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COMPUTER-BASED TECHNOLOGY IN AEA 7 SCHOOLS, 1994

A Graduate Research Paper

Submitted to the

Division of Library Science

Department of Curriculum and Instruction

in Partial Fulfillment

of the Requirements for the Degree

Master of Arts

UNIVERSITY OF NORTHERN IOWA

by

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has been approved as meeting the research paper requirements for the Degree of Master of Arts.

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ABSTRACT

The purpose of this study was to determine the extent to which school library media centers in one Area Education Agency region (AEA 7) in northeast Iowa are selecting, funding, and making available the new computer-based technologies. A confidential questionnaire was sent to 110 public and non-public schools in May, 1994. Media specialists in 77 schools responded. The results of the survey showed that a) the top-ranked determinant used in selecting computer-based technology was curriculum need, b) the top-ranked source of funding for the purchase of new technology was the local school budget, c) the most widely available computer-based technology resource in school library media centers was cable television, d) the greatest impact of the technologies was on the role of the library media specialist, e) the secondary schools have a higher average number of computer-based technologies than the elementary schools, f) the public schools have a higher average number of computer-based technologies than the non-public schools.

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Chapter I

INTRODUCTION

Computer-based technology is changing the nature of schooling. Computers have moved beyond being used as electronic workbooks to being used for such sophisticated activities as "painting" pictures in art class and composing music. These activities may include the use of interactive videodiscs, electronic information search systems and CD-ROM systems. Are the schools keeping up with the changes in computer-based technology?

As an information center in the school the media center should be on the cutting edge of computer-based technology. The purpose of this study was to determine the extent to which school library media centers in one Area Education Agency (AEA) region are implementing the new technologies. It attempted to answer the following research questions:

1. How is computer-based technology presently being selected, funded, and implemented?
2. What impact is computer-based technology having on the school library media program and its staff?
3. Does a relationship exist between selected demographics and the extent of a school's implementation of computer-based technology in the library media program?

The researcher predicted the results of the study would show:

1. The top-ranked determinant used in selecting computer-based technology is cost.

2. The top-ranked source of funding for the purchase of new technology will be the local school budget.

3. The most widely available computer-based technology resources in school library media centers are CD-ROM products.

4. The greatest impact of the implementation of computer-based technology in the library media program will be the increased use of the center by students.

5. The secondary schools will have a higher average number of computer-based technologies than the elementary schools.

6. The public schools will have a higher average number of computer-based technologies than the non-public schools.

For the purpose of this paper, the term **technology** will always refer to computer-based technology. Jacqueline Auerbach (1993) defined **computer-based technology** as the technology that emerged from the integration of previous technologies. It includes communication technologies (telephone, satellites, facsimile transmission, fiber optics) as well as data storage technologies (computer tapes, floppy disks, optical storage) (p.6). The term **library media specialist** will always refer to the person who has the assignment to administer the library media program.

If students are to succeed in the next century they will have to be information literate. **Information literacy** results from a process of critical, lateral, and branching thought strategies to seek, gather, retrieve, analyze,

synthesize, evaluate, and apply information from all formats to solve problems (Mendrinos, 1992, p.29).

Telecommunications and multi-media technology are the computer-based technologies of the future. **Telecommunications** is the technology of communication by electronic transmission accessible from locations anywhere in the world. **Multi-media technology** is a computer-managed system for instruction and research that can incorporate text, database retrieval services, audio, graphics, and video with media authoring capabilities.

The challenge of offering service to children in library media centers is like patterns in a kaleidoscope. Some of the technologies we have clearly seen and applied. Others are still emerging and their applications are being sought. Then there are those systems for which we have seen a hint of what is to come, but lack clues as to their impact or how to apply them.

This study was limited to the public and non-public attendance centers in the Area Education Agency 7 service area. The survey was sent to the media specialist in K-12 schools who administered the program in each attendance center. The AEA, located in Northeast Iowa, serves 26 districts from large urban to small rural districts. The building enrollment ranges just over 100 to over 600 students per center.

