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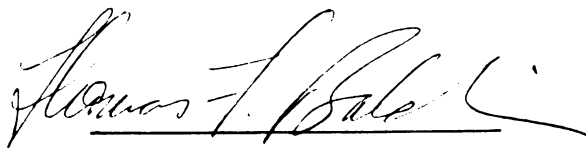
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TV the Internet and Education
A marketing guide for local television stations

presented by

Bernard Rogers McCoy

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TV, the Internet and Education
A marketing guide for local television stations

By

Bernard Rogers McCoy

A THESIS

Submitted to
Michigan State University
in partial fullfillment of the requirements
for the degree of

Master's in Telecommunication Management

Department of Telecommunications

1996

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ABSTRACT

TV, the Internet and Education
A marketing guide for local television stations

By

Bernard Rogers McCoy

The explosive growth of the Internet has created unique marketing opportunities for local television stations. A program called the News-10 Computer Education Project is one example of a local television station's use of the Internet to draw new viewers by using the Internet to establish a strong partnership with several Mid-Michigan schools.

The Project has also been shown to be a valid educational tool for teachers to use to improve the current events learning of their students.

To my wife Joanne, Donald R. McCoy and Vivian A. Rogers

Acknowledgments

This thesis would not have been possible without the support, understanding, great

patience and guidance of Thomas Baldwin, who helped still the waters when they rocked

the boat, Thomas Muth, who kept me pointed in the right direction as I worked on my

Master's, Charles Atkin, who helped me delve the great mysteries of statistics and mass

media research, Gilbert Williams who helped pave the way for my entrance into the MSU

graduate school at Michigan State University, WILX-TV, all the fine Mid-Michigan

school teachers and administrators who have helped make the News-10 Computer

Education Project a successful partnership, and my wife Joanne whose love and beautiful

inner-strength make living such a delight.

TABLE OF CONTENTS

List of Tables

LIST OF FIGURES

CHAPTER I
CONCEPT AND MANAGEMENT:
NEWS-10 COMPUTER EDUCATION PROJECT

The purpose of this thesis is to explore the potential benefits and drawbacks of a local

commercial television station using the Internet and World Wide Web as a way to foster

improved communications and market share between a commercial television station and

the viewers it serves. Specifically, this thesis focuses on an existing educational program

between WILX-TV, Lansing, Michigan and several Mid-Michigan school districts.

As the new millennium beckons, technology is rapidly moving our society into a era of

multiple communications channels, multiple technologies and an explosion of

communications services. This growing fragmentation of communications channels is filled

with new and more cost-efficient opportunities for individuals and smaller organizations to

create outlets for their messages that haven't been available in the era of mass media. The

Benton Foundation, a nonprofit agency that works to realize the social benefits of

communications put it this way: "Never mind the confident predictions of better living-the

truth is, the future is up for grabs. We still have an opportunity to set high expectations for

these new technologies, to stake out the non commercial public space in the new

communications environment. It's an opportunity to make sure that these new media will

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recognize our roles not only as consumers but as citizens, our interests not only as

spectators but as sources and our needs not only to be entertained but to be educated. It's

the opportunity to define the public interest in the digital age." [1]

These tremendous opportunities also pose challenges. How do you reach an audience?

Tim Gunn, director of National Video Resources says the public service media must

"reinvent"[2] themselves and learn how to use different tools to reach multiple audiences.

Just as emerging and converging technologies are producing new business and commercial

partnerships, there are also unique opportunities for new partnerships that promote civic

engagement, education and enrich the cultural fabric of the cities and towns that we live

in, work in and perhaps most importantly where we raise our families.

Many of these initiatives have already been proposed between America's public

broadcasting network and local schools, libraries and museums. Lawrence Grossman,

former PBS chief and president of Horizons Cable Network has proposed linking public

TV stations with libraries, schools and museums in a "cultural equivalent of C-SPAN." [3]

One vital difference, suggests Grossman, would be the development of an

advertising-supported public broadcasting system as a complement to PBS. "We have a

concrete list of convincing proposals-to establish institutional innovations such as new

networks and laboratories, to organize around shared values such as kids and community

problem solving," says Larry Kirkman, executive director of the Benton Foundation. [4]

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This author would contend that beyond the realm of public television, there lies another vast, already advertising-supported and relatively untapped communications resource: America's commercial television stations. By virtue of a U.S. television stations F.C.C. license alone, it has a responsibility to the community it serves to provide public service programming. A substantial part of a television station's intangible asset value is predicated on it's "good will" value in the community it serves. Most of the time, a commercial television station's advertising revenue is tied to the number and demographic percentages of viewers (ratings) who watch its programming.

The author believes the growth of the Internet during the past five years offers television stations a new and unusual opportunity to build viewership by further establishing a two-way relationship with it's viewers. This relationship offers the hope of doing several things:

* It's a marketing tool that will increase the station's visibility and reputation with

    viewers in Mid-Michigan

* It's a new, powerful, efficient and flexible interactive communications tool for

    viewers and WILX employees

* It will help increase station viewership and ratings

* It creates goodwill with schools

* It's an educational tool for schools, students and teachers

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* It gives WILX a competitive advantage over the competition

* It creates an impression that WILX is technologically with the times

* It creates a means for further information networking

* It reinforces loyalty and empowers viewers to access WILX via e-mail and the

   World Wide Web (www)

* As more Mid-Michigan WILX viewers and potential viewers purchase and use

   computers with dial-up and cable modems, integrated services digital network

   (ISDN), advanced digital subscriber line (ADSL) and satellite networking

   capabilities, there will be greater use/demand for the WILX e-mail and web page

   service

* Helps create an alternative public relations link between WILX personalities and

   viewers

This thesis will examine one such promising Internet based program called the News-10

Computer Education Project, that already exists at WILX-TV (NBC) in Lansing,

Michigan.

Background

In the Fall of 1994, the author, a WILX-TV news anchor and reporter, asked for

and was given the corporate assignment of putting together a cost effective Internet e-mail

system for current and prospective station viewers to use. One of the system's primary
objectives was its use as an educational outreach tool to help promote the station within

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the community it serves. As is a standard promotional practice, we wanted to give

students, teachers and parents a new external incentive to watch WILX-TV.

The author first submitted the proposed concept of the News-10 Computer Education

Project, to former WILX-TV General Manager Grant Santimore in the late summer of

1994. The author coordinated the project with Santimore, former WILX-TV Chief

Engineer Sonny Reschka, News Director Cherie Grzech, former comptroller Pam Manor,

and promotions director Pat Corfman.

The News-10 Computer Education Project

The News-10 Computer Education Project was originally designed to open a new

line of communications with teachers and students in Mid-Michigan classrooms. It wanted

to explore the idea of providing Internet access for the growing number of Mid-Michigan

schools that have invested in computer hardware, ISDN lines and modems for students

and their teachers to use as educational outreach tools. It also wanted to improve the

gathering of knowledge in the classroom.

Linking schools to the emerging telecommunications network has become one of the

hottest education topics of the 1990s. Politicians from Bob Dole and Bill Clinton to Newt

Gingrich and David Bonior campaign by proclaiming their commitment to it. More

businesses are touting their contributions toward achieving it. And schools are spending

substantial sums to accomplish it. All are energized by a vision of students across the

United States engaged in authentic and challenging tasks, linked to vast stores of

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split-second information and so-called "real world" experts beyond the walls of the

traditional school room, learning higher-order intellectual skills, and developing civic

virtues on a global scale.

WILX-TV believed that linking a broadcast TV infrastructure to the rapidly growing

Internet has vast potential. Why? As significant as computer-based communications

growth has been during the past 5-years, broadcast media still hold sway as a dominant

influence in American life.

Who Watches TV? [5]

* 98% of US households own TV receivers.

* 67% of US households own two or more receivers.

* 63% of TV households receive 30 or more channels.

* Average daily TV household viewing is 6 hours and 57 minutes.

* Television is the main news source for 70% of the U.S. public.

* There are more than 1,550 broadcast TV stations in the U.S.

The broadcast media's dominance will continue for the foreseeable future, particularly as it

relates to the emergence of computer technology availability in public and private schools.

Here's why:

In our pre-implementation surveys of other school districts in Mid-Michigan, [6] (Jackson,

Haslett, Bath, Lansing Catholic Central, St. John's, Okemos) we found financial outlays

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for computers and communications networks for students, teachers and administrators

were generally in their earliest stages. Slowly, upgrades are taking place. Probably too

slowly when you take into account the following statistics regarding computers and the

growing use of the Internet: [7]

* 40% of U.S. households had computers in 1995.

* 14% of those computers have access to the Internet

* Internet host sites grew from 1.77-million in July 1993 to over 10-million

by June 1996

* Internet Websites grew from 130 in June 1993 to over 200,000 by June

1996

* Almost 50% of all US workers use computers on the job (Double the rate

of 10 years ago)

* Workers who use computers earn 37% more than those who don't.

Conversely, the National Center for Education Statistics reported that the average student

spends just two hours a week using a computer in school. Only 35% of America's schools

and a mere 3% of all instructional classrooms were connected to the Internet in 1994. On

a more promising note, those figures jumped to 50% and 9% respectively by 1995.

Another survey conducted for the National Education Association (http://www.nea.org/)[8]

and other education groups, found that only 16 percent of America's teachers use the

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Internet and online services. In contrast, 58 % use cable television in their classroom. As

yet, no single entity, government, industry nor the nonprofit sector, has come up with the

resources to bring interactive connections like the Internet to the majority of classrooms.

As for the huge costs to underwrite interactive school technology expansion, a U.S.

Department of Education study prepared by the Massachusetts Institute of Technology

estimates the cost of providing schools with up-to-date computers linked to the

communications network could easily total $30 billion-plus operating costs that could run

another $5 billion a year. [9] The Benton Foundation wrote: "While that may seem small

compared to the $242 billion annual budget for K-12 public schools, it would require a

substantial increase over the $2.7 billion the schools currently spend each year on

technology.

"Still," said the Foundation, " the rapid rate at which schools have been buying

computers-there are an estimated 5.8 million computers in schools today, more than twice

as many as existed just five years ago-and the exponential expansion of online services

suggest this may be a propitious time to promote networking in the classroom."

The bottom line is that schools face substantial financial pressures, and winning taxpayer

only financial support to connect America's classrooms will not be an easy sell.

Implementation considerations

WILX spent a month studying hardware, software and personnel costs for

establishing the "News-10 Computer Education Project. It also researched trends in the

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use of computers in education, [10] home computing, networking and e-mail growth. These

two primary considerations made it clear there was a strong potential for the TV station to

gain new viewers, reinforce present ones and create a new asynchronous and synchronous

communications alternative by making the proposed online computer system a reality.

Other considerations included:

* Whether the system would be compatible with WILX's move to fully

computerize it's newsroom by the end of 1994.

* Whether the station could selectively manage the time and cost of having WILX

employees visit classes that used the News-10 Computer Education Project and

respond to e-mail in a timely and efficient fashion

The station's hope was and remains that it will attract new viewers to WILX and maintain

current ones by offering them a new, ongoing interactive means of communication with

their local TV station. This also underscores the TV station's public service mission of

providing news, sports, weather, public affairs and entertainment programming to all our

Mid-Michigan viewers.

WILX-TV specifically targeted schools by:

* Providing Internet access to some schools who didn't have Internet links

*Creating an e-mail mailing list of schools already on-line

* Developing weekly news quizzes for students to stimulate their interest and

knowledge about local, state, national and world events

* Personal classroom visits by WILX-TV employees

* Certificates recognizing perfect student quiz scores

By accomplishing all of the above, WILX-TV hoped to create long-term relationships

with students, parents and teachers that encouraged and reinforced their viewing of

WILX-TV.

Management of the News-10 Computer Education Project

While it's design has changed over the past two years, the News-10 Computer

Education Project's concept has basically remained the same: To promote WILX within

the community and build on our viewership among the students, parents and teachers who

come into contact with the Project directly or indirectly. WILX has an informal agreement

with America Online (AOL) that exchanges on-air promotion of the AOL name for

complimentary America Online accounts with unlimited access time. Each subscription

allows five different screen names. WILX believes America Online is a solid commercial

online service. It is ranked first among major online services when it comes to subscriber

growth. Further research [11] reveals that AOL is the only commercial online service in the

world that has been able to increase its market share from 14-to-18% of the home PC

market in the January-September 1996 time period. Compuserve, Prodigy and MSN were

all down or flat in the same time period. Over the past decade, AOL grew from being a

tiny start-up with a couple dozen employees to a global leader with more than 5,000

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4. Which team
5. Who's ahea

employees, 6,000,000 members, and $1 billion in revenue.[12] Thus, we have two AOL

accounts and a ten screen names to use.WILX-TV uses two screen names and allocates

the other eight AOL screen names to needy Mid-Michigan area schools to

use on a rotating basis as part of the News-10 Computer Education Project along with

about 60 other area classrooms who have their own Internet links and receive the

News-10 Quizzes.Each week during the regular school year, News-10 uses a master

e-mail list to send out to teachers and students a News-10 Pop Quiz. The Quiz takes

about an hour to prepare and e-mail each week and includes ten questions for students

about current local, state, national and international news stories which they may have

seen on News-10 or read about in their local newspaper. The Quizzes (See examples

below) have traditionally placed a greater emphasis on national and world events.

WILX-TV also maintains a World Wide Web page for students and teachers to use at:

http: members.aol.com/Wilxtv/index.html and we have an e-mail address at:

Wilxtv@aol.com.

Below: An example of the News-10 E-mail Quiz for 10-7-96:

Quiz Time Anyone?
Here are some questions from major news stories this week.
1. What big political event happened in Hartford, Connecticut on
Sunday of this week?
2. Who went to court in a failed bid to be allowed to appear at that
big political event?
3. The Pope is having what kind of operation this week?
4. Which team did the MSU football team lose to last weekend?
5. Who's ahead in the latest presidential poll?

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6. Which team did the Detroit Lions beat last weekend?

7. Who's challenging Republican Congressman Dick Chrysler in the November election?

8. Who's challenging Democratic U.S. Senator Carl Levin in the November election?

9. In the United States, what state is the farthest point West?

10. In the United States, what state is the farthest point East?

Here are the answers to this week's News-10 Quiz:

1. The first Presidential debate between Bill Clinton and Bob Dole.

2. Ross Perot, the Reform Party candidate for President.

3. He's having his appendix removed.

4. The University of Iowa

5. Bill Clinton, the incumbent President, leads in the latest polls.

6. The Atlanta Falcons

7. Democrat Debbie Stabenow

8. Republican Ronna Romney

9. Alaska

10 Alaska (Really- look on the map)

The quizzes are reinforced by classroom visits from the author and other WILX-TV on-air employees, field trips to the News-10 studios to watch a live newscast, the availability of News-10 staff to answer e-mail from students, teachers and classes that participate in the News-10 Computer Education Project and in-class News-10 Quiz competitions between students.

Many teachers who give the weekly quizzes make them a regular part of their weekly classroom instruction. Students in grades 3-8 take the quiz. When they received a perfect score, WILX-TV News employees make visits to their school classrooms and present each student who gets a perfect score with a special certificate of recognition. (see appendix A) Several teachers and students, based on financial need, also use

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complimentary America Online accounts provided by WILX-TV as a powerful data base to access thousands of daily, weekly and monthly periodicals, the Internet, World Wide Web, fax and U.S. mail services, weather information, educational software, 50,000 software files to download, live conferences, message boards and much more.

The accounts also allow each school to build and maintain their own World Wide Web page so they can tell the rest of the online world about life in their own school and community. If schools were to bear the costs of these complimentary AOL accounts they could cost upwards of $240 a year depending on usage levels. Teachers and students also use the News-10 Computer Education Project and the Internet to ask e-mail questions of TV-10 news staff, the White House, Governor and others in the U.S. and around the world.

The number of schools, classrooms, teachers and students participating in the News-10 Computer Education Project fluctuates from one school year to the next but the trend has been towards more participants as more school districts come on-line during the school year. WILX-TV is running on-air promotions announcing it's Internet e-mail system for viewers with Internet access. The author oversees the administration of the News-10 Computer Project.

His duties include:

* Preparing weekly News-10 Quizzes

* E-mailing the News-10 Quizzes

* Responding to e-mail

* Updating the News-10 WWW page

* Making classroom visits

* Having recognition certificates prepared for students

* Airing TV News reports about the program on a quarterly basis

* Serving as a liaison between participating schools and

WILX-TV

* Working with the WILX promotion department to promote the

Project

* Coordinating communications and visits by other News-10

employees with Project schools

Content Sources:

Content sources for The News-10 Computer Education Project are

as diverse as the information data bases it draws on and the people who participate in the

program. With access to the Internet, America Online, Associated Press, NBC, and CNN,

the possibilities for content are quite broad and allow for substantive depth in both

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486 IBM compatible 66 MHz PC with 28,8000 fax/modem, 16 RAM, 1.3 Gigabyte hard drive,

15", .28 dot pitch super vga, non-interlaced color monitor, mouse pad, keyboard, expandable

mid-sized tower case w. six external and five internal drive bays, two serial ports, 3.5" disk drive.

Includes: Windows 95, WINFAX, WindowWorks version two software, black and white printer,

surge protection strip.

$1616.00

Other hardware:

Black and white printer,cables- $329.00

4x CD-ROM, 32-bit sound card, software- $300.00

Gigabyte Tape back-up- $259.00

Subtotal: $2,504.00

Operating Costs:

America Online (2) subscriptions: Complimentary   00

Phone line-local access- $240.00 yr..

Printer Paper and ink- $360.00 yr.

Electricity $156.00 yr.

Personnel salary costs-
   (Talent, Photographer, Engineer) $1400.00-2000.00 mo.

