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Internet Filtering: The Effects in a Middle and High School Setting

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Abstract

The purpose of this study was to identify the effects of Internet filtering and restricted Internet access in a school system and its effect on teaching and learning. A total of 120 middle and high school teachers, support and administrative staff completed a questionnaire with 14 Likert-type items and one open-ended response question about their perceptions of Internet filtering in their school. A chi-square test between middle and high school respondents revealed no significant differences. The majority (N=87) reported they accessed the Internet on a daily basis. Nearly all agreed that technology support was available (N=118), but 117 respondents felt legitimate sites had been blocked. Although user agreements were in place, results indicated that some felt students were not always punished for downloading offensive material. Some admitted they used techniques to get around the filter or block to complete their tasks. A majority of the respondents reported e-mail as a critical function. Most felt the restrictions imposed in this county school system were more of a ban to Internet access. Teachers who use the Internet to develop lesson plans must show how the Web sites will be used to support the lessons and get approval to access the Internet. Sites must be bookmarked for the students' use, and teachers are responsible for them accessing only those sites. Frequent comments regarded the "filtering" system as essentially a block that hampered their duties, created an inconvenience, reduced student autonomy, lowered morale, and decreased the likelihood they would create lessons that would integrate technology.

The Internet has been touted as a tool that encourages learning and communication. As a new way of processing information, the Internet can encourage learners not only to view themselves as being in charge of their own learning but also to perceive teachers as facilitators in their learning process (Yumuk, 2002). The Internet is interactive and engages the learner upon entry into its vast network. Unlike resources such as textbooks, journals, and other materials used in traditional teaching and learning, the Internet can stimulate learners to find the most updated information in a short amount of time (Yumuk, 2003). Since the Internet is an inherent part of our lives, industries, and schools throughout the world look to protect their young and try to prevent negative or controversial information that is available on the Internet from entering the school pipeline.

Since 1996, Congress has worked to pass Internet legislation that would protect the nation's school-aged children from inappropriate content and punished violators of those laws. However, many laws passed by Congress violated constitutional rights and failed at the Supreme Court levels. One example was The Communications Decency Act of 1996. This act prohibited the sending or posting of obscene or indecent material via the Internet to persons under the age of 18. The Supreme Court declared in *Reno v. American Civil Liberties Union* (1997) the law unconstitutional because it violated free speech under the First Amendment.

In the Child Online Protection Act (1998), Congress passed a law written more narrowly to protect children from inappropriate online content. Later, Congress passed the Children's Internet Protection Act (2000) which requires schools and libraries that receive federal funds for discounted telecommunications, Internet access, or internal connection services to adopt an Internet safety policy. The safety plan must include technological protections that block or filter access to visual depiction that are obscene, pornographic, or harmful to minors.

Educators recognize that because the Internet crosses every facet of life, it tends to model the ideas and profiles of that larger society. State and national legislatures have attempted to insulate people from indecent materials found on the Web (Rumbough, 2001). The information on the Internet is often times faulty or completely inaccurate, and some suggest that if left unchecked, may expose children to pedophiles, pornography, and other lascivious acts. School systems look for ways to counter the harmful association that Internet access can bring through software design to filter inappropriate information.

Whether or not students, teachers, or administrators should have full Internet access is debatable. For example, Rumbough (2001) examined 985 college students about the controversial uses of the Internet. He found that students accessed web sites that involved pornography, illegal drugs, weapons, racist material, fake ID making, and gambling. Results also showed that although 792 (80.5%) indicated they did not engage in academic cheating and that 174 (17.7%) admitted they cheated on class assignments via the Internet. Rather than allow students, teachers, and administrators full Internet access, some schools monitor accessed web content and control when teachers and students can access sites and how they accessed based on a formalized lesson plan that must accompany a request to access the Internet. Shofield and Davidson (2002) found educators frequently implemented policies and practices specifically designed to direct and control students' behavior online. It is suggested that student learning is enhanced when students are allowed to try out their own procedures for solving problems, to pursue their personal interests, to con-

tribute to the assessment of their own work, and to help plan classroom activities (Shofield and Davidson, 2002).

Mehlinger (1996) highlights that technology has been an important part of our schooling in America, and until recently, technology was slow and simple. Society has progressed, but he reported that at one time, students did not have textbooks nor did teachers have tools such as blackboards and chalk. When viewed from this simplistic manner, it is easy to see how the Internet, known in some realms as the information superhighway, is met with resistance. Within one click, students can obtain information about how to build a bomb. This access has prompted the Internet filtering debate across a variety of mediums.