Chapter 2

LITERATURE REVIEW

TECHNOLOGY BENEFITS

In order for students to survive in school, on the job, or in the home as they participate in life's decision making, they must be information literate. This process of critical, lateral, and branching thought strategies to seek, gather, retrieve, analyze, synthesize, evaluate, and apply information from all formats to solve problems is stimulated and perpetuated by the use of high technology tools (Mendrinos, 1992, p.29).

Faculty, administrators, and students can all benefit from using high technology tools to their fullest advantage if they are properly trained. Inservice training of faculty members is critical to the successful implementation and efficient use of technologies in the curriculum.

The student becomes the navigator in the electronic sea of information. This navigation breaks away from the traditional straight or linear course. It promotes divergent thinking and branching, fosters an adventure of searching for connections, exploring and creating new constructs, and forges a new route to the knowledge path (p.30). If students are to be successful in their navigation, they will need some instruction in finding the pertinent information, filtering it, and using it appropriately (Baumbach, 1990, p.145).

Higher order thinking skills are critical for students and must be taught in formal classroom instruction. Students will then not only use these skills for classroom assignments but also for their own personal and leisure interests. Technology motivates students to use more information sources because they have a clearer knowledge of which sources contain the information that they need.

As innovators in the information age for new technology, library media specialists must take some risks to give students and teachers access to recent technology that is exciting and thought-provoking. The library media specialist must show them that electronic tools allow for the mapping of concepts and ideas, outlining terms visually as well as abstractly, while being in control of the tactile manipulation of the data (Mendrinos, 1992, p.30).

CD-ROM

One of the electronic tools that library media specialists have encountered is the Compact Disc-Read Only Memory (CD-ROM) system. This computer-based technology was introduced in 1985. It is now the most popular computer technology in use (Auerbach, 1993, p.11).

The CD-ROM is most appropriate for storing large amounts of information that do not change rapidly. This is one reason why it is so ideal for many reference works. Compact discs can store anything that can be digitally encoded - text, audio, video, animation, and graphics. With

all these capabilities, the CD-ROM is a likely candidate for multimedia presentations and interactivity (Baumbach, 1990, p.144).

One of the most popular uses of the CD-ROM for school library media centers has been the indexing of periodical articles. Some producers of CD-ROM indexes also allow access to their online index databases when more current information is needed. Some of these indexing sources include Magazine Article Summaries (MAS), and Readers Guide to Periodical Literature. Schools with CD-ROM based periodical indexes are reporting increased circulation of materials indexed on the disc and an increased demand for interlibrary loan for periodical articles not available in the school library media center (p.145).

Another popular source available on CD-ROM is Grolier's Electronic Encyclopedia. Grolier's expands the students thinking about the availability of different resources, productivity has increased, and research results have improved (Mendrinos, 1992, p.29).

CD-ROM has brought an equality of information access to students. It provides the advanced student with "more sophisticated search techniques". At-risk students and students with learning disabilities find searches are easier to do (Bankhead, 1991, p.49). This leads to an increase in achievement and a decrease in frustration.

CD-ROMs of reference works are more popular than online

databases or printed indexes. They are student-oriented, not strictly a librarian's tool. CD-ROMs do not require library staff time to access online databases but provide unlimited access with predictable costs. The same thinking and learning strategies are utilized to access and retrieve information from the CD-ROMs and online databases (Mendrinos, 1992, p.31).

ONLINE INFORMATION SERVICES

Telecommunications is the technology of communication by electronic transmission, allowing access from any location (Auerbach, 1993, p.11). Students now have a world of information available to them through online information services. These services are reshaping the way students do research and the way they learn.