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Avg. cost estimate $1700.00 mo.   **$20,400.00 yr.**

Camera, tape, edit equipment, post-production graphics-

$800.00-1200.00 mo. Avg. cost estimate $1000.00 mo.   **$12,000.00 yr.**

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CHAPTER II
A LITERATURE REVIEW OF CABLE AND TV EDUCATION EFFORTS

A literature review of TV and Cable computer education efforts almost always took us

to the Internet where there's a sharp distinction between the offerings by cable and

broadcast TV. Cable TV has a fairly well developed series of national and local-based

educational programs for schools while broadcast TV has put little if any effort into the

development of educational offerings on a national basis and has left what little it is

offering primarily to its local affiliates.

Appendix B includes a listing of useful selected readings and educational-technology

related Web sites compiled by the Benton Foundation. Appendix C is a reference guide of

online service offerings for educators compiled by "THE Journal."

<u>Cable</u>

<u>Cable in the Classroom</u>

(http://www.ciconline.com/home.htm)

Cable in the Classroom's WWW page describes it as "a $420 million public service effort

supported by 33 national cable networks and over 8,500 local cable companies."

These networks and local cable companies act as a partner in learning with teachers and

parents by providing a free cable connection and over 540 hours per month [2] of

commercial-free educational programming to schools across the country.

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Cable networks, such as CNN, Discovery, A&E, and Nickelodeon, set aside a portion of their on-air schedule to air commercial-free programming on subjects as varied as science, art history, math, literature, and world events.

Some of the programming is created specifically for a network's Cable in the Classroom offering (i.e. CNN's daily half hour CNN Newsroom/WorldView program), while other networks, such as A&E, often reformat documentaries or other programs from their regular schedule into "teacher-friendly" modules. All of the programs are copyright cleared so schools can build their own video libraries.

<u>Background</u>

Launched in 1989, Cable in the Classroom (CIC) programming is provided free to nearly 75,000 public and private schools by 8,500 local cable companies—this means that four out of five students in the U.S. have access to this programming. [2] It started as a way to provide teacherswith another tool to enhance learning, today this programming is also used extensively by home viewers seeking "family-friendly" cable programs. In addition, the free cable connection given to schools often has the capacity to access many of the resources on the information superhighway, including the Internet. Local cable companies provide a cable connection into every school in their service areas. A monthly magazine which lists the Cable in the Classroom programming by subject area is available to schools. Teachers can tape Cable in the Classroom programming at home or they can ask their school's media coordinator or librarian to tape programs on the school's VCR. By

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videotaping the program, teachers can keep the shows and use them when it is convenient

and most appropriately fits into their curriculum. They decide what portions of a program

they want to use in the classroom, they do not have to use the entire thing. Generally,

teachers use short segments of a program, often pausing the video to ask questions of

their students, thus using television in a highly interactive and engaging way.

Because Cable in the Classroom programming is commercial-free and intended to be

videotaped rather than used in real time, most programs air off-hours. Increasingly

though, parents who are concerned about what their kids watch on TV are using Cable in

the Classroom programming to build a video library at home for their children. There is a

regular programming schedule and detailed program descriptions are available in Cable in

the Classroom magazine and Cable in the Classroom Online (http://www.ciconline.com).

Additionally, Cable in the Classroom provides hundreds of teacher training workshops to

help teachers learn how to teach with one form of technology. Many networks also

participate in this training and provide curriculum guides that complement the

programming. Cable in the Classroom has the support of the National Education

Association, the American Federation of Teachers, the American Association of School

Administrators, the National School Boards Association, the National Association of

Secondary School Principals and the National Association of Elementary School

Principals.

Continental Cablevision

(http://www.continental.com/pr/news.html)

Continental Cablevision has is a good example of how one of America's largest cable companies is using Cable in the Classroom as part of it's own national media literacy effort. The Continental Cablevision WWW page proclaims: "Our goal is to improve children's TV viewing habits by providing teachers with resources to help schools start media literacy programs and to help parents take charge of their family's TV viewing." Continental believes that teaching children how to use TV must be a national priority, leading to a society that is literate not only in the printed word, but also in the use of electronic media. This year, and next Continental says it will provide every elementary and secondary school in its cable system with a free cable modem and high speed connection to an Internet access provider. In many cities and towns, Continental will go beyond the industry commitment and offer training, additional wiring of classrooms, enhanced information services or additional equipment, based on the school's needs.

"Today's installation of high-speed cable modems is just the first of many technological advances that Continental has developed to bring school, work and home closer together, " said Ron Cooper, Executive Vice President of Continental Cablevision. "Continental's advanced digital two-way network is the best technology to deliver the exciting and entertaining communications services of the future." [5]

In addition to delivering high-speed Internet access, Continental's fiber-optic network has

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already begun to enhance customers' TV-based video services, such as expanded

programming options and superior picture quality. Continental's network will also be able

to deliver a wide variety of advanced and interactive video services as well as telephone

service. Future applications might include teleconferencing between working parents and

their children at day-care, participating in interactive distance learning courses from home,

on-demand movies and information, and customizing camera angles during sporting

events. In a recent national phone survey conducted by Opinion Research Corporation on

behalf of Continental, 59 % of 1,000 adults surveyed said that enabling their children to

keep up with the latest technology is an important benefit of having cable services such as

high-speed Internet access. [4]

"Parents understand the link between quality education and access to information tools

such as the Internet," said Linda Conneely, Director of Media and Technology for

Needham, Massachusetts Public Schools. "By providing that level of high-speed access in

the schools, Continental Cablevision is making a significant contribution to improving their

community's educational system." [5] In a recent Continental survey of 2,135 administrators

and educators, 80% of educators with Internet access report regular usage of the

Internet, although 30% reported access problems with traditional phone lines. In addition,

27% of respondents felt a lack of training was impeding the school's Internet use. [6]

Continental's education initiative will include a national program to provide basic training

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to teachers on ways to incorporate the Internet into the classroom.

Based in Boston, Continental Cablevision, Inc. is the nation's third largest cable operator serving more than 4.3 million subscribers in 20 states, including Michigan and the greater Lansing area.

TURNER EDUCATIONAL SERVICES, INC.

(http://www.cnn.com/)

Here's another example of a cable programming company that has an active education outreach program much like Cable in the Classroom that is coupled with it's vast news gathering resources. CNN touts itself as the largest news gathering organization in the world. It's harnessed the power of CNN for classroom use with ready-to-use activities that teachers and students can access quickly and easily.

A division of Turner Broadcasting, Turner Educational Services, Inc., TESI was created especially to develop educational materials to support a large CNN library collection. Curriculum materials, designed by professional educators, help teachers integrate TESI programming in schools. In the special CNN Newsroom area you can keep informed about the latest news, ask questions of CNN Newsroom guests, exchange ideas and chat about current issues, access CNN Newsroom and Turner Educational Services products, and explore CNN's new multimedia collections.

Here's a partial listing of CNN's offerings as described by the CNN WWW page:

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"* CNN NEWSROOM is a 15 minute television news program that highlights the top

stories of the day, presents student interest segments and features special desks, including:

MONDAY: FUTURE DESK

TUESDAY: INTERNATIONAL DESK

WEDNESDAY: BUSINESS DESK

THURSDAY: SCIENCE DESK

FRIDAY: EDITOR'S DESK"

Each day's program is accompanied by a free Classroom Guide which provides teachers

with video summaries, key terms, suggested discussion topics, short and long term

activities, additional resources, and blackline masters for easy follow-up to viewing and

discussion.

Also, CNN Newsroom's latest addition is WorldView. CNN Newsroom's WorldView is

a new 15-minute, commercial-free program devoted to international stories. Together,

CNN Newsroom and Worldview make a complete 30 minute block of classroom

news. They air together at: 4:30-5:00 a.m eastern time.

In addition, Turner Educational Services, Inc. provides the following educational

materials. This is how TESI describes them: [7]

"*TURNER ADVENTURE LEARNING - Enroll your class now for a series of exciting
two-day live interactive field trips. Let Turner Adventure Learning take you to places
around the world, including Ellis Island, The United Nations and Costa Rica. Just click on
the TAL button to find out more information.

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* TURNER MULTIMEDIA - a new division of Turner Educational Services Inc. that specializes in repurposing Turner programming for classroom use. Each video also includes in-depth teaching materials produce by professional educators.

* TURNER MULTIMEDIA - Video collections from based on CNN programming configured for classroom use. Topics include "Portrait of the Soviet Union" and "Portrait of America" and a wide array of cross-curricular programs supported by classroom guides.

* CNN VIDEOLINK: SCIENCE ACCESS - a look at cutting-edge science and technology based upon CNN's SCIENCE & TECHNOLOGY WEEK."

The TCI Education Project, Tele-Communications, Inc.

(http://www.tci.com/)

TCI is America's largest cable company and offers the National School Assembly's Back

To School web site with additional information and resources for teachers and students

about the themes and issues explored in a series of nationally televised addresses. The

TCI Education Project provides educational programming and data services through cable

television lines to public and private schools in TCI service areas throughout the country.

Schools are not charged for the cost of the cable installation in a central location or for the

monthly programming. The TCI WWW pages says: "over 500 hours of educational

programming is produced each month for school; most are without advertising include

lenient copyright restrictions so educators can use the materials at their discretion."

The programs offered cover a wide range of topics and have been selected for their

academic merit. Programming is available for all grade levels and abilities, ranging from

preschool to the post secondary level. Many of the programs have teacher support

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materials available that provide useful lesson plans and activities designed to facilitate

critical thinking, class discussion, and suggest ideas for students to use in their learning. In

addition, as part of the TCI Education Project, schools are provided the necessary

equipment and software to connect their computers to the Ingenius (formally X*PRESS)

X*Change cable-delivered news feed. Ingenius X*Change provides the latest national and

international news as well as stock reports, weather data, and a world of information

pertaining to education and business. Ingenius X*Change also brings support materials

and lesson plans for educational programming right to the teacher's desk.

Although education primarily involves teachers, books, and classroom work, there is a

complementary and supplementary role that cable delivered resources can play.

Accordingly, TCI has made an ongoing commitment to education. At this writing,

the TCI Education Project, according to it's web page: " reaches over 16,000 schools in

this country; impacting the way learning takes place for more than 8,000,000 children."

The TCI Education Project is has also opened in the past year the J. C. Sparkman Center

for Educational Technology in California.

 TCI also maintains education links for students and teachers to use with its Ingenius

Online homepage, the "Ask A.N.D.I.E." homepage with a research link to the world's

major news sources, and What On Earth (TM), a fully interactive way to

explore world events.

Broadcast Television Internet Offerings

Public Broadcasting Service, Teachers Connex

(http://www.pbs.org/tconnex/abouttc.html#project)

PBS Teacher Connex - a service of the Public Broadcasting Service and participating

public television stations - offers information about programs from the PBS National

Program Service schedule with extended videotaping rights for pre K-12 educators in the

United States. These programs, while originally designed for the general audience, have

curriculum applications and are often used by teachers in the classroom. PBS Teacher

Connex seeks to reach U.S. teachers with valuable program information, as well as cross-

curricular applications, teacher resources, video offers and links to related resources on

the Internet. Teachers may reproduce PBS Teacher Connex information found on its Web

site to share with other educators, provided the Teacher Connex credit is maintained.

The print version of PBS Teacher Connex is available nationwide with national broadcast

schedule times. Many public television stations offer Teacher Connex and Teachers'

Digest as companions to local services, providing access to local broadcast dates and

times in different ways- through calendars mailed to subscribers locally, online, or through

member benefits or school services packages.

PBS-http://www.pbs.org/, also offers electronic fieldtrips for participating classrooms

across the country in both public and private schools. What is an Electronic Field Trip?

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Electronic field trips are "exciting learning adventures" that include live television broadcasts that "transport" students to locations of interest, a Web site with activities and resources, and a print Teacher's Guide. This electronic field trip allows students to travel back in time to experience several trials from the 18th century. In addition, students can speak directly to historical interpreters portraying 18th-century characters, vote on issues of historical importance, and discuss important issues with other students on the Internet. To fully participate in this learning experience, schools must register by calling 1-800-761-8331.

The cost is $99.95 per school. Some discounts are available.

A recent electronic field trip included the live television program for Order in the Court: Juvenile Justice in the 18th Century. PBS' web page says, "It included a dramatization of three cases for which we have found documentation in the records that survive from colonial Virginia. These records are brief and tell us very little about the actual cases. Therefore, much of what is included in the broadcast is the historical interpretation of what might have happened. (At this Web site, the sections An Accidental Murder and Build Your Own Case are designed to allow students the opportunity to create their own interpretation of what could have taken place in the Brenaugh case, using a transcript of the original documentation that Colonial Williamsburg's historians have uncovered.)"

<u>NBC-CNBC-MSNBC</u>

(http://nbc.com/)

NBC, America's largest television network, has no ongoing education program for

schools. It's homepage doesn't even list an education area. For a company as marketing

and promotions savvy as NBC, this is an opportunity missed. NBC does have home page

access for information retrievals on several education related topics, including feedback

from students on issues such as the 1996 Presidential Campaign. The MSNBC homepage

is the best of NBC's information retrieval resources at:

http://www.msnbc.com/news/default.asp

ABC-Capital Cities

(http://www.abc.com/)

ABC also has no visible education outreach program for schools. It does maintain a

Channel One homepage for teenage students to speak out about political issues at:

http://www.Politicsnow.com/resource/channelone/

ABC also maintains a "Kidzine" site on America Online that features some educational

areas for students. Ironically, it doesn't offer access to the site from its Internet webpage.

CBS

(http://www.cbs.com/)

CBS has no ongoing educational outreach program for schools. It does have an Internet

based program called Kidzone at: http://www.cbs.com/cbskidzone/ that provides a limited

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offering of the CBS children's shows and schedules, e-mail, a "Make a Match" game,

KidTriv game, a poll that asks kids questions about current events topics and an after-

school chat line on America Online about once every two weeks as part of "Project

Geeker."

FOX NETWORK

(http://www.fox.com/)

The Fox network offers "FOX KIDS CYBERSTATION" at: http://www.fox.com/. It's an

entertainment oriented web page for children to learn mostly about Fox program offerings.

Here's how Fox describes it's Fox Kids Cyberstation: "Through your viewscreen you are

looking at the fleet of Fox Kids Ships you can visit in this website. There's a Show Ship, a

Contest Ship, a Totally Fox Kids Ship, an Activities Ship...well, you can see 'em all for

yourself! And on different ships, you guessed it... you can do different things: like hear

Fox Kids characters talk, watch movies, play games, create coloring pages...even

request your fave song from our Countdown radio show! It's all happening here-well, out

there-in those wild ships. So pick a ship and take a trip into the super cool world of Fox

Kids! For a real surprise try pressing either of the turbo buttons-lightning or starburst-you

never know where those will take you!"

United Paramount Network

(http://www.upn.com/)

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United Paramount Network. UPN has no official Internet page up an running yet. It has

no educational outreach program for local schools. Some of its affiliates listed here have

some of their own local educational offerings on their own local Internet homepages:

KASN UPN 38, Little Rock
KBHK UPN 44, San Francisco
KMSP UPN 9, Minneapolis
KTFO UPN 41, Tulsa
KTXH UPN 20, Houston
KUTP UPN 45, Phoenix
KYES UPN 5, Anchorage
WKPT UPN 30, Tri-Cities
WLMT UPN 30, Memphis
WRBW UPN 65, Orlando
WTTV UPN 4, Indianapolis.

Warner Brothers Network (WB)

(http://www.tv.warnerbros.com/)

WB, like UPN, is one of America's newest television networks. Unlike UPN, WB does

have a very graphical Internet home page for kids. It's called "Kids' WB." The focus of

this page is program promotions oriented, not education oriented. Here's how WB

describes it's "Kids' WB" home page:

"Hellooo Fanimaniacs!!! Welcome to Warner Bros. Animation! Come with us as we take
you behind the scenes of Warner Bros. Animation and the Kids' WB! Shows. There are
games, GIFs, videos, sounds and much more awaiting you here. Come in and explore our
virtual world of animation! "Superman," "Road Rovers" and "Waynehead" are now in the
Kids' WB! Shows pages! Come see the Man of Steel in cyberspace, to learn more about
our new canine super heroes and to see Damon Wayans' latest creation. Kids' WB! has a
NEW schedule for our weekend shows. Click on "What's Happening" to get the latest
about "Big Kids Go First."
Cast your vote for PRESIDENT in our virtual election poll! Bugs Bunny, The Brain

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and Tweety are running against the real candidates. Who will you vote for?"

Related writings

While there are many proponents of using technology to improve the teaching of

America's students, there are some who have guarded, if not pessimistic views of the

claims that technology in the classroom will make America's students better learners. In

"Separate Realities: The Creation of the Technological Underclass in America's Public

Schools," author Charles Pillar traveled extensively to observe how schools were using

computers in 1992 and came to the conclusion that "in most cases, computers simply

perpetuate a two-tier system of education for rich and poor." Pillar found that the poorest

school districts had the least amount of funds available to buy computers, wire school

buildings for Internet access and educate teachers on how to use the technology. Pillar

concludes that the poorest schools, where students and teachers would benefit most from

having computers and Internet information access, were the least likely to have such

technology. In a book called "Silicon Snake Oil: Second Thoughts on the Information

Highway" (New York: Doubleday, 1995), author Clifford Stoll offers the musings of

a disillusioned cybersurfer while raising some interesting and important questions about

whether the Internet can live up to its reputation in the world of education and in other

spheres. Stoll has three primary observations: Computers offer plenty of data but cannot

confer wisdom and they actually work against literacy and creativity. People who spend

too much time using computers and surfing online networks would be better off having real-life experiences with people and nature. The overuse of computers and online networks is undermining social relationships and a range of institutions, including libraries and schools. Says Stoll on page 46 of his book: "The stiff-walled logic of computers rewards those who can rigorously follow strict-thought rules. These incentives include prestige and employment...our software and networks nourish drones. At the same time, computers punish the imaginative and inventive by constraining them to prescribed channels of thought and action."