In the health industry, some believe that filtering significantly hampers the quality and quantity of online health information. In a study conducted by the Kaiser Family Foundation (2003), researchers examined six filters that are used mostly by schools and libraries. They found that filters can effectively block pornography without significantly impeding access to online health information but only if they aren't set at the most restrictive levels. The study showed that when filters were set at higher levels of access, access to pornography was not substantially increased. However, access to health information was greatly reduced.

The Internet is a valid tool for research, communication and education. Educators want an effective way to use it and to ensure a safe environment for school-aged children. Since 1994, according to Mehlinger, computer usage in school has grown steadily, from fewer than 50,000 computers in 1983 to nearly 5.5 million in 1994. Since then, computer access to the Internet has grown in public school. National Center for Education Statistics (2002) reported that Internet access in schools had grown to nearly 99% in all public schools. Also, access to the Internet had expanded in instructional rooms, from 3% in 1994 to 77% in 2000 and 87% in 2001. When the data was first collected in 1994, only 35% of public schools had Internet access.

With a computer and access to a server at an Internet node, anyone can put any information on the Web (Shiveley and VanFossen, 1999). Authors have proposed greater scrutiny towards this easy access to inappropriate material. Shiveley and VanFossen's (1999) study about critical thinking and the Internet suggests questions that students should consider about information on the Internet, such as: (1) who is providing the information; (2) what is the author's authority to write on this topic, and (3) does the author provide detailed background information that supports his or her authority?

A study revealed that teachers commonly expressed concern about the possible negative consequences of student autonomy on the Internet and implemented procedures designed to control and circumscribe stu-

dents' online activities (Schofield and Davidson, 2003). Schofield and Davidson found that teachers were in agreement that they did not want students to access sexual content from school, nor did they want them to use the Internet as a recreational vehicle to engage in chat rooms or to e-mail friends. They found that high school students engaged in this purported behavior more frequently than other students. They questioned 42 high school students who used the Internet for academic activities about whether they drifted and to what extent they drifted off task while working online during classroom time; 27 (64%) admitted that they had done this.

However, according to a report released by the Department of Commerce, National Telecommunications and Information Administration (NTIA), this "one size fits all" mentality is not the solution. While the educational community has had success with technology measures, it also recognizes that comprehensive child protection solutions do not rest solely with technology (August 2003). This report emphasized a customized approach where teachers and educational institutions combine technology protection measures along with other strategies and tools to afford better Internet protection for children.

The Internet age is here and a growing number of people, including children, are online. By the fall of 2001, 99% of public schools in the United States had access to the Internet, and public schools had expanded Internet access into 87% of instructional rooms. (National Center for Education Statistics, *Internet Access in U.S. Public Schools and Classrooms: 1994-2001* (September 2002 available at <http://nces.ed.gov/pubs2002/2002018.pdf>.)

Society worries about communities being left behind without access to a computer and the Internet. However, the dangers are real, and children are at potentially greater risk with access to the Internet when they can roam freely without control mechanisms. The Commission on Online Child Protection Act (2000) established that it potentially exposed them to the unseemly side of the Internet – indecent material, pornography, hate sites, violent sites, and online predators.

Those who argue for less control and those who seek full control acknowledged that controls are necessary but disagree about the form. Schofield and Davidson (2002) found that Internet usage produced independent feelings in students as they engaged in interactive learning, teacher assessments described students as functioning in an independent and self-directed manner, and the adoption of surveillance strategies by teachers, including, placing Internet connected computers so that screens were readily visible.

This controversy led the County Public School System studied in this project to modify its Internet policy and service in computer labs. In December 2004, the County Public School System blocked Internet access to all computer labs in all its high schools. Later, it restricted access system-wide. Afterwards, Internet service was turned back on for students to access these sites on a particular location on the network. This study sought to define the perceptions and beliefs about the revised Internet policy and its effects in a middle school and high school setting.

Methods and Procedures

Participants

This study included 120 participants. There was a 73 % survey response rate, including teachers and other administrative staff. Teachers and administrative staff varied in teaching and computer technology experience. A convenience sample from a middle and high school located in an inner-city district in middle Georgia was chosen to participate in this study.

