


1998

## The integration of the Superhighway into the classroom : the advantages and disadvantages and precautions that need to be taken when allowing the Internet into the classroom

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### Recommended Citation

Maly, Shawn Louise, "The integration of the Superhighway into the classroom : the advantages and disadvantages and precautions that need to be taken when allowing the Internet into the classroom" (1998). *Graduate Research Papers*. 1140.  
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## The integration of the Superhighway into the classroom : the advantages and disadvantages and precautions that need to be taken when allowing the Internet into the classroom

### Abstract

Today few educators go without using some kinds of computer technology. Every year the number of schools connected to the Internet grows, as does the number of teachers with their own e-mail accounts. Now we seem to be heading into the areas of virtual instruction and virtual classrooms. The growth of computers is going to continue; it is inevitable. As we continue moving forward in education and technology, what are the advantages, disadvantages and precautions that need to be taken to integrate the Superhighway into the everyday classroom?

The Integration of the Superhighway Into the Classroom:  
The Advantages and Disadvantages and Precautions that Need to be  
Taken when Allowing the Internet into the Classroom.

A Graduate Research Paper

Submitted to the

Division of Educational Technology

Department of Curriculum and Instruction

in Partial Fulfillment

of the Requirements for the Degree

Master of Arts

UNIVERSITY OF NORTHERN IOWA

by

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June 1998

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Titled: The Integration of the Superhighway into the Classroom: The Advantages and Disadvantages and Precautions that Need to be Taken when Allowing the Internet into the Classroom.

has been approved as meeting the research requirement for the Degree of Master of Arts in Education.

February 10, 1999  
Date Approved

2-10-99  
Date Approved

2-17-99  
Date Approved

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## TABLE OF CONTENTS

Chapter	Page
I. Introduction	1
Research Question	2
II. Review of Literature	3
Digital Literacy	4
Advantages	6
Disadvantages	8
Precautions	9
Internet resources	13
WebQuests	13
Email Classroom Exchange	14
Electronic Emissaries Project	15
Equity	15
III. Conclusion	18
References	20

## Chapter One

### Introduction

The Chinese have a wonderful curse: “May you live in interesting times.” In education we are living in interesting times, indeed (Johnson, 1995). Today few educators go without using some kinds of computer technology. Since 1980, we have seen a dramatic rise in the use of computers and other technologies.

In the last five years, state departments of education, school district administrators, and curriculum consultants have alternately encouraged and pushed classroom teachers to enhance their instruction with technology. Every year the number of schools connected to the Internet grows, as does the number of teachers with their own e-mail accounts (Royer, 1997). Now we seem to be heading into the areas of virtual instruction and virtual classrooms. Virtual instruction can supplement traditional teaching (Gilster, 1997).

Computers are never going to replace the teacher in the classroom but computer-mediated instruction allows us to engage in networked resources in ways that are profitable for students (Gilster,

1997). The growth of computers is going to continue, it is inevitable. using the Internet as a teaching tool, the benefits and disadvantages.

### Research Question

As we continue moving forward in education and technology, what are the advantages, disadvantages and precautions that need to be taken to integrate the Superhighway into the everyday classroom?

## Chapter Two

### Review of Literature

Today every paper we pick up or magazine the talk of the Superhighway, Internet, or the Web is discussed. Whether in business, home, and especially in education. Virtual instruction is growing and becoming more popular but is it really that effective. What are the advantages, disadvantages, and precautions we need to take to integrate the Superhighway into the everyday classroom?

Telecommunications can expand classrooms vistas in ways previously not thought possible. The Internet and the World Wide Web provide access to rich educational resources through virtual instruction (Baugh, 1997).

Technological literacy involves more than just knowing how to do it. The success of technology is strongly related to the teacher's enthusiasm, initiative, and sense of improvement (Mann & Shaffer, 1997). This is a big responsibility laid on the shoulders of the teachers who dislike change and do not want to be involved in the growing technology. Some people say that the Superhighway will not revolutionize learning; instead, it is going to replicate the worst



features of TV: superficially, sound bites, mindless surfing (Kilian & Stoll, 1996).