In "The Bad Option And The Good Option," Stephen C. Ehrmann comments on the use of technology in teaching and wonders if some school districts and universities will spend millions of dollars creating technology for learning that only broadcasts a wide array of information, but never forces the student to think about and really understand what it is they're supposed to be learning. That would be the "bad option." The good option, says Ehrmann, would be to use technology to "devise assignments that force students to confront their beliefs and test their skills. These new questions and assignments could help both faculty and students understand the deep structure of ideas, not just their surface features. Electronic mail and computer conferencing could give students safer and more thoughtful means of discourse, whether students are on campus or studying at home; students may reveal more than they do when facing the faculty member behind the lectern. Students could get more and better feedback than ever before, from their peers and from

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distant experts as well as from the instructor. A healthier academic community could

develop, even among people who rarely see each other."

For every author with reservations about technology in the classroom, there seem to be a

dozen more who look at the topic with great optimism. In a June, 1996 review called

"Why Technology?" by The Educom Review, *it asked a group of information

technology leaders in higher education to give their thoughts on such basic questions as:

"Why use technology at all? What will justify its cost? What value will it really bring to

education? What will its adoption mean for the future of colleges and universities? And

what will the future hold?"

Laurence R. Alvarez, Associate Provost at the University of the South believes

"technology can enhance communication between faculty and students. (Phone calls from

students at 3 a.m. are unacceptable, but electronic mail at that hour is perfectly

reasonable.) Technology can provide students with educational experiences, which they

could not otherwise experience. (Models of molecules rotating in space on a computer

screen convey much more information than pictures in a book or sketches on a chalk

board.) Technology can open doors for students that they did not even know existed.

Colleges that do not expose their students to the proper use of technology are cheating

them, and their students leave college ill equipped for the society of continual learning into

which they move."

On the issue of education decision making and technology, Carole A. Barone, Associate

Vice Chancellor of Information Technology at the University of California/Davis [9] says

higher education traditionally has been deliberate in its decision making, seeking

consensus, and conservative in its approach to risk. "We tend to value careful planning

and, perhaps, to be overly critical of unsuccessful initiatives. Technology is a threat to

these cherished values and habits. Moreover, we continue to have individuals in

decision-making positions who are not at ease with the technology. This is not merely a

skill-set deficiency; it is a mindset discordance. The questions we should be asking are,

How quickly can we make the investment in the technological future of our campuses?

How should we go about making sensitive and enlightened decisions regarding the nature

of that investment?"

Polley Ann McClure, Vice President and Professor of Environmental Science at the

University of Virginia [10] says the cost of investments and support for information

technologies are high, probably significantly higher than most university presidents and

trustees realize. McClure offers several explanations for this trend. "But, while we must be

smart and careful about the choices we make for technologies to support, we really do not

have the option of saying "no." Experimenting and developing ways to exploit technology

to improve teaching and learning and the administration of our institutions is the price of

existence at this particular time in human evolution. There are precious few examples (but

there are some!) of significant gains in productivity in higher education due to

technological interventions. By and large, the results of investments in technology are improved quality, ease of learning and enhancements to service that would not be possible without technology. But I know of only a few examples, especially on the purely academic side, where the investments have been shown to be paid back and more through measurable improved outcomes. Part of this is due to the difficulty in measuring "learning," but the other part is because we are still in the "R&D phase," where costs are always higher than payback."

John E. Stuckey, the director of University Computing at Washington & Lee University [11] talks about the necessity of investing wisely in technology enhancements for schools and universities. Says Stuckey in an article entitled "The Perils of Procrastination," "If my university refrained from making technology investments for the next ten years, it would slip into fiscal and intellectual jeopardy. The quality of the academic offerings would atrophy, administrative efficiency would stagnate, and students, noticing those effects, would choose to study elsewhere. Opting out may have rhetorical value, but it's not an available alternative."

Thomas W. West, Associate Vice Chancellor for Information Resources & Technology at California State University [12] says using technology and planning for it's inclusion is practically a process within itself. "It is not synonymous with any single form of teaching and learning, or with any single institutional type. Technology has a role in the traditional classroom as much as in a virtual university or distance learning environment." West says

that an educational institution, to be competitive has to make investments, "significant

investments in technology." He goes on to say that colleges and universities have always

been capable of meeting new social and technological challenges by developing new and

innovative ways of doing business. "I do not think the issue is whether old forms will

disappear as much as new ones will achieve prominence and even dominance in the next

century."

Studies

A small but rapidly growing number of studies are trying to assess the impact of new

technologies in fostering learning. Margaret Riel, a researcher at the University of

California at San Diego has conducted two interesting studies in this area. In one, Riel

found that 4th graders in San Diego who had helped produce an online news service with

students in Hawaii, Mexico, and Alaska showed marked improvement in reading and

writing skills compared with students who had not participated. She theorized that editing

another student's writing teaches a student more than looking for his or her own mistakes,

and that students feel freer to edit the work of distant peers than that of their own

classmates.

In a second study, Riel, found that judges scored articles that students wrote for their

peers on the network significantly higher than the work they wrote for teachers. Riel says

this suggests that the motivation to perform well is greater when students are engaged in

authentictasks rather than in artificial exercises. Riel also points to 1992 research by S.

Weir [15] indicating that both teachers and researchers find that students who work

together on "real world problems show increased motivation, deeper understanding of the

concept and an increased willingness to tackle questions that do not have easy or known

answers." This focus on actual situations and experiential learning is reiterated in

numerous articles.

Three other research studies presented in the National Council for Educational

Technology[16] conclude that computers can reduce the risk of failure at school for

students, particularly adult learners and older pupils who feel they have been failed by the

traditional educational system, will respond better to correction from the computer.

Students enjoy working with computers and will concentrate longer than they would with

pen and paper. Motivation and concentration on learning are key factors in acquiring basic

skills. Some students who come from cultures which are different from those of their

teachers are disadvantaged. Because the learning in school does not relate directly to their

culture students find it difficult to make sense of it. The computer can present information

in a variety of formats and can draw examples from many sources. This can help these

students to make better use of their learning. Once students appear to fail they are

often made to work on low-level activities, giving and receiving the required information

in order to get the right answers, until their basic skills improve. Computers can offer
these students the chance to work on higher-level activities, seeking information and using

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it to solve problems. They learn to communicate their ideas, to ask questions and be

critical, and are motivated to acquire the basic skills which will support this kind of

activity.

Researchers, C. L. Dillion, K. M. Kincade, D. W. Hornbeck, C Dickinson and J Wright, [15]

talk about the flexibility of computers and other information technologies (IT) for

addressing the individual needs and abilities of each student. Their research finds that not

everyone learns in the same way or at the same pace. Good teachers have always sought

ways of presenting teaching material in different ways for different pupils, but this is not

always easy to do. "A computer: can be used to overcome physical disabilities and to open

up learning opportunities for students: even the student who is unable to attend classes

can share in education using distance learning can work at a speed suited to the student's

needs, rather than at a common pace. This allows a student to go back over work, ask for

clarification and make mistakes without being shown up in front of others. Computers can

provide different entry and exit points, allowing the student to start and end work at

different places can give immediate positive feedback, so the student knows that he or she

is on the right lines; there is no need to wait for the teacher to mark the work before

turning to a new task can be infinitely patient, is non-judgmental, informing the student of

success or failure without saying that the student is good or bad." Finally, these

researchers say computers "can link to other learning resources such as CD-ROM and

interactive video, allowing the student to find out information from a variety of sources

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A study by the The Software Publishers Association, (http://www.spa.org) cited similarly

encouraging evaluations of the National Geographic Society Kids Network, in which 4th

and 5th grade students shared data on acid rain that they had collected online with remote

classes. The students showed significant gains in the ability to organize, represent and

interpret data. They also demonstrated considerable achievement in geographic

knowledge, in the ability to use latitude and longitude to identify map locations and in

understanding environmental issues.

Finally, the Council of the Great City Schools and Scholastic Network released an

October 1996 study [16] that was was touted as one of the first controlled attempts to

isolate the effect of online education. Federal Communications Commission Chairman

Reed Hundt, said the study, proved the value of his agency's efforts to require access to

such online services for schools and libraries throughout the nation.

An independent research group known as the Center for Applied Special Technology

conducted the survey of more than 500 students in fourth and sixth grade in Chicago;

Dayton, Ohio; Detroit; Memphis, Tenn.; Miami; Oakland, Calif., and Washington.

A summary of the report said that students with online access showed "significantly

higher scores on measurements of information management, communication
and presentation of ideas."

The findings offered evidence that using online education-oriented sites and the Internet

"can help students become independent, critical thinkers, able to find information,

organize and evaluate it, and then effectively express their new knowledge and ideas in

compelling ways." The FCC's Hundt, said the study confirmed a long-held belief that,

"access to the world of online information and learning really does benefit the students. It

enhances learning by encouraging students to explore, to think critically and to take an

active role in their own educational adventure." [17] But he said that providing the online

infrastructure to the nation's classrooms is only the first hurdle. "Teacher training and

quality curriculum are the pillars that hold up the other side of the house," Hundt said.

"That is where the creativity, energy and contributions of educators, parents and the

private sector are needed." [18]

Ironically, all this research appears to make it clear that more research is needed in the

area of classroom computer use and other information technologies. Short and long-term

studies on this area will continue to be in demand to supplement the broad base of

research in traditional classroom theories. This research is something that classroom

teachers could take an active role conducting because of their firsthand experience with

teaching methods and knowledge of personalities.Just as importantly, research and

readings also indicate that schools, universities and society at large must also hear from

and learn more about those technology ideas that didn't produce positive results to

eliminate the duplication of wasted time, productivity and cost.

CHAPTER III
TESTING THE NEWS-10 COMPUTER EDUCATION PROJECT

This chapter is a continuation of earlier research conducted by WILX-TV and for class

studies at Michigan State University [1] and examines and evaluates the impact of the

News-10 Computer Education Project with:

    a. Attitudinal questionnaires of teachers, students and school administrators

    b. Evaluation research studies at one elementary school

    c. Interview with a school administrator who instructs teachers on classroom

        computer curriculum

a. Attitudinal questionnaires

The attitudinal surveys were designed to further explore the feelings of teachers, students

and school administrators at three Mid-Michigan schools towards the News-10 Computer

Education Project and the general use of computers as teaching tools. [23] Open ended,

scaled and closed ended questions were asked to each of the respondents during the

month of September 1996. Respondents at seven elementary and middle schools in the

Haslett, Lansing, Okemos and East Lansing school districts were chosen for the attitudinal

survey. The schools; Marble, Pinecrest, Donley Elementary Schools and MacDonald

Middle School in East Lansing, Murphy Elementary School in Haslett, Cornell Elementary

school in Okemos and North Elementary School in Lansing, have been using the

News-10 Computer Education Project as an educational tool in selected 3-8 grade

classrooms. Here's a look at questions asked by the attitudinal surveys:

Administrators
This is a questionnaire for a research study at Michigan State University. It will take about 5 minutes of your time to complete. We greatly appreciate your assistance in filling out as completely as possible all the questions listed below.

1. Have you ever heard of the News-10 Computer Education Project?
Yes_____ (If you answered "Yes" to question 1., go to Question 2.)
No_____ (If you answered "No" to Question 1., go to Question 4.)

2. On a scale of 1-to-10 with 1 being "least important" and 10 being "most important," how does the News-10 Computer Education Project rank as a teaching tool at your school? Please circle the appropriate number below:
(Least Important) 1--2--3--4--5--6--7--8--9--10 (Most Important)

3. Have you encouraged other teachers to use the News-10 Computer Education Project as a teaching tool? No_____ Yes_____

4. The "News-10 Computer Project" is a free service of WILX-TV, Lansing to encourage students to learn more about current events. Each week during the school year, it sends E-mail news quizzes over the Internet to teachers to use in their classrooms. It also allows students and teachers to ask WILX-TV News employees questions about a various educational topics.
    Based on this description, describe any curriculum areas, (Social Studies, Math, Science, etc.) in which the News-10 Computer Education Project might be a useful teaching tool at your school:

_____
_____
_____
_____

Teachers
This is a questionnaire for a research study at Michigan State University. It will take about 5-10 minutes of your time to complete. We greatly appreciate your assistance in

filling out as completely as possible all the questions listed below.

1. Have you ever heard of the News-10 Computer Education Project?

Yes_____ (If you answered "Yes" to question 1., go to Question 2.)

No_____ (If you answered "No" to Question 1., go to Question 7.)

2. On a scale of 1-to-10 with 1 being "least important" and 10 being "most important," how does the News-10 Computer Education Project rank as a teaching tool at your school? Please circle the appropriate number below:

(Least Important) 1--2--3--4--5--6--7--8--9--10 (Most Important)

3. Have you encouraged other teachers to use the News-10 Computer Education Project as a teaching tool? No_____ Yes_____

4. What are your expectations of the News-10 Computer Project?

_____

_____

_____

_____

5. How do you currently use the News-10 Computer Project in your classroom?

_____

_____

_____

_____

6. What do you LIKE or DISLIKE about the News-10 Computer Project?

_____

_____

_____

_____

(If you answered "Yes" to Question 1., STOP HERE! Thanks!)

----

7. The "News-10 Computer Project" is a free service of WILX-TV, Lansing to encourage students to learn more about current events. Each week during the school year, it sends E-mail news quizzes over the Internet to teachers to use in their classrooms. It also allows students and teachers to ask WILX-TV News employees questions about a various educational topics.

Based on this description, why WOULD or WOULDN'T you use the News-10 Computer Education Project in your classroom?

_____

_____

8. If you did use the News-10 Computer Education project in your class, HOW would you use it?

_____

_____

_____

_____

End   -   Thank-you

<u>Students</u>

This is a questionnaire for a research study at Michigan State University. It will take about 5-10 minutes of your time to complete. We greatly appreciate your assistance in filling out as completely as possible all the questions listed below.

1. Have you ever heard of the News-10 Computer Education Project?

Yes_____ (If you answered "Yes" to question 1., go to Question 2.)

No_____ (If you answered "No" to Question 1., go to Question 5.)

2. On a scale of 1-to-10 with 1 being "don't like" and 10 being "like very much," what do you think about the News-10 Computer Education Project at your school? Please circle the appropriate number below:

(Don't Like) 1--2--3--4--5--6--7--8--9--10 (Live Very Much)

3. Do you think other students would enjoy using the News-10 Computer Education Project? No_____

Yes_____

4. How do you use the News-10 Computer Education Project?

_____

_____

_____

_____

(If you answered "Yes" to Question 1., STOP HERE! Thanks!)

----

5. The "News-10 Computer Project" is a free service of WILX-TV, Lansing to encourage students to learn more about current events. Each week during the school year, it sends

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E-mail news quizzes over the Internet to teachers and students to use in their classrooms. It also allows students and teachers to ask WILX-TV News employees questions about a various educational topics.

Based on this description, do you think you might LIKE or DISLIKE using the News-10 Computer Education Project in your classroom?

LIKE_____

DISLIKE_____

6. What would you LIKE or DISLIKE about using the News-10 Computer Education Project in your class?

_____

_____

_____

_____

End   -   Thank-you

----

b. Evaluation research: studies at one elementary school

In late September 1996, students in two 5th grade classes at Haslett's Murphy Elementary

School were given a group administered questionnaire with a series of open and close

ended questions. Students in one class (experimental group) used the News-10 Computer

Education Project to take current events quizzes on a weekly basis for a four week period.

The other 5th grade class (control group) didn't use the News-10 Education Project.

Before administering the group questionnaires, the author wanted to see if there was

some pre-test measurement that might indicate how the control and experimental classes

students compared in their combined knowledge or aptitude for current events. To do

this, the author looked at last school year's 4th grade mean test scores for students in this

year's control and experimental 5th grade classrooms. The author looked at two areas:

<u>Acquired Content Knowledge</u>- This is a test of the individual students ability to read a

passage and/or a story and apply the information learned from the reading of the text to a

series of questions about the text. The Haslett school district administered this test to

students in May, 1996. Using a 4-point scale, the mean score for the experimental class

was 2.89. The mean score for the control class was 2.88.

<u>Social Studies Skills</u>- This area tested the individual students knowledge of social studies,

including the ability to use a map to get information on the location of different countries,

continents, oceans and rivers around the world. The Haslett school district administered

this test to students in May, 1996. Using a 4-point scale, the mean score for the

experimental class was 2.678. The mean score for the control class was 2.653.

Comparisons of the two test means show no significant difference between the

experimental and control classes when a t-test was applied.. These mean scores were

compiled by Faith Stevens, Instructional Coordinator at Murphy Elementary School,

Haslett Public School District. Ms. Stevens says there are also no significant gender

performance differences in either the Social Studies Skills or Acquired Content

Knowledge test areas at this age level.

The primary objective of this evaluative research was to see if there's any difference in

performance between the classrooms who use the News-10 Computer Education Project

on a regular basis, and those that do not use it at all. A secondary objective of this

research was to look further at the attitudes of students who have been exposed to the

News-10 Computer Education Project on a regular, and "not at all" basis. The following is

the Murphy questionnaire:

Murphy Elementary Students:

Dear Student

This is a questionnaire for a research study at Michigan State University. It will take about 10-15 minutes of your time to complete. We greatly appreciate your assistance in filling out as completely as possible all the questions listed below.

When you read the term "current events," it means things that are happening in your town, the state, the country or world that you might read about in the newspaper, hear when you listen to radio news or see when you watch TV news.

1. How many times a week do you discuss current events in your classroom?
   Please circle one of the following:
   a. Once a week
   b. Twice a week
   c. Three times a week
   d. Each school day
   e. More than once each school day

2. How many times a week do you discuss current events outside the classroom with your family or friends?
   Please circle one of the following:
   a. Once a week
   b. Twice a week
   c. Three times a week
   d. Five times a week.
   e. More than five times a week.