Instrumentation

The completed questionnaire had 14 Likert-type items and one open-ended response question that was designed to capture participants' knowledge about the use and perceptions regarding Internet filtering in a school setting. The first three questions captured data about participants' expertise, experience, and gender. Question 4 determined Internet usage and was rated on a 5-point Likert scale (1=Never, 2=Monthly, 3=Weekly, 4=Several times a week, and 5=Daily). Question 5 allowed participants to mark as many responses that pertained to the tasks they performed on the Internet. Questions 6-14 used a semi-structured format that employed yes or no questions regarding filtering and its effects. Question 15 allowed participants to respond if they desired about Internet access in schools. Since the survey was conducted during a planned school meeting, participants were provided verbal instructions. A pilot test was conducted prior to the survey among teachers from varied disciplines who were in a graduate student technology- based course.

Procedures

A copy of the Internet filter survey was provided to the author's Professor of Educational Research who reviewed the survey for content validity. Afterwards, middle school and high school principals at the selected schools were contacted to ask if their school would like to participate in an Internet filter survey. To reduce participant bias, neither school was provided with a copy of the survey or results until the research was complete. Upon their approval, a copy of the instrument and a cover letter were sent to the County Board of Education for approval. After the Board granted

permission, the survey was conducted at each site during an informal meeting that was arranged by each school principal.

The main threats to this survey included the possibilities of a low response rate and participant untruthfulness. To reduce these threats, a special staff meeting was planned through each principal so that surveys could be distributed and collected at one time. Participants were assured that they could be candid in their responses because the surveys would remain anonymous. No names were collected with any of the data.

Results & Discussion

The purpose of this study was to identify beliefs and perceptions about Internet filtering and its effects on teachers, support, and administrative staff in a middle school and high school setting. One hundred and twenty participants completed the survey. A cross tabulation of the results between middle and high school respondents revealed no significant differences were found among them regarding Internet use, perceptions, and beliefs about Internet filtering (see table 2). Table 1 indicates the frequency amount accessing the Internet. Table 2 indicates perception and activities regarding Internet use. Nearly all respondents agreed that technology support was available (N=118), but 117 respondents felt legitimate sites had been blocked. Although user agreements were in place, results indicated that some felt students were not always punished for downloading offensive material. Some admitted they used techniques to get around the filter or block to complete their tasks. Table 3 indicates the number of respondents and activities they conducted on the Internet. A majority of the respondents reported e-mail as a critical function.

Although no significant differences were found among middle and high school respondents who participated in the survey, (see Table 2) the survey yielded unplanned results. While the survey focused on Internet filtering, most respondents to the open-ended question felt that the system imposed in this county school system went beyond filtering. Filtering is used to eliminate certain types of information, but staff felt the revised Internet policy serves more as a ban to Internet access. Support staff, including counselors, have restricted Internet access. Teachers who use the Internet to develop lesson plans must show how the web sites will be used to support the lesson, and seek approval to access the Internet. Sites must be bookmarked for the students' use, and teachers are responsible for allowing students to access only to those sites. Comments frequently cited the "filtering" system as a block that hampered their duties, created an inconvenience, reduced student autonomy, lowered morale, and decreased the likelihood they would create lessons that integrate technology. The following comments were offered by those who felt it hampered their duties:

“Some sites are blocked that I need for classroom enrichment, but I'm glad the porno sites are blocked.”

“It is a disadvantage for students and teachers who make positive learning experiences from use of the Internet.”

Yumuk (2002) indicated that the Internet encourages learning and contributes towards a healthy self-awareness that allows students to perceive teachers as facilitators in the learning process. Rather than institute restrictive measures such as a ban on Internet access, many wanted the Board to reach a compromise agreement that restored teacher controls and contributed towards student autonomy. Comments often demonstrated that respondents felt it posed an inconvenience:

“I go home...able to....access everything; students can't access material that goes with the book.”

Some teachers felt that student independence was reduced:

I am limited as a teacher with the filter software. My students cannot research or discover knowledge on their own. I must spoon feed them everything.”

Shofield and Davidson (2002) revealed similar results that suggested student learning increases when students participate in the learning process. Students gain new knowledge while they build upon their present knowledge and are able to try out their own procedures for solving problems, pursue their personal interests, and make a contribution in the classroom.

Respondents noted the apparent effect the Internet policy had on morale and the likelihood that teachers might continue to integrate Internet use in the classroom:

“The "blanket ban" on all sites is professionally insulting and academically outrageous.”

“If a county trusts us to educate its children, it needs to trust us to monitor students and use the Internet wisely.”

