



MERIDIAN

A MIDDLE SCHOOL
COMPUTER TECHNOLOGIES JOURNAL

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

Deborah G. Simmons

Winter 2005 Issue

[View Online](#)

<http://www.ncsu.edu/meridian/win2005/Internet%20filtering/>

Abstract

The purpose of this study was to identify the effects of Internet filtering and restricted Internet access in a school system and its effects on teaching and learning. A total of 120 middle and high school teachers and 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 themselves 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 designed to be more of a ban on Internet access. Teachers who used the Internet to develop lesson plans must show how the web sites will be used to support the lesson, and get approval to access the Internet. Sites must be bookmarked for the students' use, and teachers are responsible for students accessing only those pre-approved 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 integrating technology.

Introduction

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. 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 has become so ingrained in our culture, schools now have the added responsibility to protect students from inappropriate Internet content.

Since 1996, Congress has worked to pass Internet legislation that would protect the nation's school-aged children from inappropriate content and punish 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 the law unconstitutional in *Reno v. American Civil Liberties Union* (1997) because it violated free speech under the First Amendment.

With the Child Online Protection Act (1998), Congress passed a more narrowly written law to protect children from inappropriate online content. Later, Congress passed the Children's Internet Protection Act (2000) which required schools and libraries that received federal funds for discounted telecommunications, Internet access, or internal connection services to adopt an Internet safety policy. The safety plan had to include technological protections that blocked or filtered access to visual depictions that were obscene, pornographic, or harmful to minors.

Educators recognize that because the Internet crosses every facet of life, it tends to model society at large, and this can pose a problem for content that crosses into the classroom. The information on the Internet is often times faulty or inaccurate, and some suggest that if left unchecked may expose children to pedophiles, pornography, and other lascivious materials. State and national legislatures have attempted to insulate people from indecent materials found on the web (Rumbough, 2001). School systems look for ways to counter the harmful association that Internet access can bring through software designed to filter inappropriate information. However, when filters or other restrictive measures are enforced, teachers and administrators must contend with the effects that Internet filtering or blocking has upon their use of the Internet. Whether or not students, teachers, or administrators should have full Internet access in a school is debatable. Rather than allowing students, teachers, and administrators full Internet access, some schools monitor accessed web content, controlling how and when teachers and students can access sites based on a formalized lesson plan that must accompany the request to access the Internet. This control works contrary to research about how students learn. Shofield and Davidson (2002) suggest that student learning is enhanced when students are allowed to try out their own procedures for solving problems, to pursue their personal interests, to contribute to the assessment of their own work, and to help plan classroom activities. It is not surprising that they also found educators frequently implemented policies and practices specifically designed to direct and control students' behavior online.

Mehlinger (1996) contends that technology has been an important part of our schooling in America. Initially, technology was slow and relatively non-threatening. When viewed from this simplistic standpoint it is easy to see how the Internet now is met with resistance, when with one click, today's students can obtain questionable information such as how to build a bomb. This instantaneous, limitless access has prompted the Internet filtering debate across a variety of fields.

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 are not set at the most restrictive levels. The study showed that when filters were set at lower levels of restricted access, user activity remained unchanged. While no substantial increase in accessing pornography websites was indicated, access to health care information was greatly impeded.

The Internet is a valid tool for research, communication, and education. Educators want an effective way to use it while ensuring a safe environment for students. Since 1994, according to Mehlinger (1996), 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 also grown in public schools. The National Center for Education Statistics (2002) reported Internet access in schools had grown to nearly 99% of all public schools. Also, access to the Internet had expanded in instructional rooms, 1-3% in 1994 to 77% in 2000 and 87% in 2001. When 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 distribute any information on the Web, regardless of the validity of the information (Shiveley and VanFossen 1999). Shiveley and VanFossen (1999) researched critical thinking and the Internet, and suggested questions that students should consider before using 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?