3. Do you use the computer to study current events in your class?
   Yes_____
   No _____

4. Do you use a computer to help you study at home?

Yes_____

No _____

5. Do you like using computers to help study?

Yes_____

No_____

6. When you study current events in your classroom, what area do you find most interesting?

Please circle one of the following:

a. News with information about the Lansing area.

b. News with information about Michigan.

c. News with information about the rest of the United States.

d. News with information about outside the United States.

7. The "News-10 Computer Education Project" is a free service of WILX-TV, Lansing to encourage students to learn more about current events. Each week during the school year, it sends E-mail news quizzes over the Internet to teachers and students to use in their classrooms. It also allows students and teachers to ask WILX-TV News employees questions about a various educational topics.

Does your class use the News-10 Computer Education Project?

Yes_____

No_____

8. (If you answered "Yes" to the last question) On a scale of 1-to-10 with 1 being "not important" and 10 being "very important," how would your rate the "News-10 Computer Education Project" as a current events resource for your classroom?

Please circle one number below.

(not important) 1--2--3--4--5--6--7--8--9--10 (very important)

9. On a scale of 1-to-10, with 1 being the worst and 10 being the best, how would you rate your understanding of current events? Please circle one number below.

(worst) 1--2--3--4--5--6--7--8--9--10 (best)

10. What is your favorite subject to study in school? Please choose one of the following:

a. Math

b. Science

c. Social Studies (including current events)

d. English (reading and writing)

e. Something else

11. On average, how often do you take tests or quizzes to test your understanding of current events? Please circle one of the following:

a. Once a month

b. Twice a month

c. Three times a month

d. Four times a month

e. More than four times a month

12. Compared to other subjects taught in your classroom, how would you rate the importance of learning about current events. Please circle one of the following:

a. Most Important

b. More important

c. Important

d. Less important

e. Least important

13. Who is the Governor of Michigan?
Please circle one of the following:

a. Connie Binsfeld

b. Al Gore

c. John Engler

d. Bob Dole

14. Who is the President of the United States?
Please circle one of the following:

a. Ross Perot

b. Bill Clinton

c. Bob Dole

d. Al Gore

15. What's the name of Lansing's new minor league baseball team?
Please circle one of the following:

a. Lansing Lawmakers

b. Lansing Lugnuts

c. Capital City Cruisers

d. The Michigan Whitecaps

16. Which one of these persons is the leader of Iraq? Circle one of the following.

a. Anwar Sadat

b. Saddam Hussein

c. King Fahd

d. Benjamin Netanyahu

17. U.S. troops have been in this European country this year to help restore peace? Circle one of the following.

a. Liberia

b. Russia

c. Northern Ireland

d. Bosnia

18. Which of the following is referred to in Michigan as "Dr. Death?" Circle one of the following.

a. Jack Kevorkian

b. Goeffery Fieger

c. Richard Thompson

d. David Jaye

19. What U.S. city played host to the 1996 Summer Olympic Games? Circle one of the following.

a. Atlanta

b. Los Angeles

c. New York

d. Chicago

20. Who's this year's Republican Party candidate for U.S. President? Circle one of the following.

a. Ross Perot

b. Dan Quayle

c. Newt Gingrich

d. Bob Dole

21. Who is Ross Perot? Circle one of the following.

a. A famous inventor

b. The Reform Party's 1996 presidential candidate

c. A former U-S military general

d. A famous Hollywood actor

22. The County seat of Ingham County is which city? Circle one of the following.

a. Mason

b. Lansing

c. Holt

d. Okemos

Thank-you for taking the time to complete this questionnaire.

School Administrator Interview

c. Interview at least one school administrator who instructs teachers on class

computer curriculum's to find out what they do with teachers who can't be motivated to

use computers as a teaching tool.

Bill Lang is the elementary school computer education administrator in the East

Lansing Public School District. For the last three years, Lang has been responsible for

assisting K-5 teachers in implementing our district's technology, student objectives. This

included model lessons within the classroom and teacher in-service outside the classroom.

Lang is also a teacher at Donley Elementary school in East Lansing and has taught in

public schools for the past 24 years. Our primary objective was to ask Mr. Lang how to

motivate teachers who are less than enthusiastic about using computers as a teaching tool.

The following is an interview questionnaire with opened ended questions sent to Lang via

e-mail.

Dear Administrator:

The following questionnaire is going to be used in Roger McCoy's Thesis at Michigan State University. The thesis is about the "News-10 Computer Education Project." We appreciate your taking the time to respond as completely as possible to the following brief questions. Thanks in advance for your cooperation. You may return this questionnaire via e-mail to: Wilxtv2@aol.com

Name:_____

Title:_____

Briefly describe your job duties:

_____

_____

_____

_____

_____

_____

How do you motivate teachers to learn about using computer technology as a teaching tool in their classrooms?

_____

_____

_____

_____

_____

_____

What do you do when a teacher can't be motivated to use computer technology as a teaching tool in their classroom?

_____

_____

_____

_____

_____

Describe what role, if any, that available outside computer-based teaching resources play in educating students in your school district.

_____

_____

_____

_____

End of questionnaire- Thanks for your cooperation.

CHAPTER IV
DATA ANALYSIS

This chapter will analyze results of the collected data and present profile information

on the number of schools, classrooms, teachers and students who participate in the

News-10 Computer Education Project. The author rounded fractional percentages to the

nearest whole number. (Example: 65.5% becomes 65%, 65.6% becomes 66%) A

thumbnail look at this section will reveal that those students teachers and administrators

who use the News-10 Computer Education Project in their schools have very positive

attitudes towards the Project. They give it a high rating as a useful learning and teaching

tool. (On a 1-to-10 scale students, teachers and administrators gave it an 8 or higher

average rating) Likewise, these same respondents said they'd recommend it to a fellow

student or teacher by significant (83% student, 82% teacher, 72% administrator) margins.

In an experiment featuring experimental and control classrooms, the author discovered a

significant difference in the number of times the two groups took current events quizzes or

tests each month. The experimental class that took twice as many monthly current events

quizzes as part of the News-10 Computer Education Project (Question 11) scored better

than the control class on identical current events quizzes (Questions 13-22) and

significantly better than the control class on current events questions that were national

and international (Questions 16,17,18,21) in content. This was an event made even more

interesting since the control class reported that it discussed current events more in the

class (Question 1)and outside the class (Question 2) than the experimental class. The

control class also had wider access to computers at home for learning.

Section A is a question-by-question breakdown of the survey responses by the control

and experimental classes at Murphy Elementary School in Haslett, Michigan. It includes a

analysis comparison of performance between the two classes involving independently

conducted Chi-square and t-tests for several specific questions.

Section B is a breakdown of attitudinal survey responses to the News-10 Computer

Education Project by 68 students in the Haslett, Lansing, East Lansing and Okemos Public

School Districts.

Section C is a breakdown of attitudinal survey responses to the News-10 Computer

Education Project by 28 teachers in the Haslett, Lansing, East Lansing and Okemos Public

School Districts.

Section D is a breakdown of attitudinal survey responses to the News-10 Computer

Education Project by seven school administrators in the Haslett, Lansing, East Lansing

and Okemos Public School Districts.

Section E includes responses from one East Lansing school administrator who

instructs teachers on classroom computer curriculums.

Section F includes profile information on the schools, grades and number of

students who participate in the News-10 Computer Education Project

<u>Section A: Evaluation Research Responses and Analysis</u>

This section includes a question-by-question breakdown of the survey responses

by the control and experimental classes at Murphy Elementary School in Haslett,

Michigan. It is followed by an analysis comparison of performance between the two

classes involving independently conducted Chi-square and t-tests for several specific

questions. Where statistically significant differences are detected between the experimental

and control groups these differences will be noted with their stated Chi-square or t-test

values in the relevant tables

Question 1. How many times a week do you discuss current events in your classroom?

Table 4.1

<u>How many times a week do you discuss current events in your classroom?</u>

	<u>Experimental Class</u>			<u>Control Class</u>	
Frequency	<u>N</u>	%		<u>N</u>	%
Once a week	15	54		16	64
Twice a week	8	28		3	12
Three times a week	2	7		0	0
Each school day	2	7		3	12
More than once each school day	0	0		1	4
N.R.	1	4		2	8
Total	28	100		25	100
Avg. Times/Week		1.74			1.87

Figure 4.1

How many times a week do you discuss current events in your classroom?

Experimental Group= 1.74
Control Group= 1.87
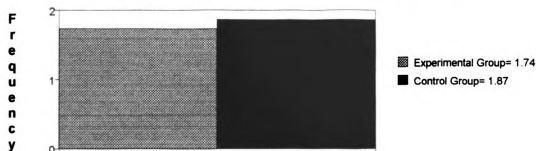
Question 2

Table 4.2
How many times a week do you discuss current events outside the classroom with your family or friends? .

Frequency	Experimental Class		Control Class	
	N	%	N	%
Don't discuss at all	6	21	0	0
Once a week	7	25	8	32
Twice a week	5	18	4	16
Three times a week	1	4	3	12
Five time a week	3	11	3	12
More than five times a week	3	11	4	16
N.R.	3	11	3	12
Total	28	100	25	100
Avg. Times/Week		2.12		2.90

Figure 4.2

Times a week you discuss current events outside class w. family or friends?

Experimental Group= 2.12
Control Group= 2.9
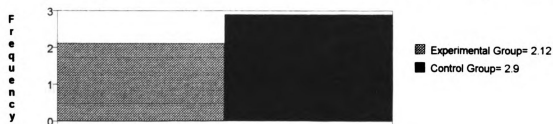
Question 3

Table 4.3
Do you use the computer to study current events in your class?

Response	Experimental Class		Control Class	
	N	%	N	%
Yes	0	0	0	0
No	27	96	25	100
N.R.	1	4	0	0
Total	28	100	25	100

4. Do you use a computer to help you study at home?

Many children have a computer at home and there are some interesting gender differences

in this area that may be resolved as more parents buy home computers across the board.

Studies by Kirkman and Martin [1] show that boys are more likely to have a computer than

girls and spend more time playing games on computers than girls. Girls are thirteen times

less likely than boys to have access to a home computer. Using a computer at home helps

children at school. Children who use a computer at home, are more enthusiastic users of

information technology (IT) at school, get more time on computers in schools, are more

confident at using IT in school, see computers as useful and consider themselves better at

using IT at school. These effects are found in both boys and girls but the attitude of girls

towards computers is affected more by having a computer at home. If girls use a computer

only at school they become more confident about IT but they do not feel that computers

are useful or that they are any better at using IT. Using a computer at home has a positive

effect on girls' attitudes towards computers in all areas. Studies also show that boys are far

more likely than girls to use their computers for games, often exclusively. Girls are more attracted to software which they see as useful, such as word processors. Giving girls software tools such as word processors and databases for them to use at home can greatly increase their enthusiasm and capability. It can also help redress the imbalance which has developed between how girls and boys use IT in schools.

Table 4.4
Do you use a computer to help you study at home?

| Response | Experimental Class | | | Control Class | |
	N	%		N	%
Yes	9	32		13	52
No	19	68		12	48
N.R	0	0		0	0
Total	28	100		25	100

Figure 4.3

Do you use a computer to help you study at home?

Experimental Group= 32.1%
Control Group= 52%
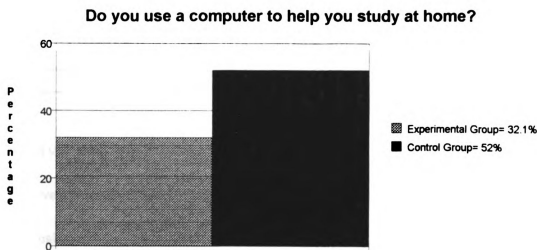
It's worth noting here that with a larger sample the difference between the control and experimental class (52% vs. 32%) would be statistically significant in a Chi-square test at

the p<.05 level.

Figure 4.4

Do you like using computers to help study?

| | Experimental Group=71.4% |
| | Control Group= 88% |
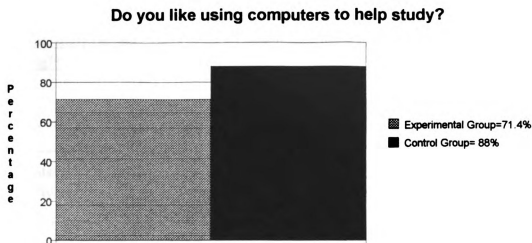
5. Do you like using computers to help study?

Table 4.5

Do you like using computers to help you study?

Response	Experimental Class		Control Class	
	N	%	N	%
Yes	20	71	22	88
No	6	21	1	4
N.R.	2	7	2	8
Total	28	100	25	100

6. When you study current events in class, what area do you find most interesting?

This survey question showed the experimental group to be much more interested

in national-world current events than the control group by a 78.5%-to-44% margin.

Conversely, the control group was much more interested in local-state events by a

52-to-21.5% margin. A Chi-squared test ^{2} was administered here and found a

significant difference between the experimental and control groups. ($p<.05$, $X^2=6.3$, $df=2$)

Below is a table breakout of question # 6

Table 4.6
 When you study current events in your classroom, what area do you find most interesting?*

Response	Experimental Class		Control Class	
	N	%	N	%
Local/State	6	22	13	52
National/World	22	78	11	44
N.R.	0	0	1	4
Total	28	100	25	100

*($p<.05$, $X^2=6.3$, $df=2$)

Figure 4.5

When you study current events what area do you find most interesting?
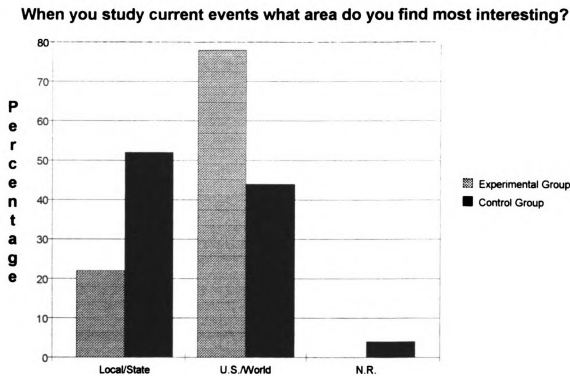
7. Does your class use the News-10 Computer Education Project?

Figure 4.6

Does your class use the News-10 Computer Education Project?
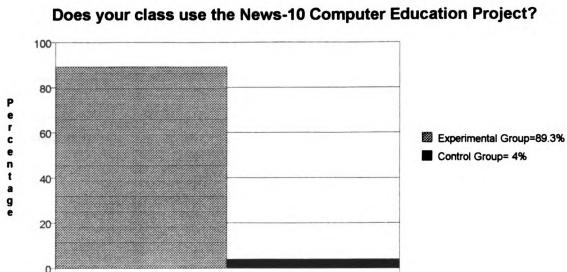
Table 4.7

Does your class use the News-10 Computer Education Project?

Response	Experimental Class		Control Class	
	N	%	N	%
Yes	25	89	1	4
No	2	7	24	96
N.R.	1	4	0	0
Total	28	100	25	100

8. How would you rate the News-10 Computer Education Project as a current events

resource for your classroom?

This question was asked to the experimental class and reflects a relatively high rating of

the News-10 Computer Education Program. This rating was also reflected in attitudinal

survey results from students, teachers and administrators at other Mid-Michigan schools

that use the Project and reflect positive attitudes towards the Project..

Table 4.8

How would you rate the News-10 Computer Education Project as a current events resource for your classroom?

	Experimental Class	
Rating	N	%
1 Not Important	0	0
2	0	0
3	0	0
4	1	3
5	1	3
6	0	0
7	3	11
8	8	29
9	2	7
10 Very Important	8	29
N.R.	5	18
Total	28	100
Avg. Rating:	192/23 =	8.35

Figure 4.7

How would you rate News-10 Computer Education Project?

Not Important------Avg.= 8.35---------Very Important
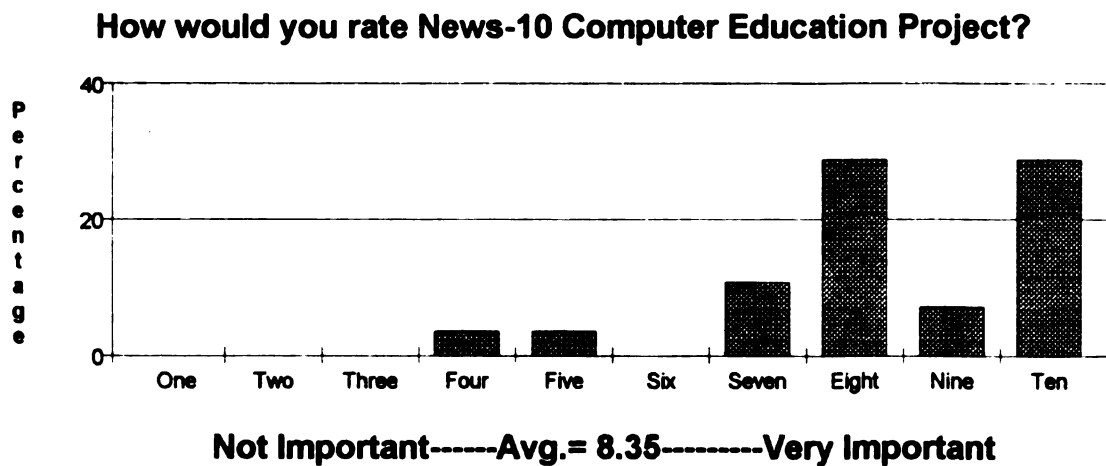
9. How would you rate your understanding of current events?

Table 4.9
How would you rate your understanding of current events?

Rating	Experimental Class		Control Class	
	N	%	N	%
1 Worst	0	0	0	0
2	0	0	0	0
3	1	3	0	0
4	0	0	0	0
5	2	7	5	20
6	3	11	3	12
7	4	14	0	0
8	2	7	2	8
9	6	22	4	16
10 Best	8	29	5	20
NR	2	7	6	24
Total	28	100	25	100
Avg. Rating:	209 /26= 8.04		130 /19= 6.84	

Figure 4.8

How would you rate your understanding of current events?