In order for students to have access to this world of technology, the school library media center must have access to a telephone, a modem, and a communication software program. Many school library media centers cannot afford to do expensive online searching because of the open-ended costs. These costs cannot easily be built into the budget. One way to get around these costs is to subscribe to Prodigy, Delphi, America Online, Compuserve, or some other online information service.

Prodigy is an inexpensive, user-friendly online information system. The software required to access the system usually runs around $50.00 but can often be attained

for free (Ensor, 1991, p.61). Once installed, a yearly or monthly subscription fee is paid so one does not have to worry that "the meter is running" (Grunwald, 1990, p.113). Prodigy is a joint effort between IBM and Sears to build an online service with a broad subscriber base. It has more than 750 editorial choices along with extensive advertising. The ads appear on most screens and can use up to one-fifth of the screen space. They are presented in a lively, colorful way in order to catch the attention of users.

Prodigy is menu-based with the commands listed at the bottom of the screen. Two commands that allow the user to get around in the system quickly are "jump" and "find". One drawback to Prodigy, however, is that not all information found can be printed. Only those entries that offer the option on the screen are available for printing.

Prodigy provides a number of services that are beneficial for school library media centers as information resources. The worldwide news service and weather report are updated frequently to provide students with the most current information. Some other services available are reports on technology, business, entertainment, consumer news, sports, and travel. Among the cross-indexed education-related features are "The Weekly Reader", Grolier's Electronic Encyclopedia, National Geographic's "Destination" detailing a different part of the world on a monthly basis, and information from the NOVA television

series (Grunwald, 1993, p.113).

Prodigy is not the only online information service available to schools. Competitors to Prodigy include America Online, PC-Link, and GEnie. All three competitors offer similar databases and information services as does Prodigy.

A very popular online database service used by school library media centers is DIALOG. DIALOG is a database vendor that makes computerized databases available to consumers. The consumers, via DIALOG, are provided with a fast and efficient method for locating and using information (Barron and Orwig, 1993, p.163). DIALOG provides over 400 separate databases covering the entire range of human knowledge. With a uniform search structure, the databases can be searched one at a time or in groups. DIALOG, like other online services, can be expensive if searches are extensive and time consuming. Standard rate for a school instructional password is $15.00 per hour plus from $3.00 to $6.00 telecommunication connect charge per hour. If a long distance telephone call must be made to a telecommunication node, e.g. Sprintnet or BT, the cost for the long distance call must be added to the cost of a DIALOG search.

The newest form of an online information service available to educators is the Internet. The Internet began as a computer-linking experiment in the 1960's. It now connects thousands of computer networks spread over 35

countries with more than two million users every day (Schwartz, 1992, p.56).

Interest in the Internet is high. Access is evolving with activities and legislative initiatives around the country. Many of the users indicated excitement and great expectations for the Internet (Kollasch, 1993, p.66). But why the Internet? Is it a crucial service? While the Internet is great, super, wonderful; it is not crucial. Many of the services offered over the Internet could be accomplished in other ways. The Internet makes it easier and more timely by collapsing the world for us (p. 66).

Students and teachers need to become aware of the Internet and how to get around in this world of knowledge that is available to them. In the foreseeable future, everyone will have access to the Internet in some way. As it grows, access will become affordable. At some future point, according to Harriet Rood, we will look at the Internet in about the same way we look at the telephone today (p.66).

VIDEODISCS

Videodiscs are another new and emerging educational technology. They allow students to interact with the information and choose their own path to learning.

Videodiscs, like CD-ROMs, are a strong, durable medium for storing and displaying video information. They are both read by a laser beam, providing the ability to search

randomly any segment of the disc for instant access to the information. Videodiscs are a popular medium for educators because they are reasonably priced. Teachers are discovering that videodiscs are an ideal medium for teaching dynamic events by allowing them to have complete control of the sequence, rate, and duration of the presentation.

