in no way affect his/her grade or standing in school.  □Yes  □ No

Signature_____________________________ Date __________

Printed Name______________________________

Your Child’s Name_________________________
Appendix G

Student Assent Form

Title of Research: Interpreting Middle School Students’ Online Experiences: A Phenomenological Study

Principal Investigator: Hongyan Ma

Department: Educational Studies, Ohio University

Federal and university regulations require signed consent for participation in research involving human subjects. After reading the statements below, please indicate your consent by signing this form.

Explanation of Study

The purpose of the research is to investigate what experiences middle school students have with the Internet and what meanings they give to their experiences. The research includes two focus groups composed of six female students and six male students, respectively. Please sign at the end if you agree to be on the focus group. The duration for each focus group is 100 minutes. Focus groups will be conducted at the school after the school ends. Each session will be audio taped.

Risks and Discomforts

There are no known risks or discomforts. The researcher will reduce any possible risks or discomforts by keeping the records of the interview confidential. When you participate, please do not mention anyone’s name in the discussion.

Benefits

Your participation will help educators learn more about young people’s perspectives of online experiences. The findings of the study will help educators develop more engaging Internet curriculum.

Confidentiality and Records

No real names will be mentioned in the discussion session. The audiotape and the transcripts will be locked in a safe place, available only to the researcher and her assistants. Names of the attendants will be anonymous in any reports of the study. The audio tapes will be destroyed once the analysis is complete.

Compensation

There is no compensation for participating in the research.

Contact Information

If you have any questions regarding this study, please contact Hongyan Ma at 740-589-4496 or at hm442592@ohio.edu or Sandra Turner at 740-593-9826 and turners@ohio.edu

If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

I certify that I have read and understand this consent form and agree to participate as a subject in the research described. I agree that known risks to me have been explained to my satisfaction and I understand that no compensation is available from Ohio University and its employees for any injury resulting from my participation in this
I certify that I am 18 years of age or older. My participation in this research is given voluntarily. I understand that I may discontinue participation at any time without penalty or loss of any benefits to which I may otherwise be entitled. I certify that I have been given a copy of this consent form to take with me.

Signature_________________________________________ Date_______

Printed Name________________________________________