Chapter One

Introduction

More than a century ago, American philosopher, psychologist, and educational reformer John Dewey, declared his pedagogic creed concerning education (1897). Dewey's overarching belief was that education should embrace both the psychological and social aspects of life. Educators who have not studied Dewey may think that concepts such as constructivism and teaching students how to learn (rather than teaching a series of facts) are relatively new ideas. However, Dewey championed these and other beliefs more than a hundred years ago:

> With the advent of democracy and modern industrial conditions, it is impossible to foretell definitely just what civilization will be twenty years from now. Hence, it is impossible to prepare the child for any precise set of conditions. To prepare him for the future life means to give him command of himself; it means so to train him that he will have the full and ready use of all his capacities; that his eye and ear and hand may be tools ready to command, that his judgment may be capable of grasping the conditions under which it has to work, and the executive forces be trained to act economically and efficiently (Dewey, 1897).

It is not likely that Dewey foresaw the invention of the Internet, with its explosive power to rapidly share information, but he did have the foresight to know that learners need to be in charge of their learning journey and that they need to become critical thinkers to succeed in the world. Dewey's philosophy and pedagogic creed support the issues posed in this study. Dewey also saw the importance of a student's need to develop critical thinking skills to determine what is true, good, bad, or irrelevant. This study is designed to determine whether mandated filtering of an information source, in this case the Internet, impedes this process.

The Internet became a common educational tool in the mid-1990s. Prior to that time, the use of computers in schools was primarily limited to the software installed on the hard drives of individual computers or on a local server within the school. Technology advanced to include the ability to connect computers to wide area networks, allowing people to share information through computer networks all over the world at any given time. Vice President Al Gore recognized the educational advantage of this emerging technology in 1994, when he issued his now famous challenge at the Superhighway Summit in Los Angeles that every U.S. classroom should be connect to the Internet by the year 2000.

Educators recognized the value of the Internet as an educational tool as well. Information found in a textbook is often outdated, but information on the Internet can be as current as the previous minute and is available at any time. Given the same level of Internet access, students could have the same quality of information no matter where they lived or how well their community funded their schools. Educators often are concerned, however, because although information on the Internet can represent multiple perspectives, it also is unregulated. As a result, educators have begun to stress media education to help students develop strong search skills for locating information and critically analyzing its validity (M. Heins, & Cho, C., 2003; Thornburgh, 2002; Willard, 2002b).

In the 1990s there also were legislative attempts to regulate the Internet. Chapter Two will chart the history of Internet regulation but it should be noted here that, after years of controversy, the Children's Internet Protection Act (CIPA) eventually passed and was signed into law by President Clinton in 2000.

CIPA requires all K-12 schools and public libraries to install and use Internet content filters in order to receive certain federal funding. In order to comply with CIPA all Internet access must be filtered, whether minors (under 17) or adults are using the computer. The law states that when minors are using the

Internet, access to visual depictions that are obscene, contain child pornography, or are considered harmful to minors must be blocked or filtered. Requirements are more restrictive for minors than for adults and filters may be disabled for adults conducting *bona fide* research (American Library Association, 2000).

After CIPA became law, many groups voiced their concerns about the implications of the law (M. Heins, 2003; The Free Expression Policy Project, 2002; Willard, 2002c). The American Civil Liberties Union (ACLU), the America Library Association (ALA), and the National Coalition Against Censorship (NCAC) adopted formal positions that called CIPA a form of censorship that could interfere with intellectual freedom.

The groups listed above, as well as educators devoted to media and information literacy, spoke out about the pitfalls of Internet content filters and stressed that it was far better to teach students how to be effective users of information than to use a mechanical means to, in their terms, “censor” information (Willard, 2000).

There are many different ways to set up Internet filters and a variety of means are employed by filtering software to select sites to be blocked. Most companies use one or more methods such as blocking key words (‘sex’ or ‘hate’) or blocking images that have a large amount of flesh exposed (Electronic Frontier Foundation, 2002; Free Expression Policy Project, 2003; M. Heins,

2003; M. Heins, Cho, C. , 2001; Kranich, 2004). Early anecdotal studies, as well as subsequent quantitative studies, found that most Internet filters blocked more context than is required by CIPA (Bromberg, 2002; M. Heins, Cho, C. , 2001, Resnick, 2004). The extent of overblocking varied depending on the filter manufacturer and on the settings chosen by the school. Early research also found that the pre-set filter "packages" offered by manufacturers block far more than CIPA requires. In order to make sure that filters did not overblock content, users needed to review, monitor, and adjust filter configurations to ensure that the filter blocked only what was necessary to comply with CIPA.