Experimental Group= 8.04
Control Group= 6.84
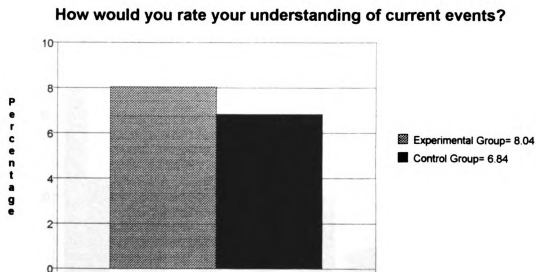
10. What is your favorite subject to study in school?

It was interesting to note here that more students in the control group liked to study social studies than students in the experimental group, even though the experimental group performed better on current events. The experimental group had a higher preference for mathematics.

Table 4.10

What is your favorite subject to study in school?

	Experimental Class		Control Class	
Subject	N	%	N	%
Math	13	46	6	24
Science	7	25	6	24
Social Studies	0	0	3	12
English	5	19	3	12
Something else	1	3	5	20
NR.	2	7	2	8
Total	28	100	25	100

Figure 4.9
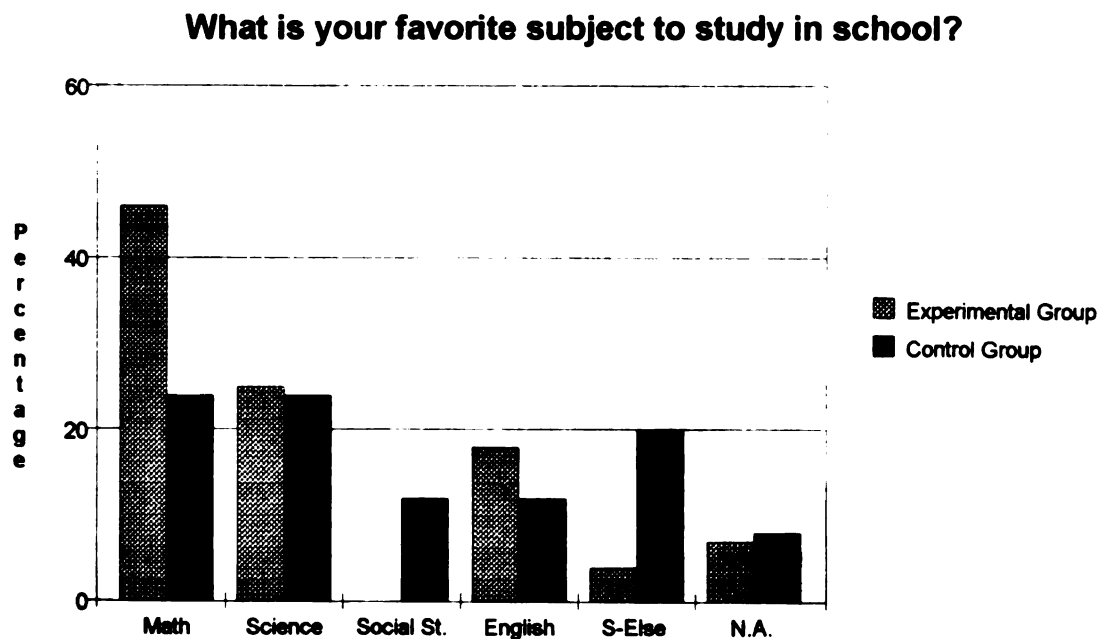
What is your favorite subject to study in school?

11. On average, how often do you take current events tests or quizzes to test your knowledge of current events?

Another area of statistical significance was measured with a t-test (t=3.2, p<.01) involves question eleven. t-tests were applied to determine significance between group means. The question asked students how many times a month they took current events tests or quizzes. The experimental group took current events tests or quizzes more than four times a month (4.11). That is more than twice as high as the control group which took current current events tests or quizzes less than two times a month (1.83).

Table 4.11

On average, how often do you take current events tests or quizzes to test your knowledge of current events?*

Frequency	Experimental Class		Control Class	
	N	%	N	%
a. Once a month	3	11	13	52
b. Twice a month	0	0	6	24
c. 3 times a month	0	0	1	4
d. 4 times a month	19	68	4	16
e. 4 plus times/mo.	4	14	0	0
NR.	2	7	1	4
Total	28	100	25	100
Avg. Times/mo.	4.11		1.83	

* (t=3.2, p<.01)

Figure 4.10

Each month, how often do you take current events quizzes or tests?
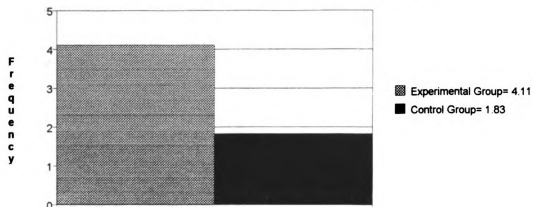
12. Compared to other subjects taught in your classroom, how would you rate the importance of learning about current events?

Table 4.12

Compared to other subjects taught in your classroom, how would you rate the importance of learning about current events?

Rating	Experimental Class		Control Class	
	N	%	N	%
a. Most important	3	11	5	20
b. More important	5	18	5	20
c. Important	19	68	14	56
d. Less important	1	3	0	0
e. Least important	0	0	1	4
Total	28	100	25	100

Figure 4.11

Compared to other subjects, rate importance of learning current events?
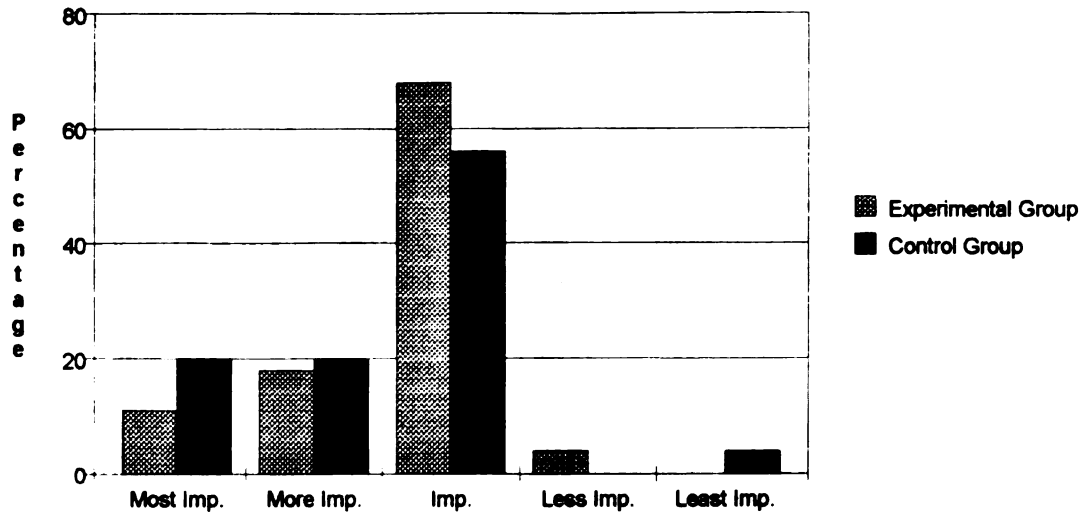
Current Event Quiz Questions 13-22

This will examine the percentage of correct answers the experimental and control classes

received on each of the 10 current events quiz questions they were given, the overall

average class quiz scores and statistically significant differences between the classes

performances on individual quiz questions and grouped quiz questions. A look at overall

performance on the news quiz indicates the experimental class scored 80.7% correct

answers versus 72.4% for the control class That's a 10.285% difference. If applied to a

straight 100% grade scale that would be the difference between a "B" grade and a "C'

grade as conventionally used in educational systems.

The experimental class was also 23.8% righter on correct answers than the control

class. The Chi-square tests were applied to the individual current event questions as a

measure of observed versus expected frequencies.

(Experimental- n=28: 16 males/ 12 females)   (Control-n=25: 11 male/ 14 female)

Table 4.13

		Experimental Class		Control Class		Significant?
#	Topic	N	%	N	%	
13.	Mi. Gov.	22	79	22	88	n.s.
14.	US Pres.	27	96	23	92	n.s.
15.	Local B.B. team	27	96	25	100	n.s.
16.	Iraq leader	23	82	13	52	sig.,p<.05(X²=4.5,df=1)
17.	U-S Troops	22	79	16	68	n.s.
18.	Dr. Death	26	93	11	48	sig.,p<.05(X²=6.2,df=1)
19.	Olympic Town	25	89	22	88	n.s.
20.	GOP/Pres.	24	86	21	84	n.s.
21.	Ross Perot	23	82	16	64	n.s.
22.	Ingham seat	7	25	10	40	n.s.
Avg.		807 / 10= 80.7%		724/10 = 72.4%		

72.4/ 80.7 =10.285% difference between experiment and control classes

The graph below serves as an illustration of the differences between the two classes.

Figure 4.12

Classes current events test scores for questions 13-22

Percentage Correct
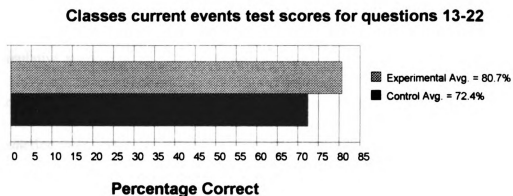
Applying the Chi-square test, we found a significant difference (p<.05(X²=4.5,df=1))

between the experimental and control groups for quiz questions sixteen (Which one of

these leaders is the President of Iraq?) and eighteen (Which of the following is referred to

in Michigan as "Doctor Death?)

It's important here to qualify the performance differences between the experimental and control classes by foremost acknowledging the relatively small sample size, its inherent limited statistical power, the individual teachers emphasis on different study areas in their classrooms and the limited exposure period (4-weeks) of the experimental group to the News-10 Computer Education Project. In some instances a larger sample would have given statistical significance to survey questions where no statistical significance is currently found because of a relatively small sample.

There are some interesting trends that should be noted. In question nine, the author asked students in the experimental and control classes to rate themselves on a 1-to-10 scale on their knowledge of current events. On question nine the attitudinal gap between the two groups (experimental=8.04, control =6.84) was coincidentally 8.5%. That 8.5% gap on question nine was fairly close to the 10.285% performance gap measured in the cumulative average news quiz scores (questions 13-22) between the experimental and control classes. This may suggest that students have a relatively good feel for predicting their performances on current events tests or quizzes based on how confidently they rated their own knowledge of current events. The next graph compares the two measurements on a 1-to-10 scale.

Figure 4.13

Rate Your Current Events I.Q. vs. Quiz Scores

I-Q Experimental Avg = 8.04
I-Q Control Avg.= 6.84
Quiz Experimental Avg = 8.07
Quiz Control Avg = 7.24
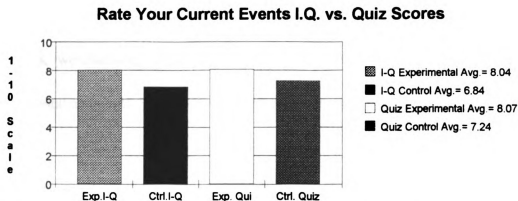
When we examined questions numbers 13, 14, 15, 19, and 22, (see Figure 4.14) that involve more "local/experience based," questions students may be more likely to know because they're a regular part of discussions with classmates, teachers and parents, there was little difference between the experimental and control groups in the percentage of students who got correct answers. 78.5% vs. 82%

It is also worth noting again that on survey question six, the control group was more interested in local-state current events than the experimental group by a 52%-to-21.5% statistically significant margin.

Figure 4.14

Local/ Experience Based Questions

Experimental Avg = 78.5%5
Control Avg = 82%
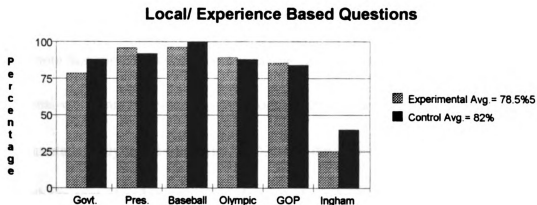
On the other hand, when we looked at questions 16, 17, 18, 21, (see figure 4.15) that involve a broader and more specific knowledge of "National/ World," based current events questions, we observed a much larger and significant performance gap between the experimental and control groups in the number of students who got correct quiz score answers.

When the four items are averaged the difference is 83.9% vs. 58%. The mean score summing for the four items is 3.36 for the experimental class and 2.32 for the control class. By running a *t*-test to determine significance between group means we found a significant difference (*t*=2.5, p<.05) between the experimental and control groups.

Figure 4.15

National-World Questions
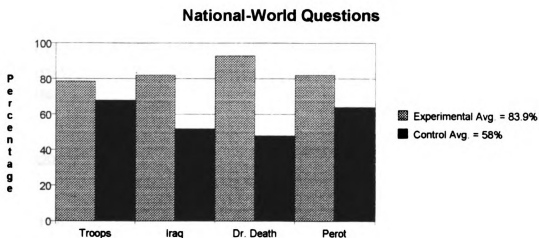
*It i*s of note that survey question six showed the experimental group to be more interested in national-world current events than the control group by a 78.5%-to-44% margin. This was statistically significant: *(p<.05, X^2=6.3, df=2) It is also worth mentioning again that both the control and experimental classes had nearly identical pretest mean scores in

two areas, Acquired Content Knowledge (experimental=2.89, control=2.88) and Social

Studies Skills (experimental=2.678, control=2.653), in which they were tested by the

Haslett Public School District in May of 1996. Both these areas would appear to relate to

the students knowledge of current events and are meant to establish a testing baseline

from which comparisons for the ten question news quiz that was administered in this

survey.

Section B: Attitudinal Survey Responses from Students
Attitudinal Surveys:
Students N=68

1. Have you ever heard of News-10 Computer Education Project?

Most of the 68 students surveyed have heard of, or currently use the News-10 Computer

Education Project.

Table 4.14
Have you ever heard of News-10 Computer Education Project?

Response	N	%
Yes:	58	85
No:	9	13
No Response:	1	2
Total	68	100

Figure 4.16

Have you ever heard of the News-10 Computer Education Project?

Frequency
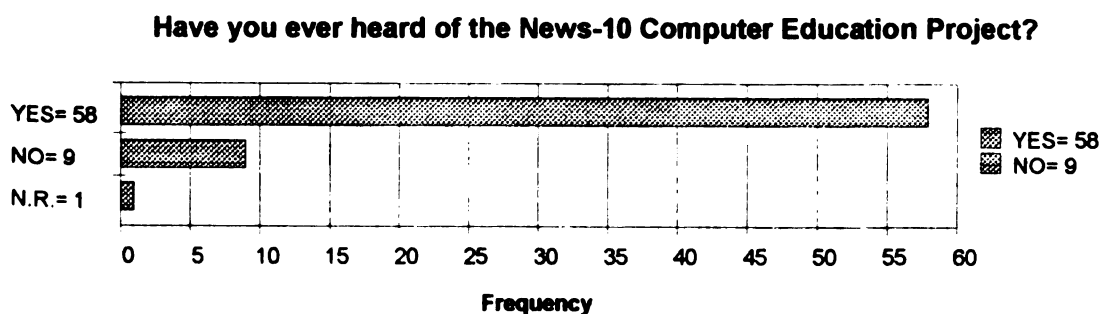
2. What do you think about the News-10 Computer Education Project?

Table 4.15
What do you think about the News-10 Computer Education Project?

Response	N	%
1. (Don't Like)	0	0
2.	0	0
3.	0	0
4.	1	1
5.	8	12
6.	3	4
7.	7	10
8.	11	16
9.	12	18
10. Like Very Much	15	22
N.A.	11	16
Total	68	100
Avg. Rating:	457/57=8.02	

Figure 4.17

What do you think about the News-10 C.E. Project?

<Don't Like-----------Avg.=8.02----------Like Very Much>
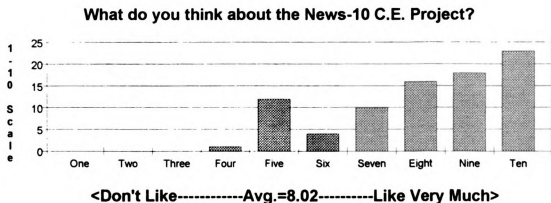
3. Do you think other students would enjoy using the News-10 Computer Education

Project?

Not only do students who use the Project rate it highly, 83-percent of the surveyed

students said they would also recommend it to a fellow student.

Table 4.16

 Do you think other students would enjoy using the News-10 Computer Education
Project?

Response	N	%
No	3	4
Yes	57	84
N.R.	8	12
Total	68	100

Figure 4.18

Do you think other students would enjoy using News-10 C-E-P?
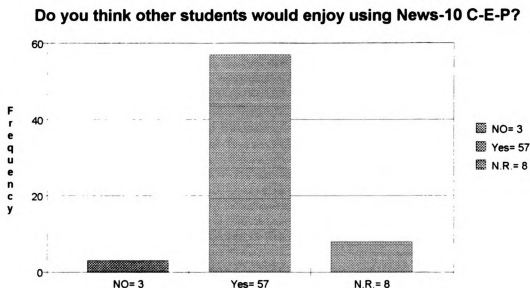
4. For those who use News-10 Computer Education Project: "How do you use the
News-10 Computer Education Project?

Respondents were 4th and 5th graders at elementary schools in the Haslett, East Lansing
and

Okemos School districts. Most of them equate watching the news with taking news
quizzes as

a standard part of the News-10 Computer Education Project. Here are some key
responses:

"To see what's going on in the world."

"I use it for studying current events and just for the fun of it."

"I watch the news every night and I answer the questions on Monday (we review the questions) and on Friday we do the quiz."

"I copy down the questions and try my best to watch the news and read the paper and get the answers."

"We talk it over then take the quiz and then get our score."

"You watch the news, read newspapers and answer the questions on the news quiz."

We get the questions from our teacher and study for it (quiz) then later in the week we take a quiz."