Students really need someone to help them define their purpose and steer them through the vast amount of material on-line. The problem that schools have today--with discipline, with kids not reading enough--aren't going to be solved by wiring them. These are important issues that should be discussed. But people are rushing in, quite blindly, to promote computers for reasons that have little to do with education (Kilian & Stoll, 1996).

There is no question that students find computers engaging. Students love computers and multimedia. They'll sit there and click on icons for hours on end. But just because something is fun to do doesn't mean it has really engaged the child's mind (Kilian & Stoll, 1996).

### Digital Literacy

First and foremost, people who are using the computers and the Internet for instruction need to be digitally literate. Digital literacy is the ability to understand information and---more importantly---to evaluate and integrate information in multiple

formats that the computer can deliver. Being able to evaluate and interpret information is critical (Gilster, 1997).

Dealing with information on the Internet is different for several reasons. First, it is not all text. Multimedia computers enable students and teachers to download video, audio, and photos.

Second, the way we find this information is different from the way we use a card catalog, check out a book, buy a magazine, or sit down to read a book on a rainy day. A multimedia computer with an Internet connection enables people to truly construct information from around the world.

Third, being digitally literate is multidimensional and interactive. If you found a picture you liked, you could not only view it but also save it to a file on your own computer, use it in a hypertext creation of your own (being careful of copyrights, of course), print it out, or send it to a friend over e-mail (Gilster, 1997).

Virtual instruction allows for an integration of knowledge in many fields, geography, language art skills, biology. Through projects teacher can pull together different disciplines and make them available to students; and can tie everything together through written language (Gilster, 1997).

A major part of this literacy has to be knowing how find those resources. Searching the Internet on the surface is deceptively simple. Type in a keyword and presto! A software "spider" scurries through thousands of files looking for it. But getting 30,000 identified sites or "hits" after a search is not going to help you find important information. Teachers and students need to learn sophisticated search techniques---so they get 50 hits or fewer per search. Use one Web search engine exclusively at first---such as Alta Vista, Excite, or HotBot---and learning all you can from the tool. Then you can explore other search engines and their databases (Pool, 1997).

### Advantages

The computer simplifies research. With help from text links and powerful navigation tools, young computer-using researchers are able to explore and make connections between related topics in a way that rarely happens with print reference materials which require users to return to the library shelves to retrieve additional volumes (Holzberg, 1995).

Computers can make research simple and easy but companies are continually coming out with faster ways for browsing that would

be helpful for educators. Some of these products are WebWhacker, WebBuddy, WebEx, Incontex Flashsite and there are many more.

Since the Web is overflowing with more exciting new content everyday, the most important resource is time. These products allow you to automatically download and stash Web pages and files in an unattended surf-and-grab program, better known as a offline browser (Stevenson, 1997).

With up-to-date Web sites preloaded on the computer system, it is possible to quickly review sites (Stevenson, 1997). Just think how helpful this could be for teachers, especially those who use the excuse for not using computers is that it takes too long to find what they need to be using. It can all be set up ahead of time like a bookmark and used for easy access for students to use to find information fast.

Imagine a learning network that links students nationwide and worldwide, connecting students of different backgrounds, religions and financial situations. Imagine, too, the impact that network might have in breaking down prejudice based on ignorance. As most people know, it is hard to hate someone you truly understand. It indeed, can be a bridge to a better future for all our children (Hass, 1996).

## Disadvantages

People assume that what is wrong with education can be cured by technology; we just need to spend enough on machinery. That's a dangerous assumption. We still need the very best teachers we can find. We still need to teach essential skills in reading, math, listening, and thinking. Computers are supplements---tools---in education (Pool, 1997).

A disadvantage to working with students on the Internet is the sexually explicit sites. Some schools sensor this, but it is a major concern for parents. Gilster (1997) stated that the total traffic to graphic sites is four percent. He also said that this is a legitimate concern for parents.

After the students start working on the computers classroom control is difficult to obtain. It's difficult to gain their attention. Almost immediately the teacher loses eye contact. The teacher realizes students engaged in different activities on the computer. Are they doing what they are supposed to be doing? The teacher will not know unless he or she walks around the room and finds out (Gilster, 1997).