Videodiscs come in two formats. The one most frequently used in education is called CAV (constant angular velocity). It contains 54,000 frames and is very versatile. It allows the user to find a specific frame in a number of different ways and allows for two audio tracks that can each contain different information. The CAV format allows for maximum interactivity through such features as still frames, step frames, and multiple speeds (Barron and Orwig, 1993, p.41).

Videodisc programs have varying levels of interactivity. The level of interactivity determines the kind and amount of equipment required to operate the program. Level I does not require the use of a computer, only a videodisc player, a monitor, and a remote control unit or a bar code reader. Level II discs are also used without a computer but the disc contains a computer program that provides increased flexibility over Level I. This computer program is embedded in the disc and cannot be changed. Level II videodiscs are not very common in schools.

Level III interactivity requires the user to connect the videodisc player to a computer with the computer controlling the player through a software program. Level III requires the use of two monitors because the videodisc monitor cannot display the computer information and vice versa. Students would have to get used to watching dual monitors to obtain all their information at this level.

Videodiscs contain different types of instructional strategies. These include linear movies, interactive tutorials, instructional games, visual databases, and simulations. Some discs contain only one strategy while some discs contain a variety of approaches (p.41).

Videodisc technology offers a new dimension to the school library media center. The integration of this technology can make educators more efficient and students more productive. If we are to keep informed about the new technology and provide the best education to our students, we must implement this technology as a teaching and learning tool (p.51).

FUTURE TECHNOLOGY

The technology that is now available for use in the school library media centers is only the beginning. The future holds many new technologies that have already been developed but are too costly for school library media centers to own or access. Some technologies are in the experimental stages and will soon be available.

Multimedia technology is one of the new technologies that is starting to appear in school library media centers. Multimedia technology is a computer-managed system for instruction and research that can incorporate text, database retrieval services, audio, graphics, and video with media authoring capabilities (Auerbach, 1993, p.12). Among the most powerful of the new technological teaching tools are multimedia presentations. An array of equipment, such as a videodisc, a computer, and other cutting-edge equipment, are all linked together to make information come to life (Toch, 1991, p.77).

A new technology beginning to appear in our schools, using one-way transmission of information, is the use of satellite technology for "distance learning". This is accomplished via cable-television programs, such as Channel One, Discovery Channel, C-Span, and CNN Newsroom. About 85% of the nation's public high schools with access to cable television receive cable programming (p.77). X*Press/ X*Change uses a portion of the cable television signal to transmit information one-way to a personal computer (Grunwald, 1990, p.114).

A second way for distance learning to occur, at least in Iowa, is via the fiber optics network. This is a two-way video and audio transmission system that is still in the developmental stages. It will be a great asset to education once Phase III of the network is completed and all schools

connected. On a national level, the National Research and Educational Network (NREN) is in the planning stage.

Michael Eisenberg (1990) lists six possible areas of future emphasis in technology development. These include:

1. Full-text storage and retrieval of journal articles, books, and reference sources, not just bibliographic citations.
2. Integration to focus on common commands, not specific programs, to accomplish a range of tasks.
3. Interactivity that caters to the individual user by creating a customized profile including a record of special requirements, searching preferences, and previous interactions.
4. Multimedia information that enables the user to communicate to the computer via icons, voice, touch, or words.
5. Local and external connectability.
6. Searchability that allows one to search and browse through computer-based information resources in many different ways. This means the user can use their own "natural" language following pre-programmed "hyper" links or jumping from one source to others and back again at will (p.140).

Chapter 3

METHODOLOGY

A confidential questionnaire was sent to each attendance center serviced by Area Education Agency 7. Media specialists who administer more than one center were asked to complete a questionnaire for each attendance center. A list of all the attendance centers serviced by the AEA was supplied by the agency at my request. This list included public and non-public districts.