Teachers commonly expressed concern about the possible negative consequences of student autonomy on the Internet, and implemented procedures designed to control and circumscribe students' 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 also found that high school students engaged in this behavior more frequently than other students. They questioned 42 high school students who used the Internet for academic activities about whether they drifted off task and to what extent this occurred while working online during classroom time. Over half, 27, (64%) admitted that they had drifted off task.

According to a report released by the Department of Commerce's National Telecommunications and Information Administration (NTIA) (August, 2003), a "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. 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.

A growing number of people including children now rely on the Internet. By the fall of 2001, 99% of the public schools in the United States had access to the Internet, and public schools had expanded Internet access into 87% of instructional rooms (The National Center for Education Statistics, 2002).

Those who argue for less control and those who seek full control acknowledge that controls are necessary, but disagree about the form. However, 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 the Internet potentially exposed children to indecent material, pornography, hate sites, violent sites, and online predators. However, 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 using the Internet, even with the adoption of surveillance strategies such as placing Internet connected computers so that screens were readily visible.

The public school system studied in this project modified its Internet policy and service in computer labs. In December 2004, the 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 specific sites. 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

Participants

Surveys for this study were sent to middle and high school teachers, support personnel, and administrative staff. Of the 164 surveys administered, 120 participants returned completed surveys, making a 73% survey response rate. 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 unlimited 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 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 asked if their schools would participate in an Internet filter survey. To reduce participant bias, no school was provided with a copy of the survey or results until the research was completed. Upon 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. Although the survey did not

indicate certain fields of teaching such as language arts, the researcher instructed participants to add this to their surveys if their field of expertise was not included.

The main threats to this survey were the possibilities of a low response rate and participant untruthfulness. To reduce these threats, surveys were distributed and collected at one time. At the meeting, I introduced myself as a graduate student and remained at the meeting the entire time to collect completed surveys. 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 and 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 regarding Internet use, perceptions, and beliefs about Internet filtering (see Table 2). Table 1 indicates the frequency of 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.

Table 1

Time Spent Using Internet

Internet Use	Participant Response (N=120)	Percentage
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	* χ^2	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 materials	94	11	0.04	.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	1.03	.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
Distance Learning	25

A Chi Square test was used to find out if there were differences in opinions among middle and high school teachers. All P values were more than .05 (Table 2). 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 school system went beyond filtering. Filtering is used to eliminate certain types of information, but staff felt the revised Internet policy served more as a ban on Internet access. Support staff, including counselors, had restricted Internet access. Teachers who used the Internet to develop lesson plans had to show how the web sites would be used to support their lessons, and had to seek approval to access the Internet. Sites had to be bookmarked for students' use, and teachers were responsible for monitoring student access. 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 integrating technology. The following comments were offered by those who felt it hampered 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 that restored teacher controls and contributed towards student autonomy. Comments often demonstrated that respondents felt filtering 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 control student behavior directly. Some teachers, however, felt that the current Internet policy would influence whether they would design lessons that would 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 study (2003) found that filters can effectively block pornography without significantly impeding access to online health information only if they are not 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 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.

Implications and Conclusions

The study results indicated that 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. Also, results showed that teachers should meet with administrators to discuss ways to minimize the impact that Internet filtering has upon learning so that academic opportunities are maximized.

This study was conducted to determine the effects of Internet filtering and restricted Internet access in a school system and its effect on teaching and learning. It determined that although some students may break rules that have been set to protect them from harmful or indecent material that is available on the Internet, administrators should try to find other creative disciplinary methods to reduce such violations. This would eliminate restrictive measures such as a total ban to Internet access because findings indicate that productivity is reduced, and it negatively impacts job performance among teachers and administrators. These findings might add to the scope of opinions regarding the appropriateness of Internet filtering rather than to a total ban of Internet access in the classroom and the school

environment.