As we look at computers, we know that there are disadvantages to using it in the classroom due to control and the students. But we also have to look at the other side of the issue and try to work through those disadvantages focusing on the information that is obtained on the Internet. There are some problems with virtual instruction. One major problem is there is a lot of very bad information floating in cyberspace. The Internet, by design, supports freedom of speech. It is a work in progress, and anyone is free to publish information or opinion on it. There are no editors or cyberpolice to steer you away from the unreliable sites (Caruso, 1997). Anybody can be a publisher from the New York Times to neo-Nazi groups who say that the Holocaust didn't happen, to the child next door reporting on his soccer game. Internet publishing tools are free or very inexpensive (Gilster, 1997).

### Precautions

A big problem is that we all live in an information society, but few of us ever question or challenge the information we are being provided. People need to be more critical of the information to which they are exposed, particularly people accessing information from the

Internet. This is called being “InfoCritical.” To be InfoCritical means you’re taking extra time and effort to verify or test the accuracy of information before you accept it and share it with others (Jurek, 1997).

Sorting through the information to separate the fluff from the substance is a necessary task for any teacher or student who decides to use the Internet for research. What are some of the things we can teach our teachers and students to look for in a Web site to determine if the information it contains is valid? This brings us to the who, what, when, and where of site validation (Caruso, 1997):

- Who wrote the site?
- What are they saying on the site?
- When was the site created?
- Where is the site from? Where did it originate? (p.23)

Who wrote the site? Is the author of the site qualified to voice his or her viewpoints about the subject matter? Are the authors credentials included? An e-mail message to the webmaster can get you the information you need if it is not readily available. Don’t be afraid to ask for it. Looking to see who is talking is the first and probably the most important step in site validation. If you can’t find

an author or webmaster, look for another site. There is plenty of information out there (Caruso, 1997).

What are they saying on the site? What links are on this page and how reliable are they? What is the scope of the topic? Is the information too broad, too shallow, or just the right depth? Do you think the information is factual? Do you suspect any author bias? Is the text well written? Has the site received any awards? Is the information short enough to print out? The content of the site, of course, is only one piece of information. Educators must make certain that learners don't rely solely on Web resources and ignore information available in books, videos, and human resources (Caruso, 1997).

When was the site created? When was it last revised? If the creation date is not posted directly on the site, you can sometimes determine how current it is by clicking on its links. If the links don't work, the site has probably not been updated in a while. The importance of knowing the timeliness of information on a site will vary based on your research needs. Up-to-date information will be important if you are researching an event in progress, but less critical if you are writing history report (Caruso, 1997).



Where is the site from? Where did it originate? Is it buried in someone's Internet account or does it have its own domain name? Is the domain name reputable? What server houses the site and why? Does the URL indicate that this site is an educational institution? Many genre categories exist as sources for Internet sites including universities, commercial services, electronic journals and commercial magazines, special interest groups, companies and organizations, advertising pages, personal pages, search engines, software sites, city and state pages, and federal government pages (Caruso, 1997).

Making the Internet available in K-12 schools is not enough. We need to teach students the vastness of the information available to them. They must learn that many reputable sites and many unreliable sites reside side by side (Caruso, 1997). Always take what you find with a grain of salt until you get corroboration (Jurek, 1997).

Not everything on the Internet is necessarily positive for education, but the integration of knowledge and the emphasis on communication are powerful tools. Teachers can use these resources to present new kinds of experiences to their students (Gilster, 1997).

## Internet Resources

WebQuest has quickly become one of the hottest educational technology buzzwords both online and in the real world. WebQuest is a learning activity in which some or all of the information that students interact with comes from sites in the Internet. WebQuests can focus either on a single topic, or to be multidisciplinary. There are two types of WebQuests: short-term or long-term (Using WebQuests in the K-12 Classroom, 1997).

In a short term WebQuest, the instructional goal is simply knowledge acquisition and integration. Each student obtains and processes a significant amount of new information from the Web and in-school materials and makes sense of it usually by creating Web pages. Short term WebQuests are designed to be completed in one to three class periods (Using WebQuests in the K-12 Classroom, 1997).

In a long term WebQuest, the instructional goal increases one level, challenging students to extend and refine the knowledge they find online and in the real world. Each student deeply analyzes a body of knowledge, integrates it into their knowledge base, and demonstrates their understanding by presenting it into class in the form of Web pages. Long term WebQuests can take between one

week and one month to complete (Using WebQuests in the K-12 Classroom, 1997).