The questionnaire (Appendix A) consisted of five sections. Section I addressed what determines the selection of new technologies by the library media specialist. Section II contained one question asking the library media specialist to rank the main sources of their funds to purchase new technologies. Section III consisted of a list of computer-based technologies. The school library media specialist circled "yes" or "no" for each item based on what is available in the library media center at each attendance center. Section IV asked the school library media specialist what impact the computer-based technology has had on the staff and program of the library media center. Section V consisted of basic questions about the demographics of the attendance center, such as enrollment, grade levels, and staffing in the library media center.

The questionnaire was accompanied by a cover letter introducing the project. It explained the reason for the

questionnaire and asked the library media specialist to take a few minutes to complete the confidential questionnaire. A self-addressed stamped envelope accompanied the questionnaire.

The questionnaire was based on a questionnaire used by Jacqueline Auerbach in 1993 as part of a thesis in the Library Media Technology Program at Georgia State University. It was adapted to better fit Iowa schools and the purpose of this study.

The confidential questionnaire was sent to each attendance center on May 5, 1994. A follow-up phone call was made ten days later to those library media specialists who had not responded. All questionnaires had to be received by May 20, 1994 to be included in the final data analysis.

Chapter 4

ANALYSIS OF DATA

The researcher sent 110 questionnaires to AEA 7 attendance centers and received 77 for a 70% response rate. Of these responses, 45 (59%) were classified as a K-8 elementary, 27 (35%) were classified as secondary which includes those buildings with grades 6-8, and five (6%) were classified as a K-12 building. Ninety-two (84%) of the questionnaires were sent to public schools and 18 (16%) to non-public schools. Of the 18 non-public school questionnaires sent, only nine (50%) responded.

The researcher predicted that "the top-ranked determinant used in selecting computer-based technology is cost." Table 1 shows that at the elementary level, 25 (56%) of 45 responding centers base their selections on curriculum need. K-12 centers also based their selections on curriculum need with three (60%) of the five centers using this method. More secondary centers based their selections on their district technology plan. Nine (33%) of the 27 responding centers use this method of selecting their computer-based technology needs. Curriculum need ran a close second with eight (30%) centers using this method of selection. Company representative, conference exhibits, and preview were not ranked as a decision basis by any of the responding schools.

The researcher was surprised to find that of the 77 centers responding, only nine (12%) based their selections on cost. Hypothesis 1 was rejected.

Table 1

Number and Percent of Highest Ranked Selection Factors

Ranked Selection Factor	Elementary N=45		Secondary N=27		K-12 N=5		All N=77	
	no.	%	no.	%	no.	%	no.	%
Curriculum Need	25	56	8	30	3	60	36	47
Dist. Tech. Plan	7	16	9	33	0	0	16	21
Cost	4	9	5	19	0	0	9	12
School Tech. Plan	6	13	3	11	0	0	9	12
User Recommend.	1	2	1	4	1	20	3	4
Product Eval.	0	0	1	7	1	20	2	3
Other	2	4	0	0	0	0	2	3

The second hypothesis stated "the top-ranked source of funding for the purchase of new technology will be the local school budget." Fifty four (70%) of the 77 responding centers use the local school budget as their main source of funds. Of these 54 centers, 29 (59%) are elementary and 20 (41%) are secondary centers. All five of the K-12 centers use the local school budget to purchase their computer-based technology. No centers reported using bond referendum or endowment funds as their top-ranked funding source. Table 2 shows the comparison between local school budget and other

sources included on the questionnaire. Hypothesis 2 was accepted.

Table 2

Sources of Funding for Purchase of New Technology

Sources	Elementary N=45		Secondary N=27		K-12 N=5		All N=77	
	no.	%	no.	%	no.	%	no.	%
Local Budget	29	64	20	74	5	100	54	70
Instruct. Levy	7	16	6	22	0	0	13	17
Parent\Teacher	5	11	0	0	0	0	5	6
Federal Funds	2	4	1	4	0	0	3	4
Private Grant	1	2	0	0	0	0	1	1
Other	1	2	0	0	0	0	1	1

"The most widely available computer-based technology resources in school library media centers are CD-ROM products." Results of the study as shown on Table 3 indicate that CD-ROM products are the second most widely available technology. In the 45 elementary centers, 37 (82%) have cable television and 33 (73%) have CD-ROM products.