Early reports focused on the specific issues related to the Internet content filter, including the accuracy of the filters, the possible impact on intellectual freedom, and the impact that Internet filters may have on the "digital divide" (Bromberg, 2002; M. Heins, Cho, C. , 2001, Resnick, 2004). After a failed attempt to repeal CIPA in 2003, the focus of concern shifted to the actual effects of CIPA on student learning (Electronic Frontier Foundation & Online Policy Group, 2003; M. Heins, Cho, C. & Feldman, A., 2006).It was this latter issue that served as the foundation for this study.

Statement of Purpose

The overarching question in this study was, "Do Internet content filters limit secondary school students from accessing information they need to complete Minnesota academic standards?" There is very little documented research examining the effect that Internet content filters have on student learning. A search in the Digital Dissertation database revealed only four academic studies on Internet filters. Three studies examined various aspects of CIPA. Only the fourth study, which was conducted in Canada (where CIPA is not in effect), explored the implications that Internet filters have on 'lost opportunities of learning.' However, that study did not investigate the potential impact that Internet filters may have on required learning outcomes such as state academic standards.

One quantitative study by the Electronic Frontier Foundation (EFF) and the Online Policy Group (OPG) (2003) measured the extent to which Internet content filtering blocked access to web pages relevant to the required curriculum in California, Massachusetts, and North Carolina. This study examined N2H2 (Bess) and SurfControl, two filtering software products used commonly by schools across the country. The study showed that, even when schools implement Internet blocking [filtering] software with the least restrictive settings, they still

blocked between 0.5% and 5% of the search results identified as legitimate sources for state-mandated curriculum topics. The researchers in the EFF and OPG study did not investigate how technology administrators actually set up the Internet content filter in their respective school districts, nor did they discuss with teachers the realities of teaching with Internet content filters.

The results of the EFF and OPG study prompted this researcher to question how technology administrators and educators manage the CIPA rule in Minnesota. Information from the studies cited above and readings from the related literature led the researcher to develop the following hypothesis: *School districts that adopt more restrictive Internet content filter settings may be restricting access to information students need to complete the requirements of the Minnesota academic standards*. In addition, the researcher drew on Dewey's philosophy that it is important that students develop critical thinking skills to determine what information is true, good, bad, or irrelevant. Inspired by Dewey's assertion that students should be in charge of their own learning, the researcher surmised that if Dewey were alive today he might be concerned with the effect that Internet filtering might have on student learning. With this inspiration the researcher posed the following questions to determine whether teachers were providing lessons to develop students' critical thinking skills:

1. Do Internet content filters limit secondary school students from accessing information and, if they do, to what degree does the level of filtering (highly filtered v. minimally filtered) used by a school district effect the ability of students and teachers to access information students needed to meet Minnesota Academic Standards (Minnesota Department of Education, 2007)?
2. How do teachers and administrators respond when they find that Internet filtering software denies students access to information necessary to complete assigned work in order to meet state academic standards?
3. Do teachers have the media literacy and information literacy training necessary to understand the implications of teaching students how to access, analyze, and critique information from diverse perspectives?
4. Are teachers informed about the role that media and information literacy skills have in preparing students for a future which we cannot predict?

Methodology

A complete description of the methods used for this study are found in Chapter Three. This section provides a brief overview of the research design and the methodology used for this study. The data collection for this qualitative study included: 1) an initial survey to identify qualified school districts, 2) in-depth interviews and surveys to collect data for the study, and 3) URL checks through the filtering company web sites used by each participating school district.

To collect the data, the researcher used Flannigan's (1954) Critical Incident Technique (CIT), a qualitative method designed to draw out the most memorable aspects of an event or experience from the study's participants (Ruben, 1993). CIT was an appropriate method for this study because it allowed the researcher to gather data from the experiences of the participants as well as from the technology providing information.

To analyze, and report the web search data, the researcher used the Chenail Qualitative Matrix (CQM). CQM makes it possible to sort ideas and report them into a simple conceptual framework (Cole, 1994).

Delimitations and Limitations of this Study

The major delimitation of this study was its focus on two specific Minnesota academic standards. The researcher was purposeful in choosing two

standards that could be expected to involve accessing and using information that Internet content filters might block in restrictive settings. Study limitations include the limited number of school districts involved (nine out 345 possible Minnesota districts) However, participants representing rural, metropolitan, and greater Minnesota communities were recruited for this study and seven different brands of Internet content filters were included as well. As with all research involving human subjects, the reliability of the Data were dependent on the responses from the participants.

Significance of this Study

The results of this study may foster additional examination of the effects Internet content filters have on students' ability to access information, particularly when that information is necessary for completing Minnesota academic standards, but also when it is used to provide students with multiple possibilities for directing their own learning. As Dewey said, "Diversity of stimulation means novelty, and novelty means challenge to thought" (1916). In addition, it is hoped that those reading this study are motivated to examine whether teachers are receiving the media and information literacy skills they need to prepare their students for "a future in which we cannot predict" (Dewey, 1897).