About the Author

Deborah Simmons is a graduate student in Instructional Technology/Library Media at Georgia College and State University in Milledgeville, GA.

dgsim@bellsouth.net

Send correspondence to:
Department of Education
Instructional Technology/Library Media
Box 31061
Georgia College & State University
Milledgeville, GA 31061

References

Children's Internet Protection Act of 2000, Pub. L. No. 106-554 (codified at 20 U.S.C. §§ 6801, 9134 (2001); 47 U.S.C. § 254 (2001)).

Commission on Child Online Protection. (2000, October). Final report of the COPA Commission to Congress. Retrieved June 15, 2004, from COPA Commission Web site: <http://www.copacommission.com/report/>

The Communications Decency Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified at 47 U.S.C. § 223) (2001 & Supp. 2004).

Mehlinger, H. D. (1996). School reform in the information age. [Electronic version.] *Phi Delta Kappan*, 77, 400-407. Retrieved March 22, 2004 from Academic Search Premier database.

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>.

Reno v. American Civil Liberties Union, 521 U.S. 844 (1997).

Rumbough, T.B. (2001). Paper Mills, Pornography, and Pirating: College Students and the Internet: Controversial Uses of the Internet by College Students. Retrieved March 16, 2004, from *EDUCAUSE* Web site: <http://www.educause.edu/ir/library/pdf/CSD1618.pdf>

Schofield, J., & Davidson, A. (2003). The impact of Internet use on relationships between teachers and students. [Electronic version.] *Mind, Culture, and Activity*. 10(1), 62-79. Retrieved March 19, 2003 from

Academic Search Premier database.

Shiveley, J. & VanFossen, P. (1999). Critical thinking and the Internet: Opportunities for the social studies classroom. [Electronic version.] *The Social Studies*, 90(1), 42-46. Retrieved March 19, 2004 from Academic Search Premier database.

U.S. Department of Commerce, National Telecommunications and Information Administration (1999, September). How access benefits children: Connecting our kids to the world of information. Retrieved March 19, 2004 from http://www.ntia.doc.gov/otiahome/top/publicationmedia/How_ABC/How_ABC.html

U.S. Department of Commerce, Economics and Statistics Administration, National Telecommunications and Information Administration. (2002, February). A nation online: How Americans are expanding their use of the Internet. Retrieved March 14, 2004 from <http://www.ntia.doc.gov/ntiahome/dn/index.html>.

U.S. Department of Commerce, National Telecommunications and Information Administration. (1999, September). How access benefits children: Connecting our kids to the world of information. Retrieved March 14, 2004 from http://www.ntia.doc.gov/otiahome/top/publicationmedia/How_ABC/How_ABC.html

U.S. Department of Commerce, National Telecommunications and Information Administration. (2003, August). Report to Congress: Children's Internet protection act, study of technology protection measures (Publication No. L. 106-554). Retrieved March 14, 2004, from http://www.ntia.doc.gov/ntiahome/ntiageneral/cipa2003/CIPAreport_08142003.htm

U.S. Department of Education, National Center for Education Statistics. (2002, September). Internet access in U.S. public schools and classrooms: 1994-2001 (NCES 2002-018) Retrieved March 14, 2004 from <http://nces.ed.gov/pubs2002/2002018.pdf>

Yumuk, A. (2002). Letting go of control to the learners: The role of the Internet in promoting a more autonomous view of learning in an academic translation course. [Electronic version]. *Educational Research*, 44, 141-156. Retrieved March 14, 2003 from Academic Search Premier database.

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 __ Distance 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 ___ No ___

14. Are students punished for downloading offensive material?

Yes ___ No ___

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

Meridian: A Middle School Computer Technologies Journal
a service of NC State University, Raleigh, NC

Volume 8, Issue 1, Winter 2005

ISSN 1097-9778

URL: <http://www.ncsu.edu/meridian/>

[Contact Meridian](#)

All rights reserved by the authors.

last updated: April 22, 2005



Meridian is a member of the GEM Consortium