In the secondary centers, the cable television and CD-ROM products tied with 25 (93%) in the 27 centers. The same results are true for the K-12 centers. Four (80%) of the five reporting centers had cable television and CD-ROM products. Hypothesis 3 was, therefore, rejected.

Table 3

Number and Percent of Technologies in Library Media Center Programs

Technologies	Elementary N=45		Secondary N=27		K-12 N=5		All N=77	
	no.	%	no.	%	no.	%	no.	%
Cable TV	37	82	25	93	4	80	66	86
CD-ROM	33	73	25	93	4	80	62	81
Telephone	30	67	21	78	1	20	52	68
Fax Mach. Access	20	44	23	85	4	80	47	61
Interactive Media	27	60	19	70	1	20	47	61
Modem	27	60	20	74	0	0	47	61
Automated Circ.	21	47	15	56	4	80	40	52
Laserdiscs	24	53	16	59	0	0	40	52
Videodiscs	24	53	13	48	1	20	38	49
On LAN	11	24	9	33	0	0	20	26
Online Database	12	27	8	30	0	0	20	26
Distance Learning	8	18	10	37	1	20	19	25
Internet	6	13	6	22	0	0	12	16
Automated Cat.	4	9	6	22	1	20	11	14

Data on Table 4 show the greatest impact of the technologies to be on the role of the library media specialist. -This is in contrast to the researcher's prediction that "the greatest impact of the implementation of computer-based technology in the library media program will be the increased use of the center by students."

In all centers, 50 (65%) of the 77 responding media specialists said that the greatest impact of computer-based technology was on the role of the library media specialist.

Increased use of the center by students received only 34 (44%) of the "greatest impact" responses. Access to information and mission of the library media center had the second and third highest number of "greatest impact" responses, respectively. Hypothesis 4 was rejected.

Table 4

Number and Percent of Technology Impacts on Library Media Program and Staff

Program/staff Impacts	Great Impact n=77		Some Impact n=77		No Impact n=77	
	no.	%	no.	%	no.	%
Role of LMS	50	65	21	27	2	3
Job Stress	21	27	38	49	11	14
Teacher Inservice	27	35	39	51	7	9
Technical Support	18	23	31	40	20	26
Administrative	35	45	31	40	6	8
Assist Students	29	38	31	40	8	10
Repetitive Tasks	27	35	39	51	8	10
Mission of LMC	42	55	27	35	4	5
Access to Info.	48	62	21	27	4	5
Info. Searches	36	47	29	38	8	10
Range of Services	37	48	29	38	6	8
Student Use	34	44	34	44	8	10
Faculty Use	12	16	45	58	17	22
Funding	24	31	29	38	21	27
Print Purchases	10	13	42	55	22	29
Outside Sources	15	19	42	55	15	19

The researcher predicted that "the secondary schools will have a higher average number of computer-based technologies than the elementary schools" and that "the public schools will have a higher average number of computer-based technologies than the non-public schools." Based on all the technologies that are available at each level, the secondary centers do have a higher number of computer-based technologies than the elementary centers. The secondary centers report an average of eight different types of technology per center. They report having access to other computer-based technologies such as scanners, X*press/X*change, CAD, CAS, and others.

By comparison, the elementary centers reported an average of six different types of technology per center. They have access to the following at some of the responding centers: flatbed scanners, photoman camera, and an LCD panel for overhead projection. Table 5 shows the number of technologies available in elementary and secondary, public and non-public schools.

The public schools are averaging seven different types of technologies per center. By comparison, the non-public schools are averaging 6.55 different types of technology per center. Both hypotheses mentioned above were accepted.