"They give you the news quiz and you study the news for about three days then you put down the answers that you get from the news."

"Our teacher gives us a question sheet every Monday and we study on the computer, ask our parents or watch News-10. Then we test it on Friday."

"I watch the news and use the computer to find out interesting facts about our community."

"You watch TV and read the newspaper and get all the information you can then answer the questions."

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5. (After a description of the News-10 Computer Education Project) Do you think you might like or dislike using the News-10 Computer Education Project in your classroom?

This question was asked to the small sample of student respondents who had never heard

or used the News-10 Computer Education Project.

Table 4.17

<u>Do you think you might like or dislike using the News-10 Computer Education Project in your classroom?</u>

Response	N	%
Like	6	66
Dislike	1	11
N.R.	2	22
Total	9	100

6. (For those who have never used News-10 Computer Education Project: "What would you LIKE or DISLIKE about using the News-10 Computer Education project in your class?

Most of the respondents seemed open to using the Project even though they'd never tried it before as the responses indicate:

"It's confusing."

"It's encouraging and people, or should I say "kids" are learning more about the world and news around us, currently speaking."

"I would like the Computer Education Project because it sounds cool to me."

"I wouldn't like it."

"I would like students to learn more about current events and news quizzes. I think News-10 is a good project to do."

I would like it because I like quizzes and tests."

"I think I would like it because I like to know what's going on in the world."

I like to do and learn about current events. I also like the quizzes."

<u>Section C: Attitudinal Survey Responses from Teachers</u>
Teachers: N=28

Teachers taught 3rd, 4th, 5th, 6th, 7th, 8th grades in the Lansing, Okemos, East

Lansing and Haslett school districts that use the News-10 Computer Education Project in

some classrooms at their schools. 40% of the respondents were teachers who do not

currently use the Project in their classes.

1. Have you ever heard of News-10 Computer Education Project?

Table 4.18
<u>Have you ever heard of News-10 Computer Education Project?</u>

Response	N	%
Yes	17	60
No	11	40
Total	28	100

Figure 4.19

Teachers- Ever heard of News-10 Computer Education Project?
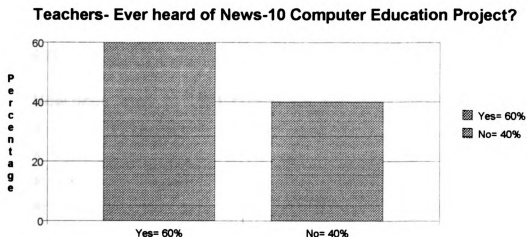
2. How does News-10 Computer Education Project rank as a teaching tool at your
school?

For teachers who responded to this question, the Project ranked very high on the

importance list as a teaching tool at their schools. The N.A. levels are very high here

because many teachers used a student attitude survey to record their responses and

we tossed those responses out.

Table 4.19
How does News-10 Computer Education Project rank as a teaching tool at your school?

Response	N	%
1. (Least Important)	0	0
2.	0	0
3.	0	0
4.	0	0
5.	2	12
6.	0	0
7.	3	18
8.	1	6
9.	4	24
10. (Most Important)	7	42
N.R. or n.a.	11	
Total	17	100

Avg. rating: 145/17=8.53

Figure 4.20

How does News-10 C-E-P rate as a teaching tool at your school?

<1=Least Important-------Avg.= 8.53-------Most Important=10>
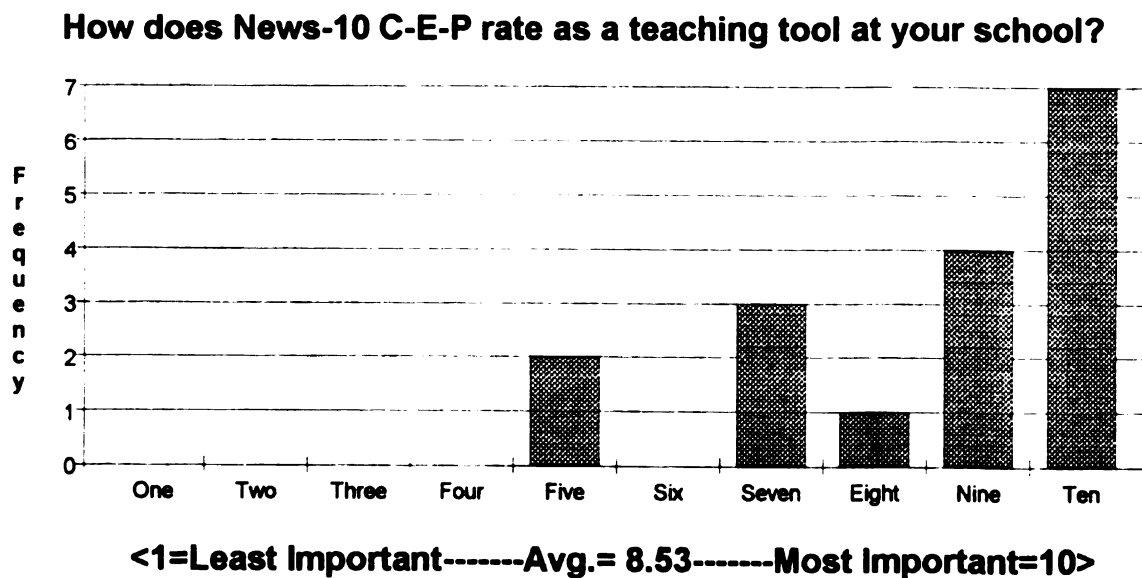
3. Have you encouraged other teachers to use News-10 Computer Education Project?

The responses speak for themselves. Again the NA level is high because many

teachers filled out responses using student response forms.

Table 4.20
Have you encouraged other teachers to use News-10 Computer Education Project?

Response	N	%
No	2	18
Yes	9	82
N.R.	17	.
Total	11	100

Figure 4.21

Have you encouraged other teachers to use the News-10 C-E-P?
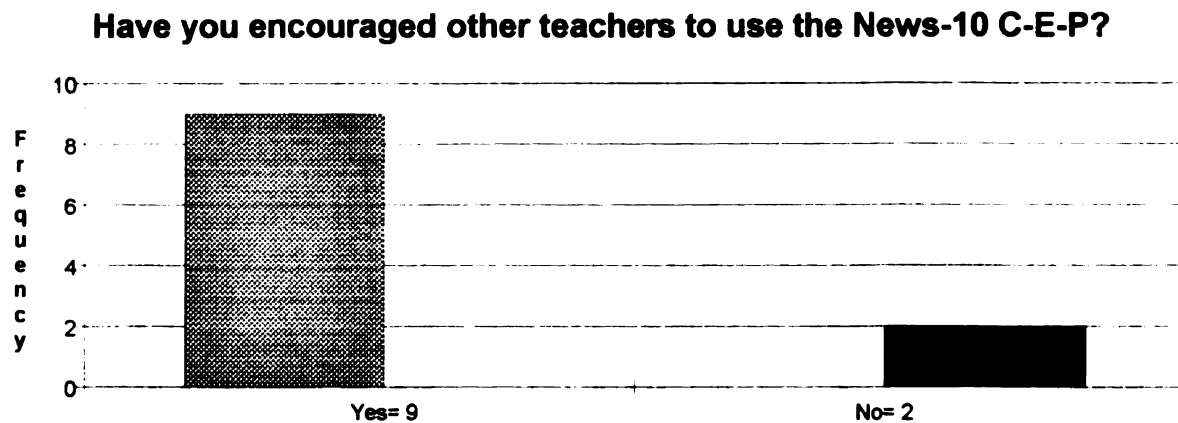
4. What are your expectations of the News-10 Computer Education Project?

On this question the vast majority of teachers said they relied on the News-10

Computer Education Project to help make their students aware of current events on

an ongoing basis. Many also liked the rapport the Project helped establish between

their classrooms and employees at WILX-TV. Below are some of the verbatim

teachers replies:

"To motivate students to become aware citizens with more caring attitudes."

"Children become aware of current events by using technology. Establish rapport with staff at News-10."

"I expect a quick summary of top news stories of the week at my students interest/understanding level."

"The news quizzes are great-being able to consult to the web-e-mail."

"To keep us updated on current events and to continue to be a community resource."

"Raise awareness and knowledge of current events and sources of news."

"Spark an interest in students to keep abreast of and discuss current events issues."

"I like it when Roger (News-10 Anchor) comes to my room to present awards to students with perfect scores."

"I feel guilty having "expectations" from something that is provided free, but I have come to expect the Quiz and access to the Internet. I also expect that I will learn to make better use of access."

"The News-10 Project helps keep the kids current. They also like asking questions back to Roger McCoy. They think it's great when he comes to visit with certificates." (Perfect Quiz Score Certificates)

5. How do you currently use the News-10 Computer Education Project in your classroom?

As in question 4., the vast majority of teachers again said they relied on the News-10

Computer Education Project to help make their students aware of current events

and to help keep them focused on current events through the media as a part of

their curriculum. Many also liked the interactive communications the Project helped

establish between their classrooms and employees at WILX-TV. Below are some of

the verbatim teachers replies:

"I use it as an integral part of our current events study. It also is used to introduce electronic access of information."

"We use the weekly quizzes, search for answers on-line, write via e-mail to News-10."
"In the past I would use it as an outline for discussion as a motivator for myself and my students to keep up with the news broadcasts and reading and a fun way to quiz-provide closure. It encourages students to do at-home learning and to discuss with (bring in) parents."
"Internet access and quizzes. We also send e-mail to get answers to our questions."

"I use the Project with my team partner for science and social studies."

"I use it to encourage students to follow current events. I have found it to be a good extra credit incentive."

"Use Quiz weekly with small groups. Send questions to newsroom personnel as they arise. Example: weather questions during science weather unit."

"We go over it together with the rest of the students checking there on. We get into great class discussions."

"We do the weekly quizzes."

"Current events supplement to our curriculum."

"I use the Project as an interactive on-line current events supplement."

"We listened to news broadcasts and read the newspaper all week and on Fridays we took the quiz. The children were responsible to do this on their own and we would discuss the news before the quiz."

"Quiz given once a week. Students accumulate points from correct answers on quizzes and top point getters win "trip" to watch the News-10 broadcast...Each morning students have the opportunity to share news stories with the class which they think might appear on next week's quiz."

6. What do you like or dislike about the News-10 Computer Education Project?

Teachers who responded to this question primarily liked the simplicity of the

Project as a current events teaching tool.

Dislikes included a lack of more analytical questions and the long e-mail address list

that's at the top of the News-10 Quiz when it comes down on e-mail each week.

Here are some of the teachers comments:

"I like the format, easy access to people involved and the willingness to come into the schools."

"I wish there were an easy way to do why and how (analytical) questions."

"I like the personal interest Roger McCoy takes in helping to motivate the students."

"We are not ready to be on the web using district hardware. The Project gives us the access we need."

"I like the simplicity of the format. I like the ease of distribution. (e-mail)"

"It works-students are motivated to keep up with and discuss current events."

"I often don't get the quiz since it is up to another teacher to copy it and give it to me. It is a great vehicle for discussing current events."

"Can't beat the cost. I like the idea that students can access media personalities for information and can access the Internet and are learning to incorporate it in their research."

"The long list of users addresses (headers) preceding the quiz-trivial I know."

7. (For teachers who have never used News-10 Computer Education Project) Why would or wouldn't you use the News-10 Computer Education Project in your classroom?

The biggest stumbling block here was most teachers lack of access to computer hardware

and the Internet. Most of the teachers who don't use the Project say they'd like to

use it if only they had the necessary hardware, access to the Internet and the

necessary training to feel confident in using computers.

Here are some of the teachers responses:

"I would definitely use the program if I could e-mail from my room. Currently, I would have to e-mail questions from my home."

"I would like to have available the technology in my classroom- however there is always a caution regarding how violent or graphic some news can be."

"I would use it as I could get more use out of the technology I have available. I really need a more structured way to get kids informed."

"I would like to use it but don't have access to Internet currently and am not sure how to go about getting it. I would really like to be able to have kids interact with news persons about world wide views."

"Currently I have only about 5 students doing your News 10 Quiz because we need to hand copy the questions until we get a working printer and they need to come in after school."

"I like being able to send a question when it arises and not the next day."

"It sounds like something I'd like to try."

"Children might develope an interest in current events and watching news."

I will use the Project in my class now that I'm aware of it. The Internet is still a mystery to me but I'm enjoying learning more and more."

"I would use this service to help my students stay current about the world around them. Not all 5th graders read the newspaper or watch the news so this could be an effective way to stay current."

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8. (For teachers who have never used News-10 Computer Education Project) If you did use the News-10 Computer Education Project in your class, how would you use it?

Just as teachers with access to the News-10 Computer Project rate it highest as a

useful tool for keeping their students abreast of current events, so do teachers

without access to the Project. This would appear to indicate that a top priority for

both user and non-user teachers is the Project's regular and timely focus on current

events. Here are some of the non-user teachers responses:

"I would use it weekly in my social studies class and/or my homeroom."

"I would use quizzes with small groups-possibly encourage outside research to answer questions. Maybe key them (questions or news stories) to countries we study in Social Studies."

"Current events, special research topics, the election!"

"I would let students formulate and send questions to you."

"I'm not exactly sure, but an idea would be to assign or let students choose an area of interest and write about it or report back to the class."

"Starting to use e-mail for more communication. Fun with the news and the (TV-10) employees."

"Kids are full of questions and often they share wrong information about current events and I would love for them to be able to actually learn more about current events."

Section D: Attitudinal Survey Responses from Administrators
Administrators N=7

Respondents were elementary and middle school principals from Lansing, East

Lansing and Haslett. Even though this is a very small sample, it exhibits positive

attitudes by school administrators whose schools use the News-10 Computer

Education Project.

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1. Ever heard of News-10 Computer Education Project?

Table 4.21
Ever heard of News-10 Computer Education Project?

Response	N	%
Yes	7	100
No	0	0
Total	7	100

2. How does News-10 Computer Education Project rank as a teaching tool at your school?

Table 4.22
How does News-10 Computer Education Project rank as a teaching tool at your school?

Response	N	%
1. (Least Important)	0	0
2.	0	0
3.	0	0
4.	0	0
5.	0	0
6.	0	0
7.	2	29
8.	1	14
9.	1	14
10. (Most Important)	1	14
N.R.	2	29
Total	7	100

Figure 4.22

How does the News-10 C-E-P rank as a teaching tool at your school?
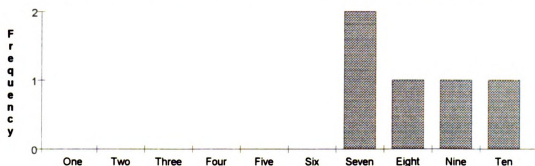
<1=Least important--------Avg.= 8.2---------Most Important=10>

3. Have you encouraged other teachers to use News-10 Computer Education Project?

Table 4.23

Have you encouraged other teachers to use News-10 Computer Education Project?

Response	N	%
No	1	14
Yes	5	72
N.R.	1	14
Total	7	100

Figure 4.23

Have you encouraged teachers to use News-10 C-E-P?
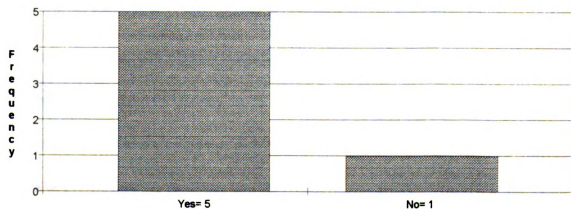
4. Describe any curriculum areas in which the News-10 Computer Education Project might be a useful teaching tool at your school:

As with both user and non-user teachers, administrators responses indicate a

primary consideration of the News-10 Computer Education Project as a teaching

tool most useful for Social Studies and current events in their school's classrooms.

Some administrators also acknowledged the positive interactive nature of the Project

too. Here are their responses:

"Social Studies/Current Events; Critical Thinking; Character education; Research Skills; Technology/Computer Skills; Cooperative Learning Skills."

"All areas are appropriate. We have a "Brain Teaser" each morning for the kids that is very popular. It hits on all content areas."

"Most interesting, the access to WILX-TV news employees-build a bridge."

"Science/ Social Studies and other curr. areas."

Predominantly social studies and language arts. Because of the uncertain nature of the content, math, science, health, art, music, etc. are less involved."

"This kind of activity can span all curriculum areas. I will continue to encourage teachers to use outside agencies and resources to enhance their instructional programs."

Section E: Computer Education Administrator Interview

A primary force behind technology use in the classrooms are the teachers. Many of them

said in this and previous surveys that they lacked the necessary training and/or hardware

to be able to participate in programs like the News-10 Computer Education Project. have

told But what happens when a teacher isn't inclined to use computers, the Internet and

other technology tools for teaching in their classrooms?

This is another critical question most all school districts face as they bring technology into the classroom. To help answer this question we turned to Bill Lang (lang@voyager.net) a 4th grade teacher at Donley Elementary School in the East Lansing Public School District (ELPS). Between 1993 and 1996 Lang was given a special assignment and title: Elementary School Computer Education Administrator.

In this position Lang assisted ELPS K-5 teachers in implementing the District's technology, student objectives. "This included model lessons within the classroom and teacher inservice training outside the classroom," says Lang.

Lang was also selected as winner of a grant from TCI this year to attend a seminar at the Sparkman Center for Educational Technology near Denver, Colorado. There he received personal training in a variety of instructional technologies including data resources, the Internet, information retrieval, computer networks, multimedia and electronic publishing.

Lang says the Sparkman Center, "deserves an 'A' on the work it does inspiring teachers to properly integrate technology into the classroom." Lang has taught in public schools for the past 24 years. The following are excerpts from Lang's response to a September 1996 interview questionnaire with opened ended questions sent to Lang via e-mail:

How do you motivate teachers to learn about using computer technology as a teaching tool in their classrooms?
"Through newsletters, staff meetings, and personal conversations I focus on the aspect

that technology related tools are effective, motivating, and productive teaching and learning tools.

I try to stress the fact that these tools may not be a part of the teacher's world but they are an integral part of our student's every day lives.

A child's perceptions have been molded by these tools and the use of these tools is a natural way for them to gain understanding and meaning."

What do you do when a teacher can't be motivated to use computer technology as a teaching tool in their classroom?
"It seems to me there are two options. First, you can encourage the teacher's administrator to use the evaluation process to change behavior or you can accept the teacher's position and hope that they'll come to a different one on their own."

Describe what role, if any, that available outside computer-based teaching resources play in educating students in your school district.
"If you mean on-line services, our district has very limited capability for all students at this time. Selected classrooms are using e-mail services to connect to teacher and student resources. However, at this time, we do not have a graphical interface to the Internet. We should have this service sometime in the next year."

Section F:

This section describes the known number of schools, students and teachers who

participate in the News-10 Computer Education Project based on an e-mail survey

by WILX-TV on 10-13-96. We believe this number to be larger for two reasons:

1. Several teachers without Internet access use the News-10 Computer Education

Project quizzes provided to them and their classes by teachers who do have Internet

access.

2. Many schools have switched their Internet providers. This means changes in e-

mail addresses for teachers who have been participating in the News-10 Computer

Education Project, but currently aren't because they haven't forwarded their new e-

mail address to WILX-TV.

Here are those schools who responded to our e-mail survey and say they currently use the

News-10 Computer Education Project
:

MacDonald Middle School, East Lansing Public School District
6th grade- 241 students
7th grade-110 students

Donley Elementary School, East lansing Public School District
4th grade- 22 students

Marble Elementary School, East Lansing Public School District
4th grade- 33 students

Whitehills Elementary School, East Lansing Public School District
5th grade- 47 students

Pinecrest Elementary School, East Lansing Public School District
4th grade- 37 students

Washington Woods Middle School, Holt Public School District
4th grade- 213 students
5th grade- 212 students

Murphy Elementary School, Haslett Public School District
4th grade- 43 students
5th grade- 82 students
*Several other rooms use the quiz as a whole class discussion, rather than have the kids

answer on their own. There are about 3 more classrooms using the quiz in this way.

Cornell Elementary School, Okemos Public Schools District
4th grade- 24 students

Dwight Rich Middle School, Lansing Public School District
6th grade-47 students

7th grade-120 students

8th grade-44 students

Henry North Elementary School, Lansing Public School District

3rd grade- 25 students

Pattengill Middle School, Lansing Public School District

8th grade-5 students

Distribution totals:

3rd grade- 25

4th grade-372

5th grade-341

6th grade-288

7th grade-230

8th grade- 49

Total-1,305 students

CHAPTER V
PRESENT AND FUTURE: THE NEWS-10 COMPUTER EDUCATION PROJECT

This chapter concludes with a discussion for present and future growth opportunities for

the News-10 Computer Education Project.

This is an exciting time for the News-10 Computer Education Project. After two full

years of existence, its third year has seen a growing acceptance among teachers and

students as a useful learning and teaching tool at several Mid-Michigan schools. There's an

old addage for gardeners that also seems to apply to the News-10 Computer Education

Project: "The first year it sleeps. The second it creeps. The third year it leaps."

As the Internet grows and more schools invest in equipment to make Internet access a

reality, more teachers are requesting to be part of the Project. Many of these requests have

come from word of mouth advertising among teachers. Also documented is a growing

number of teachers and students who feel increasingly comfortable using computers and

confident using the Internet as their knowledge of its use grows.   Another unexpected

dividend has been the growing number of students who were introduced to and used the

Project in one class and who have now asked for it as they enter the next grade level

in school. One of the immediate challenges associated with the growth of the Project is to

be able to find enough time to manage it successfully so that its unique combination of

interactiveness, personal visits with students and teachers, timeliness of current events

material and interest to students and teachers continues unabated.

This means:

1. Allocating WILX-TV human and financial resources to be able to visit more

classrooms where the Project is being used

2. Preparing and presenting a growing number of News-10 Perfect News Quiz

Awards

3. Responding to a growing tide of e-mail from students and teachers who

participate in the Project

4. Spreading the word about the Project to schools that are not currently using it

5. Staying current with the technology

6. Providing access means for schools with limited funds

Here's a brief discussion of these six points:

1. Allocating WILX-TV human and financial resources to be able to visit more classrooms

where the Project is being used

Under new station ownership and management, the News-10 Computer

Education Project is being moved under the umbrella heading of WILX-TV's "Make It

Count" community service program. "Make It Count" is a joint station effort combining

the skills and energies of the station's news, promotions and advertising departments to

streamline our community outreach effort. Under this initiative, the station is looking for

synergistic promotional opportunities that include partnerships with local civic groups,

charities, advertisers, public and educational institutions. While the News-10 Computer

Education Project is still being administered by the author, personnel from the station's

news, promotions and advertising departments are also now assisting in publicizing the

Project's existence and coordinating activities of the Project with other of the station's

community outreach programs.

2. Preparing and presenting a growing number of News-10 Perfect News Quiz Awards

The first two months of the 1996-97 school year saw about a 250% growth in demand

for the News-10 Perfect News Quiz awards. This is a vital reinforcing part of the News-10

Computer Education Project. Originally, the awards were prepared by a caligrapher who

hand printed the names of each award recipient on the certificates. The certificates were

then personally signed by the author before being presented to the individual students who

got perfect quiz scores. If demand continues to soar for the certificates, WILX-TV has the

option of loading the names of the recipients into a print data base that will print them

directly onto the Perfect News Quiz certificate in any one of 2000 different

"8-through-36-point" font styles. The station also has several members of the news

department, besides the author who can personally sign and deliver the Perfect News Quiz

certificates on behalf of WILX-TV to students classrooms if the need should arise. Thus

far, that hasn't been necessary.

3. Responding to a growing tide of e-mail from students and teachers who participate in the Project

It's difficult to predict the volume of e-mail between WILX-TV and the classrooms that participate in the News-10 Computer Education Project. The station typically logs about 20 e-mails from students and teachers on any given week during the school year, but that can increase dramatically if a classroom studies a topic where students are encouraged to write e-mail and ask our opinions and advice on everythng from weather and sports to local, state, national and international current events. If there were to be a large enough increase in e-mail volume, the station has the option of purchasing any one of several commercially available bulk e-mail software packages. These packages can assist with auto responder messaging and expedited bulk e-mailing, but still wouldn't replace the personal replies we now make to all of our e-mail users. In that regard, more station personnel have been assigned to handling personal e-mail responses when the need or topic arise.

4. Spreading the word about the Project to schools who are not currently using it

Until this point, WILX-TV has been content to slowly nurture the News-10 Computer Education Project with the emphasis on developing an educational content that's accepted by teachers and students alike rather than the size or scope of the program. Now that the station is satisfied with the Project's participant acceptance, plans are in the works to begin promoting it on-air to make other schools aware of its existence within WILX-TV's

Dominant Market Area (DMA).

Another approach under consideration is to aggressively build through Freedom of

Information Requests (FOI) an extensive data base e-mail address list of every public

school in WILX-TV's DMA. Once compiled, we could conceivably bulk e-mail

solicitations on an annual or semi-annual basis to every e-mail address that would make

them aware of the News-10 Computer Education Project and invite them to respond via

e-mail if they're interested in becoming a Project participant. The expected increase in

school participation also means the station would inevitably have to expand its ability to

respond to an increase in e-mail, to prepare and present more "News-10 Perfect Quiz

Award" certificates and create additional human and financial resources for the Project. At

this point, these challenges are something the station is aware of and would be capable of

dealing with on a timely basis when they begin happening, according to WILX-TV

News Director Cherie Grzech.

5. Staying current with the technology

Staying current with the technology is both daunting and exciting. It would be virtually

impossible for an organization the size of WILX-TV to stay abreast of every new

technological development on the Internet or involving computer hardware. That said,

WILX-TV has been able to stay abreast of many of the current technological

breakthroughs on the Internet and is constantly examining their applications on a

cost-benefit basis to the station. The station now has a Web page devoted entirely to the

News-10 Computer Education Project at: http://members.aol.com/Wilxtv/index.html

The station is also examining the use of jpeg video and sound of it's broadcasts on a Web

page, plus the addition of a self updated news WWW page. As more viewers use the

Internet, the station's near term future plans include hiring or contracting with someone,

perhaps MSNBC, to help maintain and produce new ventures on the station's WWW

pages. Looking at economy of scale, WILX-TV and parent company Benedek are also

developing WWW formats that can be used and duplicated by all of Benedek's 22 TV

stations across America. When possible, partnerships with Benedek,CBS, ABC and NBC

networks will also help control costs and increase the production value of projects on the

Internet. If nothing else, the continual decline of technology costs, greater technology

efficiency and initiatives by the Federal government to make Internet access available to

every public school in America, make it appear certain that more people will use this

medium in the foreseeable future.

6. Providing access means for schools with limited funding

News-10 wants to make a continued commitment to providing Internet access via

complimentary America Online accounts available to needy school districts whose funding

may be limited or non-existent. It currently provides such accounts to three schools in the

Lansing Public Schools, three in the East Lansing Public Schools and one in the Haslett

Public School district. Unfortunately, the greatest obstacle here is not necessarily Internet

access. It is having schools wired for Internet access. A majority of schools in

Mid-Michigan still have six or less telephone lines for use by the entire school building and no other alternative, such as a fiber optic cable, to bring the Internet into individual classrooms, much less the school library.

Today, some private and charter schools in Michigan require six-year-olds to have laptop computers while nearby public schools can't even afford a computer lab. Children without access to computers and computer networks will be ill-prepared to take their place in tomorrow's job market. We know that telecommunications technology brings new resources into the classroom and can be particularly effective in helping all children to learn. We also know that schools with modern technology can become gateways for parents and others who do not have access to computers at home to learn computer skills. Today, only one-third of U.S. schools are wired for Internet access. Schools with a high proportion of low-income children are half as likely as schools serving more affluent children to have Internet access. Given the financial crisis in many of our public school systems, many urban and rural systems lack the resources to invest in modern telecommunications technology. According to a 1995 U.S. Department of Education survey, [4] lack of funding is the single largest barrier to technology deployment in the schools, followed by lack of technical expertise. The study estimates it will cost $9 billion to wire every school with a computer lab and $47 billion to wire every classroom. As most public schools across the country wrestle with funding choices for education, the cost of bringing the Internet and other telecommunications technologies to the classroom, many

believe, will inevitable have to be shared with non-traditional funding sources. "The telecommunications is part of the puzzle, but only one part," said Christopher Hedrick, who heads the library program for Microsoft. "Real technology access for poorer areas requires public and private-sector support." [2]

It is not just getting the technology into the classroom, but maintaining and upgrading it that may demand larger funding priorities in the future. President Clinton has proposed an ambitious project to wire all of America's schools for Internet access by the year 2000. The plan includes modern computers for students, classrooms to be connected to one another and to the outside world, teachers who are ready to use and teach technology and educational software that is "as engaging as the best video game." [3] The Clinton administration also says it will "push to increase the speed of the Internet to between 100 and 1,000 times its current pace -- an effort aides estimated would cost $500 million during the next five years."Now is the time to invest in the next generation of Internet," said Clinton. [4]

John Gage, director of the science office of Sun Microsystems said many schools simply aren't prepared for those expenses, or haven't even thought about them. "We should do more than we have been, pointing out to people that when these things come into a classroom, it's an ongoing cost," he said. "There is a maintenance cost, and somebody's going to have to do it, otherwise this wonderful infrastructure we're installing will just

stop working. But the success of the subsequent steps rests on volunteers, private

donations, corporate corporate sponsorships and other uncertain methods of funding." [5]

"Taxpayers are not going to give a blank check," said Barbara J. Yentzer, director of the

Center for Education Technology of the National Education Association. "It's going to

take untraditional strategies for paying for things. We'll have to be creative." [6]

WILX-TV is currently working on a plan to create partnerships between trade unions,

school districts and businesses in Mid-Michigan to help create a private volunteer pool to

provide the know-how, materials and workers to help wire the area's underfunded schools

for Internet access. As for Internet access itself, WILX-TV has a proposal pending before

America Online to increase its allocation of complimentary on-line accounts for

underfunded schools in exchange for on-air promotions through WILX-TV. Similar

projects on a larger scale are already unfolding across America. At the University of

California-Berkeley, UC-Berkeley's new Interactive University project, funded by the

U.S. Department of Commerce, the Oakland and San Francisco school districts, Pacific

Bell and IBM, elementary and high schools in designated Oakland and San Francisco

neighborhoods now have Internet access to the students, professors and resources at

UC-Berkeley. [7] The U.S. Department of Commerce has awarded a $650,000 grant to

the $5 million project. Officials said they hoped the program would become a prototype

for other universities and neighboring communities across the country. High school

students will also be able to hook up to students and professors, who can offer help with

classes and preparing for college. Older students can also join chat groups with leaders in

government, business and foreign affairs.

Cost-benefit analysis

Much to the station's pleasure, the actual cost of launching the News-10 Computer

Education Project and internet e-mail link was much less than originally estimated. When

station management first asked for cost estimates on hardware, networking fees, personnel

and software costs, the estimate included ground-up cost appraisals for purchasing new

equipment with upgradable capabilities. Instead, much of the fixed asset costs of the

Project were reduced by using existing computer equipment at WILX-TV. As far as

opportunity costs are concerned, the Project affords the author and station a more cost

and time efficient way to make making public appearances. These appearances are part of

an on-going relationship with students, teachers and administrators, as opposed to one

time visits, that are reinforced by the weekly News-10 Quizzes and e-mail interaction with

schools. Since good public relations and regular public appearances are often a key part of

a local TV news anchor's job, the opportunity costs associated with the News-10

Computer Education Project are considerably lower than other more traditional PR tools

used to maintain a visible and positive profile with the station's viewing audience.

It's too early to gauge the long-term benefits of this project, but it's safe to say that

initial reaction by viewers, schools, students, teachers and administrators who have been

using the News-10 Computer Education Project has been quite favorable.

Ratings

Ultimately, the objective for every commercial television station is to maintain the highest viewer ratings possible. Viewer ratings, as determined by Nielsen are the primary factor stations use when they determine how much money they can charge the sponsers of advertising. If ratings go up, stations can charge more for the time they sell advertisers. This is because advertisers are reaching a larger pool of potential customers. In this situation, a television station's advertising revenues and gross profits grow. Likewise, if viewer ratings fall, television stations may find themselves forced to drop their advertising rates and cut operating expenses. This is because advertisers are reaching a smaller pool of potential customers. In this situation, a television station's advertising revenues and gross profits may decline unless they run a higher ratio of advertisements at the expense of programming and at the risk of alienating viewers. This study did not attempt to examine or measure the potential ratings gains the News-10 Computer Education Project might have for WILX-TV. To do so, the author felt, might lead survey participants to feel uneasy about the possible commercial uses of this study.

The author does feel that had he asked ratings related questions to a large sample of News-10 Computer Education Project participants they would have shown higher viewership levels of WILX-TV. This might be a future audience research topic for the station and would be a powerful tool for station management to use to determine the Project's economic value to WILX-TV. In lieu of such ratings research, WILX-TV

believes the News-10 Computer Education Project is a logical and efficient marketing tool to help increase viewer ratings and station revenue. It believes the Project can do so in several ways. In the near term, WILX-TV believes the News-10 Computer Education Project helps attract teachers and parents of students who participate in the Project and use WILX-TV as a viewing resource at home to help prepare and study for the News-10 Quizzes. WILX-TV also believes that the good-will value the Project renders helps to reinforce the station's commitment to the community it serves, another potential, albeit sometimes intangible, factor people use when deciding which station they watch.

A final short term benefit that translates into long-term potential is the rapid growth of the Internet and personal computers in general. A July 1996 Nielsen survey called "The Home Technology Report" looked at trends. "The report is a nationally projectable study of penetration of new technology in consumers' homes and, further, the usage of that new technology." The Home Technology report sampled 2000 U.S. households and made some basic findings. Of the approximately 84 million Americans aged 12 years or older who said they had a personal computer at home:

* Over one in four (26%) had more than one computer at home

* Over half (56%) of persons with children 12-17 years of age in their household had a computer in their home, while slightly less (46%) of those with children under twelve had a computer

* Over half (54%) of the persons in households with a home computer have

  children under seventeen years of age living in the household

* Slightly less than half (43.1%) have at least a college degree and nearly two of five

  (37.9%) classify themselves as professional or managerial with regard to their

  occupation

What's more, the Nielsen report found that a large majority of those in households

subscribing to an online service (62.8%) have children under 18 years of age in the

household. Slightly less than half (48.7%) have at least a college degree and two of five

(40.3%) classify themselves as professional or managerial with regard to occupation.

Over half of those whose households subscribe to an online service report an annual

household income of $50,000 or more. Slightly over half (50.8%) of persons with access

to the Internet live in households with children under seventeen years of age. Less than

half (43.7%) have at least a college degree and nearly two of five (40%) classify their

occupation as professional or managerial. Nearly one of t o (47.8%) report an annual

household income of $50,000 or more.

In the long term, WILX-TV believes the News-10 Computer Education Project will be

useful as a tool for developing relationships with today's students who will eventually

grow-up and become tomorrow's adult viewers. In particular, as today's students become

tomorrow's young adult viewers, ages 18-45, they will move into an advertising

demographic that commands the highest advertising rates based on a widely held

assumption that this group has the most income to spend on advertisers products and

services. Finally, the station believes the personal interaction and e-mail contact

WILX-TV employees have with today's students, teachers and parents who participate

directly or indirectly in the Project will help create viewer loyalties that will for last as long

as these people live and work in the WILX-TV DMA.

Future Growth Opportunities for the News-10 Computer Education Project

The so-called Information Age has brought exciting new possibilities to mankind. One

of the greatest of all possibilities have less to do with the hardware itself, and more to do

with the societal implications of an age where information flows faster and from more

sources than ever before. "In 1850, it took about 50 years to double the world's

knowledge base," notes Frank Withrow, director of learning technologies for the Council

of Chief State School Officers. "Today, it takes only a little more than a year. The way we

store, retrieve and use information is vastly different in the Information Age. The U.S.

work force does not need knowers, it needs learners." [9]

Dr. Douglas Engelbart once worked at the Stanford Research Institute. Beginning in the

early 1950's he invented many groundbreaking products and concepts that we take for

granted today: the computer mouse, hypertext, groupware and many others. Dr.

Engelbart's motivating concept, still largely untested today, is that information

technologies could serve as the connective tissue between people and information.   The

result, he said, would be an exponential increase in what he calls an organization's

"collective I.Q.," [10] which would in turn supercharge a group's ability to improve itself

over time. This is because IT would bring the collective experiences of people

together to focus on problem solving while at the same time sharing and teaching skills

with those connected to the problem solving. "Such a broad-based initiative is critical

because changing the way people work together is as critical as the technologies that

connect them, according to Engelbart's partner/daughter Ms. Christina Engelbart, a

cultural anthropologist." [11]

Dr. Engelbart's "connective tissue" concept of information technologies might easily

apply to the News-10 Computer Education Project. WILX-TV believes the Project's

growing use as an educational tool helps foster a collective change in its users knowledge

base. The station also believes the Project is helping to shape the private sector's emerging

role in public schools as educational costs continue to climb and the need for

non-traditional assistance, both financial and experiential, is in greater demand than ever

before. To be sure, those who have the responsibility of making America's schools the

best place for students to learn, must independently make the best decisions regarding the

quality and consistency of teaching and learning. But, to this end, the private sector may

indeed have more to contribute today than has ever before been dreamed possible.

Future Project Research

Given the small samples measured in this study, future research involving the News-10

Computer Education Project might be aimed at the Project's public relations and economic

values to WILX-TV. Besides a larger sampling of respondent teachers, students and

administrators to generate more statistical power, such research would require additional

questions exploring topics like TV program viewership levels, viewing habits, viewer

message recall and more widespread promotion of the Project via WILX-TV.

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Chapter III

1. *These schools have been participants in the News-10 Computer Education Project, many since it's inception in 1994. That's when WILX-TV did pre-implementation surveys that were later used in a November 1994 paper entitled: *WILX-TV Online in Mid-Michigan,* for Telecommunications 801 taught by Professor David McCarty. In July 1995, additional research was conducted for another paper entitled:"East Lansing Public Schools Telecommunications Field Study" for Telecommunications 810 taught by Professor Thomas Muth.

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3. Roger McCoy, *WILX-TV Online in Mid-Michigan,* (November 1994) 6. In our pre-implementation surveys of other school districts in Mid-Michigan, (Jackson,

Haslett, Bath, Lansing Catholic Central, St John's, Okemos) we found financial outlays for computers and communications networks for students, teachers and administrators were generally in their earliest stages. WILX spent a month surveying hardware, software and personnel costs for establishing the *WILX-TV in Mid-Michigan* online system. We also researched trends in computing, networking and e-mail growth. These two primary considerations made it quite clear there was a strong potential for the station to gain new viewers, reinforce present ones and create a new communications alternative by making the proposed online computer system a reality.

Since the inception of the News-10 Computer Education Project, several students and teachers have been the subject of on-going news reports aired on WILX-TV that described the Projects use and reception in Mid-Michigan schools.

The News-10 Education Project has been enthusiastically endorsed by the students, teachers and administrators who have willingly, voluntarily and without hesitation participated in the Project and understood my role as facilitator whose responsibilities include on-going academic and station-related research on the Project dating back to 1994.

All of them agreed to participate in the surveys. All of them were made aware in advance that all survey data collected was for confidential research on the News-10 Computer Education Project as part of a study for WILX-TV or Michigan State University.

The contacts at each of the schools surveyed are:

Haslett
Murphy Elementary School-Keith Etheridge
East Lansing
Pinecrest Elementary School-Bill Gale, Tom Rodriguez
Donley Elementary School-Bill Lang
Marble Elementary School-Roberta Peters
MacDonald Middle School-Bob Bawden
Okemos
Cornell Elementary School-Cindy Lafkas
Lansing
North Elementary School-Brenda Henderson

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APPENDICES

Appendix A
PERFECT NEWS QUIZ AWARD

PERFECT NEWS QUIZ AWARD

PERFECT NEWS QUIZ AWARD

10
WILX-TV

The recipient of this award has demonstrated an exceptional degree of knowledge and understanding of current news events. Proof of that knowledge is a perfect score on a News-10 weekly events quiz.

Therefore, let it be known that,

_____ is

a proud member of the **NEWS 10** Perfect Quiz Honor Roll,

an accomplishment enjoyed by a select group of young

scholars here in Mid-Michigan.

_____   _____
School Principal   **NEWS 10** Anchor

_____
Date

Appendix B
Benton Foundation Educational Web Sites

Benton Foundation Educational Websites

Benton Foundation

(http://www.cdinet.com/benton).

The Benton Foundation's Communications Policy Project promotes public interest

values and noncommercial services for the National Information Infrastructure through

research, policy analysis, print, video and online publishing and outreach to nonprofits and

foundations.

The following are web sites that discuss the current status of and theory behind computer

networking and the schools provided by the Benton Foundation:

Center for Research on Evaluation, Standards and Student Testing

(http:/www.cse.ucla.edu/).

 CRESST, based at the University of California at Los Angeles, offers a rich array of

reports on research into alternative forms of evaluating student learning. Though not

geared exclusively to the role of technology in the classroom, these papers give a detailed

view of the theory and practice of "performance-based assessment," which many analysts

believe must become one of the objectives of school reform.

Clearinghouse for Networked Information Discovery and Retrieval

(CNIDR) (http://www.cnidr.org).

 Created by the National Science Foundation to support networked information discovery

and retrieval, CNIDR hosts a number of WWW servers for information. John and Janice's

Research Page, which can be reached through Janice's K-12 Outpost, shows results of an

ongoing survey of schools with Internet connections.

The Collarboratory Visualization Project (CoVis)

(http://www.covis.nwu.edu)

Comprises thousands of students, over one hundred teachers, and dozens of researchers

all working together to find new ways to think about and practice science in the

classroom.

Consortium for School Networking

(http://cosn.org)

This web site promises to offer updates on important policy discussions involving school

networking.

The Educational Resources Information Center

(http://www.cua.edu/www/eric_ae/home.html)

ERIC, a national information system established in 1966 and supported by the U.S.

Department of Education, contains more than 850,000 abstracts of documents and journal

articles on education research and practice. As the sheer volume of the material suggests,

this is a web site for the serious researcher, not the casual reader.

Educational Technology Resources

(http://www.camosun.bc.ca).

For a view from Canada, look up this site of the Standing Committee on

Educational Technology (SCOET), a panel of volunteers representing the 20 publicly

funded colleges and institutes in British Columbia, Canada. Educational Resources has a

variety of interesting links.

Educom Home Page

(http://www.educom.edu/)

Though oriented primarily toward higher education, this easy-to-maneuver web site

provides a wealth of information on educational technology issues from one of

the early players in the field. Created in 1964, Educom describes its members as

"institutions of higher education, nonprofit associations, corporations and other

organizations committed to education that is active and learner-centered, free from

traditional constraints of time and space, lifelong and collaborative, cost-effective,

responsive, dynamic, relevant and accessible."

EdWeb

(http://K12.cnidr.org)

The Corporation for Public Broadcasting's education site includes very useful and

accessible explanations of the development of the Internet and its relationship

to education reform by author Andy Carvin.

From Now On: The Educational Technology Journal

(http://www.pacificrim.net)

Maintained by Jamieson McKenzie, a teacher, school administrator, and technology

expert in Bellingham, Wash., this online publication is full of fascinating musings on

the nature of Internet-based learning. The site also offers advice to school officials on how

to plan technology acquisition and use.

ILTWeb

(http://www.ilt.columbia.edu)

The Institute of Learning Technologies, part of Columbia University, maintains this site

full of readings, electronic texts, journals, and hypertext documents on the role of

networked digital communicationand multimedia on education. The materials are

comprehensive and fascinating, but they can be difficult for the casual reader.

Institute for Learning Sciences

(http://www.ils.nwu.edu)

Northwestern University's ILS-aninterdisciplinary research and development center

dedicated to transferring innovative educational technology from the laboratory to

practical applications in businesses, schools, government agencies, and the community-

builds educational software for use in multimedia computers. The site includes Engines, a

"hyper-book" by Roger Shank, ILS director, and Chip Cleary, a graduate student, on the

problem's with the education system and how to reform it-especially through the use of

educational technology.

The Internet and Schools

(http://sunsite.unc.edu/cisco/tracy-article.html)

A comprehensive report on major groups and activities shaping the Internet's role in

education. This is part of the Sun Microsystems Inc. Cisco Education Archive

(http://sunsite.unc.edu/cisco/cisco-home.html).

National Academy of Sciences

(http://nas/edu/nap/online/techgap/welcome.html)

A clear and well produced discussion of how computer networking can-and must-lead to

school reform.

The Jason Project

(http://seawifs.gsfc.nasa.gov/JASON.html)

The Jason Foundation for Education, formed by explorer Robert Ballard, organizes

annual interactive field trips to a volcano in Hawaii, the Galapagos Islands, the

Mayan ruins and other locales. The foundation's substantial curriculum suggestions

and lesson plans stress hands-on activities and multidisciplinary approaches. Each

year's project culminates in 60 hours of interactive television coverage. An online

component of the program enables students to exchange notes with explorers at the scene-

including students and teachers selected to represent various regions-and to help students

participate in actual research with scientists.

On the 1995 "Island Earth" project, for instance, students communicated with a scientist studying the spider population on a Hawaiian island and then collected samples from their own areas. The data were shared online and then discussed by the scientists. The site also includes a software program designed by a participating teacher to help students study island ecology.

KIDLINK

(www.kidlink.org)

This grassroots keypal project has drawn 37,000 kids from 71 countries into a "global dialogue." .

NASA IITA K-12 Internet Initiative

(http://quest.arc.nasa.gov).

This site describes NASA's many educational activities, including online interactive projects, grants programs, assistance in learning to use the Internet in schools, and links to NASA's own online resources.

Appendix C
THE Journal On-line Service Guide

Appendix C

Following is a brief overview of the major commercial online services, highlighting

those aspects of interest to educators as compiled by Terian Tyre, *Commercial online*

services: Benefits for educators.., Vol. 23, T H E Journal, (August, 1, 1995), 44.

CompuServe

The largest general online information service in the world, CompuServe's strengths lie in
its technical support forums, education-specific forums, a huge array of databases, its
current and archival news, and a worldwide membership of two million plus.
For technical support, this is the place to go. Over 850 vendors supply technical support
for their products in forums; shareware is plentiful too. Alone this can be worth the cost of
the service.
Of the some 900 different special interest forums, a number are devoted to education. The
Education Forum is a semi general-interest spot; Students' Forum is for learners and the
Educational Research Forum discusses recent findings. In specific disciplines, there is the
Foreign
Language Education Forum, Science/Math Education Forum, IBM Special Needs Forum
and more. Over 2,000 research and reference databases are available, including those from
Dialog. To search over 850 bibliographic and full-text databases,
IQuest offers fully indexed historical data updated daily.

America Online

AOL, as it's known, is purposely tailored for the home user. The friendliest user interface
in town is AOL's distinction and strength, and Education is one of the nine Main Menu
choices. From here, one gets to a wide range of activities, forums and mini-networks
devoted to the process of teaching and learning.
One can sign up for tutoring sessions, public or private. For papers, use
the Academic Research Service, Compton's 30-volume encyclopedia set or
Barron's Booknotes. For adult and higher learning is the Electronic University Network,
which provides credit-by-exam college courses, degree programs and corporate
training. AOL's Online Campus holds eight-week-long classes. And for that
"coffee-house" feel, one can go to meeting spots and chat--Bull Moose Tavern
for politics; Afterwards Cafe for the arts or International House for
foreign culture and language. AOL boasts a number of mini-networks devoted to specific

areas of education. These are umbrellas under which one finds links to professional organizations; searchable databases of publications, software, etc.; staff development opportunities; discussion forums and message boards; and more. The Teachers' Information Network, for example, includes NEA Online, AFT Online and ASCD Online. Joint projects are in both The Electronic Schoolhouse and Multimedia Exchange. Teachers' University offers six-week inservice seminars. For administrators, the National Principals' Center contains many of the same elements of the Teachers' Network. AOL also has services sponsored by the National Staff Development Council, National Association of Secondary School Principals and the Council of Chief State School Officers. AOL also links to: Scholastic Network (K-12), Smithsonian Online, Library of Congress Online, CNN Online, National Public Radio Online and more.

PRODIGY

Distinguishing itself from other services, PRODIGY offers two flavors: regular, for home users and Classroom PRODIGY. On the regular service, several areas off the Main Menu merit a look. Reference holds the Academic American Encyclopedia, Consumer Reports and two features on U.S. politics. News supplies current headlines, AP Online and more. Home/Family/Kids offers NOVA science activities, Carmen Sandiego geography adventures, etc. For an extra fee, Homework Helper, by Infonautics Corp. of Wayne, Pa., lets K-12 students do research via natural-language queries and icons. Classroom PRODIGY is uniquely tailored for K-12 school-based use. It includes all educational features of the regular service without the ads or other commercial content. Instead, it has its own message boards for teachers and students at elementary, middle and high school levels plus other special areas, projects and activities. One can exchange private e-mail with members of the regular service and the Internet. A Teacher's Manual binder serves as both user guide and aids incorporating the service into everyday teaching. Organized by discipline, a list of curriculum areas is on the Main Menu, each leading to other features. The areas are Math, Language Arts, Science, Social Studies, Art and Music, and Games. A matrix in the Teacher's Manual shows how most features address more than one area. The PRODIGY services host unique interactive learning adventures. In MayaQuest, students literally directed a team of scientists on mountain bikes as they explored Mayan ruins and culture. Other cooperative ventures include SuccessMaker Online from Computer Curriculum Corp. As one element of CCC's new Multimedia Science Classroom, which uses their Amazonia and Virtual BioPark titles for a thematic approach to middle school science, SuccessMaker Online is the link to online resources and communication.

eWorld

This service, originally for Apple users but with Windows software due out this year, shows its unique style at first glance. eWorld uses a graphical "townsquare"; one clicks on different buildings, like the Arts Pavilion, to go to parts of the service.

eWorld is education rich. There are forums for educators to exchange ideas and to participate in live conferences with various academic experts. Soon new text-to-speech technology will allow members to actually hear the conferences. Lesson plans, sources for grants or fellowships and other opportunities are shared.

Plenty of areas on eWorld suit students' needs as well, including collaborative learning projects run by teacher members. A special eWorld subscription program for schools was launched this spring. Links to the Internet are also planned for this year.

Delphi Internet Services

This older service revamped itself and changed its name. While its new focus is providing more Internet access and tools than other services, it also offers the same spectrum of features as its counterparts.

Delphi Internet is the only service that lets members set up their own personal online forums open to the public, complete with software libraries and direct links to appropriate Internet sites. This facilitates collaborative learning projects and teacher exchange.

The Reference and Education area draws upon the resources of the Internet to let subscribers join special interest groups such as the Nature/Science Forum. It also has the Dictionary of Cultural Literacy, Groliers Encyclopedia and the Federal Register.

Real-time learning adventures debuted on Delphi Internet in 1994 with Class Afloat, an international study program featuring e-mail contact with students sailing around the world. It occurs again this year. 1995 brought the Young America Electronic Adventure with correlated math and science activities, plus e-mail exchange with the America's Cup PACT 95 syndicate and the Young America yacht's crew.

Other Names to Recognize

The DIALOG online service from Knight-Ridder Information, Inc. excels in professional and scholarly databases (450+); many other commercial services utilize them as well. GEnie, on the other hand, leans toward hobbies and recreation, with only a smattering of features that would suit education. It, too, boasts Internet access with a Web browser due out in August.

Accu-Weather is a unique online service offering real-time weather data and forecasts.

The core is the Accu-Data database, updated every second and including all available weather data, charts, forecasts and maps for the entire world. Among the highlights are real-time satellite imagery in 3D and infrared, plus complete NEXRAD Doppler radar information. Schools get toll-free access, free software, DataShare Student Weather Network and more. Educational Modules, for grades 7-12 or grades 3-6, add a teacher's manual, activity sheets and other integration tools.

The Microsoft Network

The Microsoft Network, MSN for short, shows promise.
Clicking Categories on the opening screen brings up an Education & Reference choice. From there, eight areas (so far) are offered: Colleges & Universities, Computer Education, Educator-to-Educator, International Students, Primary & Secondary Education, Continuing Education, Reference, and Field of Study (where the action is in terms of disciplines). Most areas have message BBSs and live chat; other features vary. MSN integrates software libraries, user forums and projects, even links to related material on the Internet that automatically fire up and "fetch." The technology is impressive; now all it needs is members.

Quick Contact Info

Accu-Weather, Inc.
State College, PA (814) 234-9601, x400

America Online, Inc.
Vienna, VA   (800) 827-6364

CompuServe, Inc.
Columbus, OH   (800) 695-4005

Delphi Internet Services Corp.
Cambridge, MA   (800) 695-4005

DIALOG
Knight-Rider Information, Inc.
Mountain View, CA   (800) 3-DIALOG

eWorld
Apple Computer, Inc.

Cupertino, CA   (800) 775-4556

GEnie
General Electric Information Services
Rockville, MD   (800) 638-9636

Prodigy Services Co.
White Plains, NY   (800) PRODIGY

The Microsoft Network
Microsoft Corp.
Redmond, WA   (206) 882-8080