Successful WebQuests always include six main components (Using WebQuests in the K-12 Classroom, 1997):

- A clear introductory paragraph that sets the stage,
- A central task that is complete and interesting,
- A set of information sources,
- A description of the entire process,
- Guidance on how to organize the materials,
- A conclusion that brings closure to WebQuest(p.4).

The end result of WebQuest is publishing the results on the Internet in the form of Web pages. This online publishing serves three purposes:

- It focuses the learners on a tangible and hi-tech task.
- It gives them a receptive, sympathetic audience to create for.
- It opens up the possibility of getting feedback from that distant audience if you include a return email address on the Web material (Using WebQuests in the K-12 Classroom, 1997).

An interesting Internet site is Email Classroom Exchange (ECE). Using the Email Classroom Exchange Web site, educators can take full

advantage of the Net's communication capabilities to meet and talk with classrooms around the world. Visitors can freely search for and then connect with classrooms registered in the site's growing online database (Internet educational resources, 1997).

The Internet population is composed of more than 40 million individuals, firefighters, architects, engineers, businessmen, chemists, teachers, and students. Many of the Net's most prolific inhabitants are subject matter experts (SMEs) whose knowledge encompasses a wide spectrum of expertise (Electronic Emissaries Project, 1997).

Thanks to the Electronic Emissary Project, now the teacher and his or her class can communicate directly with many of these experts in the field (Electronic Emissaries Project, 1997).

## Equity

We have learned different programs that we can enter to work together with classrooms around the world but how is the access for the other countries. Equity in the United States is one problem; it gets even worse if you start looking in other countries. The distribution of computers in Africa and Latin America, for example, is minuscule.

But some people are coming up with creative solutions (Gilster, 1997).

In one project, 5000 educators and volunteers are fanning out in Central and South America to instruct local farmers in computer skills and in finding ways to finance their own computers for both businesses and schools. The idea is to link 500,000 poor households in 3,600 different Latin American communities. The fund doesn't buy computers; it pays teachers to empower the local people in ways to improve their lives. Projects like this have great potential to benefit local communities (Pool, 1997).

The future of technology is still a thought in everyone's minds especially in schools. What is it going to be like in five or ten years. Gilster (1997) believes that in five years there is going to be a backlash against technology. A lot of people are upset about the state of our schools are in. They say, "You know, we've spent X many millions on computers. Where are the results?" (Gilster, 1997, 3). It's dismaying to find that so many of the positive studies come from technology companies and people who have vested interest in technology. It is very hard to come up with the really impartial studies that show a huge increase in student learning. A backlash

might be productive because it will make us re-examine how we use technology in the classroom (Gilster, 1997).

Ideally, technology sets up wonderful possibilities for multimedia projects. The beauty of new technology, within ten years, is that we're going to have very broad bandwidths and thus make faster connections. A school's best teachers can become available to anybody on the Net. In Internet-based instruction, it is possible to attend class at 3 a.m. if that is preferred whether it is a high school or a college class (Gilster, 1997).

What the net is going to give us is the ability to turn our educational facilities loose---to distribute education. That's provocative because it points to lifelong learning (Pool, 1997).

## Chapter Three

### Conclusion

Technology is going to be around for awhile. It might not take the place of a teacher but it can add to instruction and make it more interesting for the students.

Schools and teachers have served as faithful governors of information and knowledge for 500 years, and for them this new tool is both exciting and frightening. It offers enormous power and flexibility, but at the same time it threatens the time-honored dialectic of teacher and pupil, master and student. While some educators view computers as the instruments of a new approach to knowledge, those of a more suspicious nature believe them to be sinister and unwelcome invaders. The climate in many schools is ambivalent --- as much characterized by fear and doomsdaying as it is filled with excitement and anticipation (Weiss, 1996).

Technology has been around for many years and it will be around for the years to come. Education and business are the largest part of society that really grasps technology. People need not fear

technology but they need to embrace it and make it part of their everyday life and explore the world around them. When thinking of technology --- just remember that the Chinese word for crisis is made of two characters, one meaning danger, the other meaning opportunity (Johnson, 1995).



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