Table 5

Number of Technologies in Elementary and Secondary, Public and Non-Public Schools

Technologies	Elementary		Secondary		All
	Pub. N=39	Non N=6	Pub. N=24	Non N=3	N=77 no.
Cable TV	33	4	22	3	62
CD-ROM	27	6	22	3	58
Telephone	27	3	18	3	51
Fax Machine	19	1	20	3	43
Interactive Media	24	3	17	2	46
Modem	23	4	18	2	47
Automated Circ.	20	1	14	1	36
Laserdisc	23	1	15	1	40
Videodisc	23	1	12	1	37
Local Area Netwk.	10	1	7	2	20
Online Database	10	2	7	1	20
Distance Learning	6	2	8	2	18
Internet	4	2	5	1	12
Automated Cat.	2	2	5	1	10

Chapter 5

CONCLUSIONS, RECOMMENDATIONS, SUMMARY

Technology plays an important part in the education of our students. Cost, however, is not the highest ranked determining factor when it comes to selecting computer-based technology. School library media specialists are meeting with teachers to see what their curriculum needs are. Curriculum needs may ensure technologies which are purchased are used for teaching and learning instead of occupying space or contributing to public relations efforts.

CD-ROM products are very popular in the library media centers. More centers, however, seem to have access to cable television than to CD-ROM products. This may be the result of accepting a Channel One system in order to obtain free television equipment for all rooms in a school.

Computer-based technology has an impact on everyone. The impact seems to be greatest on the role of the library media specialist. This impact is the result of having more information sources available for the students and teachers to learn how to use. Having access to computer-based technologies in the library media center does not mean that students will make use of the technology without assistance.

Non-public schools are doing surprisingly well keeping up with computer-based technology. The researcher thought there would be a greater difference in the average number of computer-based technologies in public and non-public school

library media centers. The questionnaire asked the media specialists to respond if they had a specific technology. They were not asked to specify how many of each one they had. Overall - LMC's in AEA 7 seem to have a variety of technology available for students and teachers to use.

It would be interesting to repeat this study in 5 years to see how the school library media programs have increased or not increased the number and type of computer-based technology they have available. This study could be expanded to include school library media centers in other AEAs which provide services to a wider variety and a different number of school districts. A more complete profile of computer-based technology in Iowa school library media programs could be established.

SUMMARY

The purpose of this study was to determine the extent to which school library media centers in one AEA region are selecting, funding, and making available the new computer-based technologies. What impact does this technology have on the school library media program and its staff? Is there a relationship between selected demographics and the availability of computer-based technology in school library media programs?

A confidential questionnaire was sent to the media specialists in all schools in AEA 7 in Northeast Iowa. The questionnaire contained five sections requesting responses

about the selection, funding, availability, and impact of computer-based technologies.

It was predicted by the researcher that the top-ranked determinant used in the selection of computer-based technology would be cost. The top-ranked determinant used in selection, however, was meeting curriculum need. The top-ranked source of funds for the purchase of computer-based technology was from the local school budget.

The most widely available computer-based technology resources in school library centers were predicted to be CD-ROM products. Cable television was more widely available than CD-ROM products. The greatest impact of the implementation of computer-based technology in the library media program was predicted to be the increased use of the center by students. The greatest impact was found to be on the role of the library media specialist.

The researcher predicted that the secondary schools would have a higher average number of computer-based technologies than the elementary schools. The public schools were predicted to have a higher average number of computer-based technologies than the non-public schools. Both predictions were accepted.

Computer-based technology has found its way into library media programs. Schools are trying to keep up with the emerging technologies as best they can.

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May 1, 1994

Allison-Bristow Community Schools
513 Birch Street
Box 428
Allison, Iowa 50602

Dear Library Media Specialist:

My name is Julie Heitland and I am a student at the University of Northern Iowa working on my Masters degree in library science. One of the requirements of the program is to do a research project on a library-related topic.

Computer-based technologies was chosen for the topic of my research paper. Computer-based technologies are defined as any form of technology that requires a computer to run at least part of the program. Some computer-based technologies that might be found in the library media center are CD-ROM products, laserdiscs, online access to information via a modem and many other new and exciting products.

Enclosed is a questionnaire which should take no more than 10 minutes for you to complete. Library media specialists who administer more than one library media program, e.g. elementary and secondary or multi-elementary library media programs are asked to complete a questionnaire for each center. All responses will be confidential and no school districts or programs will be identified in the final report.

Thank you for taking time out of your busy schedule to complete the enclosed questionnaire. Please return it to me in the enclosed, self-addressed envelope by May 10th.

Sincerely,

Julie Heitland
112 W. Prospect
Box 402
Shell Rock, Iowa 50670

TECHNOLOGY QUESTIONNAIRE

PART I SELECTION

1. When purchasing new technology, what determines your decision? Rank your answers with 1 being first choice and 10 your last choice.

____COMPANY REPRESENTATIVE	____PRODUCT EVALUATIONS
____CONFERENCE, EXHIBITS	____PREVIEW
____COST	____USER RECOMMENDED
____CURRICULUM NEED	____SCHOOL TECHNOLOGY PLAN
____DISTRICT TECHNOLOGY PLAN	____OTHER (EXPLAIN)

PART II FUNDING

2. Please rank your main sources of funding with 1 being the main source.

____LOCAL SYSTEM/SCHOOL BUDGET
____FEDERAL FUNDS
____BOND REFERENDUM FUND
____INSTRUCTIONAL LEVY
____PRIVATE GRANT
____ENDOWMENT
____PARENT TEACHER ORGANIZATION
____OTHER (SPECIFY)_____

PART III AVAILABILITY

Does your school library media program have the following? Please circle your answer.

3.	Automated circulation system	NO	YES
4.	Automated catalog/OPAC	NO	YES
5.	Cable TV	NO	YES
6.	Access to distance learning capability (ICN)	NO	YES
7.	Telephone	NO	YES
8.	Modem	NO	YES
9.	Online database (DIALOG, America Online, etc.)	NO	YES
10.	Internet	NO	YES
11.	Access to fax machine	NO	YES
12.	On local area network (computer LAN)	NO	YES
13.	Interactive multimedia program(s)	NO	YES
14.	CD-ROM products	NO	YES
15.	Videodisc products	NO	YES
16.	Laserdisc products	NO	YES

17. Other computer technologies. Please list _____
_____

(OVER)

PART IV IMPACT OF TECHNOLOGY

What impact have computer-based technologies had on your school library media program and staff? Circle the number that best matches your answer.

1 GREAT IMPACT 2 SOME IMPACT 3 NO IMPACT

18. Your role as library media specialist	1	2	3
19. Stress from job	1	2	3
20. Teacher inservice/staff development	1	2	3
21. Technical support for automation	1	2	3
22. Administrative tasks	1	2	3
23. Time to help students	1	2	3
24. Repetitive tasks	1	2	3
25. Mission of library media center	1	2	3
26. Access to information	1	2	3
27. Information search capabilities	1	2	3
28. Range of services	1	2	3
29. Center use by students	1	2	3
30. Center use by faculty	1	2	3
31. Funding	1	2	3
32. Purchase of print materials	1	2	3
33. Access to sources outside school	1	2	3

PART V DEMOGRAPHICS

34. What grade levels are in your building? _____
35. What is the 1993-94 student enrollment? _____
36. How many media center staff?
    Library Media specialist _____
    Associate_____
    Adult Volunteer_____
    Student Assistant_____

Please circle your answer to the final question.

37. My school system is Public Non-public

Thank you for taking the time to complete this questionnaire. Please return completed survey by **May 10** to:

Julie Heitland
112 W. Prospect
Box 402
Shell Rock, Iowa 50670