These statements are consistent with similar results reported in Schofield and Davidson (2002) in which teachers did not want students to

access sexual content from school and frequently instituted safeguard measures to directly control student behavior. Some teachers, however, felt that the current Internet policy would influence whether they would design lessons that incorporate Internet technology into the classroom. The following comments demonstrate these views:

“It is easier not to incorporate technology rather than go through the long tedious process of doing the research myself first.”

“I think teachers should be trusted rather than blocking the Internet in their room. Sometimes teachers need access in their classroom.”

As Mehlinger (1996) reported, technology is a part of the culture from which it arises and impacts the culture that created it. Similar studies show that while teachers and other staff do not want students to access pornography and acknowledge that the software effectively eliminates pornography, it also blocks legitimate sites. This was confirmed in this study; nearly all the respondents indicated that legitimate sites were blocked. Though filters are necessary, the Kaiser Family Foundation (2003) study found that filters can effectively block pornography without significantly impeding access to online health information only if they aren't set at the most restrictive levels. This study's results indicated that a blanket ban may be inconsistent with academic related tasks, creativity among students, student autonomy, and teacher morale. The results indicated that the county school system policy may significantly impede the learning process and job-related duties among its staff members, including teachers. When teachers do not feel they can be trusted, their creativity is reduced. When teachers and staff have to go outside of their main work area to access a particular Web site, then the quality of their work may decrease. The Child Online Protection Act (1998) passed by Congress established that educators, schools, and libraries protect children from inappropriate online content. However, it did not suggest that a total ban to Internet access was necessary to protect the nation's children. Further studies might examine how middle and high school students feel about Internet filtering and whether they perceive it as a barrier to academic success. A follow-up study is suggested since some educators believed that this policy would be changed in the very near future. These findings might add to the scope of opinions regarding the appropriateness of Internet filtering rather than a total ban to Internet access in the classroom and the school environment.

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Table 1
Time Spent Using Internet

Internet Use	Participant Response (N=120)	%age
Daily	87	72.5
Several times a week	20	16.7
Weekly	7	5.8
Monthly	4	3.3
Never	1	.8
Missing	1	.8

Table 2
Participant Perceptions about Technology Use

	N=Yes	N=No	*X2	p=
Technology support available	118	2	.13	.72
Legitimate sites blocked	117	2	.14	.71
Students sign computer user agreements	116	4	.29	.59
Filter installed on all computers	110	6	.44	.51
Eliminated offensive Web sites	94	11	.22	.64
Students punished/download offensive materi	94	11	.04	.85
Tasks jeopardized	90	26	.03	.87
Integrate technology into class lessons	85	28	3.35	.07
Techniques to get around filter/block	12	106	106	31

*Chi-Square tests revealed no statistically significant difference between opinions of teachers at the High School and teachers at the Middle School.

Table 3
Task Performed on the Internet

Technology-based Tasks	Participants Responded (N=120)
E-mail	109
Research	104
Create Instructional Materials	91
Grades	84
Attendance	63
Communicate with Students at Home	38
Distanced Learning	25

Appendix
Internet Filter Survey

To prevent offensive online content, to safeguard children, some schools have enacted software designed to filter offensive material. The purpose of this survey is to examine teacher and administrative staff perceptions about filtering information online in school. Survey responses remain anonymous and help to fulfill my graduate requirements.

1. What is your area of expertise?

- ===Computer Technology
- ===Social Studies
- ===Science
- ===Math
- ===History
- ===Geography
- ===Library Media
- ===Foreign Language
- ===Admin. Staff
- ===Principal

2. How many years of computer experience do you have?

- ===1-3
- ===3-5
- ===5 or more

3. What is your gender?

- ===Male

===Female

4. How often do you use the Internet?

===Daily

===Several times a week

===Weekly

===Monthly

===Never

5. What kinds of tasks do you perform on the Internet?

===E-mail

===Research

===Attendance

===Grades

===Distanced Learning for Self

===Communicate with Students at home

===Create Instructional Materials

6. Is filter software installed on all the computers at your school?

===Yes

===No

7. Do you use techniques to get around the filter program?

===Yes

===No

8. Have any tasks been jeopardized since the software was installed?

===Yes

===No

9. Do you design lesson plans that integrate technology into the lesson?

===Yes

===No

10. Do you have technical support at your school?

===Yes

---No

11. Are legitimate sites blocked because the filter program is installed on the computers?

===Yes

===No

12. Has the filter program eliminated offensive web sites?

===Yes

===No

13. Are students required to sign a computer user agreement?

===Yes

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===No

14. Are students punished for downloading offensive material?

===Yes

===No

15. Please provide your comments about blocking Internet access in schools: