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Using technology to create partnerships among school libraries and public libraries

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ABSTRACT


The purpose of this study was to show the benefits of collaboration between school libraries and public libraries with a focus upon how technology was a catalyst in creating those partnerships. Through case study methodology, two elementary schools which are recipients of a wide area network though the public library were examined. The development of the network, the public library's role, and the school staff's perceptions of the service which provides Internet and database access were examined. Advantages such as positive outreach from the public library to an underserved public and provision of otherwise cost-prohibitive databases and electronic reference sources to the schools were included in the major findings of the study.
MINI-ABSTRACT


This study showed the benefits of collaboration between school libraries and public libraries with technology acting as a catalyst. Advantages such as positive outreach from the public library to an underserved public and provision of otherwise cost-prohibitive databases and electronic reference sources to the schools were included in the major findings of the study.
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Chapter 1

Introduction and Background

Since its inception, digital technology has become a conduit to serving the business, governmental, educational, and personal information needs of society. The proliferation of digital information and its by-products have affected our jobs, voting practices, learning styles, and lifestyles so much that institutions created before its advent (e.g. public libraries and school libraries) have incorporated digital technology into mainstream functions.

Bruce Allen Klaiss, as an MLS degree candidate at Clarion University of Pennsylvania, Department of Library Science, in his assessment of technology needs in public libraries, notes that “just as funding new buildings was the approach of the 1960s, the 1990s is the era for funding technology.” (Klaiss, 1996, p. 72). As technology becomes a staple within the library institution, the library is fast becoming an information center in addition to a center for circulation of materials.

As people within communities become more isolated from the public library due to geography, transportation issues, no recognition of need for a library, ignorance of resources, and, ironically, household access to technology, the public library must extend its resources beyond its building in order to pull in an underserved public.

One area in which the library reaches out to its community is through collaborative activities with local schools. With the objective to “enhance the educational resources of the community” (Council on Library Resources, 1996, paragraph 1) by creating a “new, integrated kind of library/school experience for kids” (Berry, 1997, p. 6) the public library,
with state of the art technology as a vehicle, can forge partnerships with school libraries, thus positioning itself amid its public with the purpose of providing more comprehensive services. Such partnerships allow the public library a more visible position within the community while providing school libraries with resources which strengthen the educational process.

Technology-based partnerships between school and public libraries have been a reality since the late 1980's (Nichols, 1990; Mathias, 1989). Such partnerships have included shared automation systems and electronic reference sources, interlibrary loan networks, materials delivery systems, and combined school/public library facilities. More recently, partnerships have provided public schools with Internet access.

For the purposes of this study, a partnership in which a public library provides school libraries with resources such as online catalog access, Internet access and access to electronic resources was examined.

In southern New Jersey, a wide area network called CamNet, an information service delivery provider in Camden County created in 1994, connects the Camden County Library (CCL) in Voorhees, NJ with 34 public school districts and 6 private schools. This partnership provides schools with low cost access to the library's on-line catalog, electronic reference resources and the Internet. Through a partnership with the local cable company, the board of education and a local Internet service provider, the Automation Department at CCL acts as the network hub by maintaining its server and providing technical support to users. The library is also connected to a local community college and vocational college through CamNet.

The Camden County Library system serves 227,000 people in 26 member communities. Its four branches reach a population mix of rural, suburban, and urban communities.

CamNet is an outgrowth of a county Board of Education technology committee which, in 1993, began to explore the concept of advancing technology to schools
throughout the county. Camden County Library's automation staff members, who sat on this committee, initiated the concept of a network which would operate from the public library, reach out to the schools, and link them together to create greater access to electronic information resources.

According to a Web-based publication by the Council on Library Resources, "One of the primary goals of the library is to provide users 'of all ages and backgrounds' with 'access to materials, information and services.'" (Council on Library Resources, 1996, paragraph 24). Through this initiative, Camden County Library administration hoped to expand its scope and visibility within the community.

Statement of the Problem

This thesis is a study of information services delivery by way of school library and public library technology partnerships, the methods involved in implementing such services, and the possible impact school/library technological collaboration have upon the community(s) which receive services.

Purpose or Objectives

The methods of cooperation examined include communication techniques, cooperative activities, and joint technological services required to create a partnership between school and public libraries. By examining the methods used, a clearer understanding was formed in regard to how separate organizations can link together in a cooperative venture via a technologically networked system. This study is an exploration of the parameters and barriers around which school library and public library personnel must work when acting in a collaborative environment.

Through interviews with school library and public library personnel, inquiry was made into whether school/public library partnerships appear to enhance the educational
process through the technological resources provided via the partnerships. Inquiry was limited to a case study based upon elementary schools which are members of CamNet.

This investigation shows, through a pragmatic approach, how information services delivery through technology has been implemented in two municipalities which use CamNet. In both cases, CamNet is received within an elementary school, one K-6 and one K-5. The two communities studied differed in economic demographics—with one representing a middle income community and the other representing a community which is economically disadvantaged (Swartz, 1999).

The personnel interviewed included CamNet staff, principals, school librarians, and one teacher from each grade level. Research also identified library cooperatives in other library systems in southern New Jersey in order to discern whether efforts towards similar partnerships are occurring in the area.

**Theoretical or Conceptual Framework**

For over 120 years, scholars in the field of education have called for public libraries and public schools to collaborate in an effort to preserve a sufficiently well-taught populace (Woolls, 1972). Studies regarding collaboration between school and public libraries show that many barriers exist which thwart the possibility of partnerships (Woolls, 1972; Dyer, 1978; Kelly, 1992). Still, practitioners in the field of librarianship hail participation in technological partnerships between public libraries and school libraries as a valuable area of study (Veccia, 1994). The current age of rampant information technology is seen to produce “challenging times to be librarians and to be involved in public library planning and services” (Council on Library Resources, 1995, paragraph 1). Initiatives to enhance the “potential for libraries to become the initial link for the public as they learn how to use the Information Superhighway” by providing opportunities for communication between the public library and the public school are hailed as a necessity.
for the proliferation of libraries as viable entities within the community (Council on Library Resources, 1995, paragraph 1).

Questions to be Answered

This thesis explored answers to the following questions: “How does technology make school library and public library partnerships possible?” “Does technology serve to break down barriers to partnering?” “Does technology provided to schools by way of the public library enhance access to resources for children and adults within the community?”

Definition of Terms

Automated catalog. A computerized system which organizes library holdings in digital form in order to facilitate faster, more accurate searching.

CamNet. The name of a partnership, housed at Camden County Library in Voorhees, N.J., between the public library and member schools.

CamNet members. Public schools, private schools, and the public library which receive the CamNet service.

Digital technology. Offers information in digitized or computer form. Electronic reference sources are usually presented in the form of CD-ROM or through the global computer network, the Internet.

Electronic reference sources. Computerized version of magazine and periodical indexes; business indexes; full text magazine articles; reference sources such as encyclopedias, thesauruses, handbooks, almanacs and dictionaries; reader’s advisory resources such as novel-finding help tools or poem finders allowing the information gatherer to retrieve information electronically through the use of specified search terms and commands with the use of a micro-computer.

Evening library. Located on the grounds of a public school, this resource allows community members to access information from the public library during evening hours.
**Librarian.** A professional position within a public library.

**Media Specialist.** A professional position within a school library (or school media center).

**Partnership.** Refers to a distribution of information sources between a public library to a school library through technological means.

**Public library.** An organization which specializes in information services to the public and is governed by a municipality or county.

**School media center.** An organization which specializes in information services to a school’s student and teacher population and is governed by a school board (or board of education).

**Web-based.** Electronic reference sources or other information which are accessed through the Internet.

**Organization of Remainder of the Study**

The purpose and objectives of this study are to investigate the process of creating school library and public library partnerships. Professional and mainstream periodicals were researched in order to discover how this process has worked in communities outside of southern New Jersey.

Methods utilized for the design of the study are discussed and details of the study’s findings are presented in order to strengthen the study’s objectives. Based upon these objectives, conclusions are drawn regarding the methods required in implementing school library and public library partnerships and recommendations for future studies are made.
Literature Review

Introduction

A review of relevant literature concerning the creation of partnerships among school and public libraries includes historical accounts of cooperative ventures, arguments in favor of collaboration by experts in the field of librarianship, research in regard to collaborative efforts which utilize varying research methodologies, personal feedback from public library practitioners in relation to existing cooperative ventures, and news and professional journal articles detailing school library and public library partnerships.

Historical accounts of partnering which occurred before the information age offer a precedent-setting philosophical overview to the value of partnering. This overview is echoed in the discussion of partnerships among experts in the field who, in their writings, hail collaboration as an asset to the community as a whole. Published research reiterates the value of partnerships and furthermore serves to identify factors which affect the success or failure of cooperative ventures. Personal communication with public library practitioners as well as published accounts of collaboration in the press and in professional journals detail cases in which technology-based partnerships are occurring. It is not until we explore these last sources that we find the literature focus upon technology as the conduit to collaboration.

Historical Context

Woolls (1972) details the comments of 19th century scholars regarding the “relationship of the public library to the public schools” (p. 4) as community forces which complement each other in an effort to maintain an adequately educated public. “At the 1887 National Education Association convention in Chicago, (T.J.) Morgan made several
statements concerning the relationship of the public library to the public schools. Since he believed that men needed to know how to read before they could use a library, the public library would be useless without the school” (Woolls, 1972, p. 4).

Another 19th century thinker, Charles Francis Adams, spoke of building bridges between public schools and public libraries. “Adams believed that cooperation between the two institutions would allow the public library to become the ‘people’s college’ and help the public school to create an educationally stimulating environment” (Dyer, 1978, p. xv).

In 1920, there was a call by C.C. Certain that in order to supplement the learning process, the public library was to “be a factor in their (public school students) future mental development” (Woolls, 1972, p. 6). In the 1940’s and 1950’s, school and public libraries were reported to grow further apart with little contact between the two entities (Woolls, 1972). In the late 1960’s, increased federal funding for school libraries resulted in the placing of school libraries in elementary schools. In 1968, J.F. Francis said,

Neither the school nor public library alone can provide the quantity and the quality of materials necessary to serve all the demands of the curriculum and the community. . . It is important and necessary that these two types of libraries clearly define their individual and shared functions, coordinate their programs of service to children and young people, and develop a cooperative mutual understanding of each other in order to serve the entire community more efficiently and effectively (Woolls, 1972, p. 9).

Dyer said of school/public library collaboration, “it is still not possible to include in the centennial celebration of library achievements, a formula for the proper relationship between these two public agencies” (1978, p. xvi).

In the 1970’s, both Woolls (1972) and Dyer (1978) concurred that collaboration between the two entities is indeed a necessity based upon the reasons cited by past thinkers and for pragmatic reasons such as avoiding duplication of services as well as promoting continued education among adults, equal access to information, support of
community groups, and the provision of a safe place for children and youth to enjoy leisure time. Both also agree that many barriers exist which prohibit cooperation. Indeed, Dyer states that the reason for her research is to discover “alternatives for cooperation” (1978, p. xvi).


In the 1990’s, public libraries and school libraries began incorporating Internet-based reference sources into their collections. Public libraries began implementing other technology-based information service delivery systems such as telneting which allowed patrons to search online catalogs and electronic reference sources from home and office computers. Such capabilities became a potential boon to underserved populations in rural and low-income areas where small libraries were able to share servers and databases with larger systems (Cisler, 1995).

Assessment of Previous Studies

Scholarly research. Though previous research does not focus upon technology as the conduit for school library and public library partnerships, the concept of collaboration between the two entities has been a highly-discussed topic for over a century. As a result, studies regarding collaboration in general was assessed while professional journal articles and news articles which provide cases in which technology-based collaboration have occurred are presented.

Woolls’ research studied the extent of school and public library cooperation in selected communities in Indiana through questionnaires sent to students and staff. She concluded from her study that “little communication exists between the public libraries and the elementary schools in those cities surveyed in Indiana” (1972, p. 187). Her
recommendations include requiring cooperation within written library policy, shared professional organizations between school and public library staff which include annual meetings, support of school/public library liaisons by school administration via faculty meetings, communication between school/public library staff regarding materials acquisitions which includes cooperative materials selection, and continuing education programs which support the notion of partnerships (191-195).

Utilizing a research methodology called the Delphi Technique, Dyer proposed bringing "to bear the judgment of experts, about the prospects for future cooperation in terms of much of the rhetoric of the past" (1978, p. 20). The Delphi Technique is "an intuitive forecasting technique. . .based on the opinions and judgments of experts in a given field" (p. 23). Simply put, a panel of experts is chosen. They each maintain anonymity during the information gathering process. The information gathering process includes responses by members of the panel to questions "expressed as potential events" (p. 33). Responses are quantified statistically and questions are sometimes re-issued when "no consensus" on a potential event is achieved among panel members (p. 32). Dyer concludes that her study "reinforce(s) the abstract ideal of cooperation but cast(s) grave doubts on the plausibility of actual implementation...unless external forces such as the community or other funding agencies foist such a requirement upon these traditional institutions" (abstract).

A Massachusetts study (Kelley, 1992) utilizes survey/questionnaires in a quest to "identify the types of cooperation in place in Massachusetts between public school library/media centers" (abstract) as well as identifying barriers to and offering recommendations for public/school library cooperation.

In Kelley’s study, Massachusetts communities that exhibited little cooperation between school libraries and public libraries and communities that exhibited a great deal of cooperation were surveyed. Kelley found that one component which contributed to cooperation was the result of the leadership and momentum of individual people.
“Dynamic individuals, committed to cooperation, instigated cooperative activities” (p. 125). Kelley also finds that “network technology will make cooperation between public libraries and public school/library media centers possible” (p. 149).

Other Technology-Enhanced Partnerships. In southern New Jersey, the Atlantic County Public Library provides Internet services to every school district in Atlantic County throughout T1 frame relay phone lines (A. Bowers, personal communication, March 3, 1999). Other public libraries in southern New Jersey utilize technology for collaboration with schools for projects such as shared computer labs and consortiums for sharing materials (Schalk, personal communication, March 10, 1999).

Berry asserts the need for school/public library cooperation and applauds ventures in which “technology has been used to tie the library to the schools” (1997, paragraph 7). Friedman suggests that the library partnership, such as one cited in Arlington, VA, “has moved beyond lament to begin to develop the building blocks of a seamless and robust information environment for young people” where “using technology and particularly the Internet to build a community of readers is a natural direction to think about” (1995, p. 12).

In Billings, Montana, a school/public library cooperative project includes a cooperative automation project for the holdings of the public library and three area high schools (Commings, 1996).

In local newspapers nationwide, school/public library partnerships through technology have been reported in areas such as East Islip, N.Y. (Altherr, 1998) and Ft. Lauderdale, FL (Sun-Sentinel, 1998). In both cases, school libraries and public libraries continued functioning autonomously while students and school staff were able to search the public library databases from school grounds.
The subject of this case study, CamNet, is depicted as a program "that will enhance library leadership" (Council on Library Resources, 1997, paragraph 1). In a report by the Council on Library Resources, Camden County Library's

... strategic plan states that 'A number of different innovations...are taking place both in libraries and in schools that would suggest greater cooperation is a natural evolution.' However, rather than waiting for the slow process of evolution to effect change, the Camden County Library took charge of the situation and built partnerships with the schools through the CamNet project (Council on Library Resources, 1997, paragraph 23).

The Council on Library Resources also authored a national web-based publication which "share(s) ideas on the electronic-age innovations being undertaken to bring communities into the 21st century" (1995, paragraph 1). This publication includes copies of hundreds of letters from library directors from all over the United States regarding initiatives their libraries were taking technologically. Out of 68 public library directors responding in the Northeastern U.S. alone, only 7 mentioned collaborative efforts with the schools through technology.

Justification of the Topic

A call for factors which will act as a catalyst to school/public library partnerships are alluded to in the previously mentioned research literature (Woolls, 1972; Dyer, 1976; Kelley, 1992). The purpose of this research paper is to suggest that technology may indeed be the catalyst which fulfills the goal to create partnerships.

Selection of the Research Design and Methodology

Although a survey/questionnaire of schools in New Jersey like Woolls' (1972) research in Indiana and Kelley's (1992) research in Massachusetts would be a useful format for studying the ways in which school/public libraries are partnering through
technology, the shortage of actual examples of partnering would provide little data for examination. In the hope that further study in this manner will ensue as partnerships become more common, for the purposes of this research, case study methodology was utilized. Through case study, a thorough review of the “background, development, current conditions, and environmental interactions” (Mauch & Birch, 1998, p. 117) between the subjects of the study are possible.

Case study is, in essence, the act of naturalistic inquiry. This type of inquiry, as defined by Mellon allows the researcher to “focus on viewing experiences from the perspective of those involved: patrons, librarians, administrators. The intent is to understand why people in a library setting behave as they do” (1990, p. 3).

Theoretical Framework

Based upon the writings and comments of practitioners and experts in the field of librarianship such as Kelley (1992) who said, “There is growing recognition in the library field (as libraries have developed automated systems, which at one level, force cooperation) that cooperation between public libraries and public school library media centers is a good thing” (p. 146). It is hypothesized, through the findings of this research, that collaboration between school libraries and public libraries is beneficial to the community as well as to both of those institutions. Therefore, this study researched the ways in which such partnerships have been realized through technology as well as suggesting further modes of research regarding school library and public library collaboration through technology.
Chapter 3

Introduction

This investigation ascertained what actually occurred when particular school and public libraries performed in a collaborative environment. More importantly, this study described the chain of events which occurred when technology was employed as the vehicle which enabled collaboration between one public library and nearby schools.

Description of Methodology Selected

In order to examine school library/public library collaboration most effectively, case study methodology was chosen. Case study gives the researcher an opportunity to describe an individual situation using field research as a scholarly form of inquiry in an attempt to determine meanings and hypotheses from that situation. Babbie says that “field research offers the advantage of probing social life in its natural habitat. Although some things can be studied adequately in questionnaires or in the laboratory, others cannot. And direct observation in the field lets you observe subtle communications and other events that might not be anticipated or measured otherwise” (1998, p. 285).

Design of the Study

Although case study methodology does not allow the researcher to measure quantifiable data in determining the empirical value of school library/public library collaboration, it does allow the researcher an opportunity to offer a descriptive analysis of an individual instance of collaboration and to analyze that instance within a reasonable period of time as well as provide the framework for more in-depth research.
Survey methodology, while offering concrete statistical data, was not practical for the purpose of this study because there are not enough identifiable instances of school library/public library collaboration through technology to make a statistical study feasible. As this is a new area of collaboration, case study is a valued method of exploratory research (Babbie, 1998). Computerized data showing the effects (e.g. increase in circulation of materials from CamNet-enhanced communities, increased use of public library electronic reference sources, etc.) of the collaborative quality inherent in the CamNet service upon the schools, public library and the community were not available.

A case study offered the investigator the maximum opportunity for exploring school library/public library technological collaboration from the points of view of both organizations.

**Sample and Population**

The population studied in this inquiry included teachers, principals and media specialists from two elementary schools which utilize the CamNet service as well as public library staff. One school is located in a moderate income community which has a median household income slightly lower than the average median household income in Camden County (Workforce New Jersey Public Information Network, 1989) and provides classes to students grades K-6. The other school is located in a fiscally challenged community (Swartz, 1999) which serves students grades K-5. The former has been a member of CamNet since its inception. The latter signed on in 1997.

A list of CamNet members is included on the Camden County Library’s Internet site. The list is divided into elementary, secondary, and private schools and community colleges. Addresses of the schools and phone numbers are included in the listing.
While interviews of staff members from all of the elementary, secondary, and private schools connected to the CamNet service would have been ideal, these two samples offer a fair representation for a descriptive study of how the CamNet network creates school library and public library collaboration.

By focusing upon two schools in disparate socioeconomic districts, the researcher was able to describe how the CamNet service is regarded by professionals in similar positions of employment across two economic spheres.

At each school, in-person interviews of one teacher per grade level was arranged. Each teacher was asked a series of questions regarding his or her experience with the CamNet service. Also interviewed were the media center specialist from each school, the principal from each school, and the evening librarian at one school which keeps its doors open two nights per week in order to provide library services to its community.

At the public library, an automation department staff person who has specialized in servicing CamNet members since CamNet’s inception was interviewed.

**Instrumentation**

The primary instrumentation involved in this field research included qualitative interviewing (Babbie, 1998), a process which allows the investigator to ask questions of subjects while receiving impromptu responses. While the actual queries offered to respondents in the same professional positions (e.g. teachers, principals, media specialists) were the same, additional questions during the course of the conversation may arise due to the spontaneous nature of this method of inquiry. “A qualitative interview is an interaction between an interviewer and a respondent in which the interviewer has a general plan of inquiry but not a specific set of questions that must be asked in particular words and in a particular order. A qualitative interview is essentially a conversation in which the interviewer establishes a general direction for the
conversation and pursues specific topics raised by the respondent” (Babbie, 1998, p. 290).

The qualitative interview allows the researcher to document a description of the methods involved in implementing information service delivery by way of school library and public library technology partnerships as well as speculating upon the effect such a partnership may have upon a school and community.

Technological instrumentation applied to this research included use of an audiotape recording device utilized for the preservation of records of field interviews and a personal computer for word processing which allowed for the organization of field notes obtained during the interview process.

**Data Collection and Other Procedures**

While subjects were being recorded during interviews, extensive hand-written notes were taken down in order to enable the researcher to record and verify oral observations and nonverbal information. A list of questions (see Appendix) were used as a guide for each interview while still allowing for a spontaneous interaction. Questions differed based on the professional position of the person being interviewed.

Within the same day of each interview, field notes were recorded in detail on a word processing program in order to maintain an accurate account of research observations. Hand written field notes created during the interviews were organized in order of participant type (e.g. principals, teachers, media specialists). From this information, patterns, similarities, dissimilarities, and observations from the data gathered were consolidated and examined.

Each interviewee was asked to expect a follow-up telephone call if certain details and information appeared to be lacking from the initial collection of data.

**Data Analysis Plan**

Based upon the information collected during the qualitative interview process, a description of how CamNet has developed and ways it and its recipient schools interact was created. From this information, an account of ways in which technology can aid in creating school library/public library collaboration was submitted.

Data was tabulated based upon the type of interviewee (e.g. principal, teacher, media specialist, evening librarian, CamNet staff person) as each interview differed somewhat based upon the individual subjects’ professional position and the point of view rendered because of that position.

Audio transcripts of each interview were entered into a word processor. Each audio transcript was stored in a separate file. The word processed field notes were saved on the same document with the corresponding audio transcript file.

After all of the interviews were completed and all field notes were organized, significant pieces of data were culled from all the word processed notes and “cut and pasted” into yet another document based upon the professional position attributes. For example, data which supported the question asked by this thesis derived from principal interviews (transcribed field notes and audio transcripts) were moved to a comparative column format in a document entitled “principals.”

Similar data was extracted from the other interview field notes and audio transcripts. This method of organizing data created a master file which allowed the researcher to make a comparative analysis of the data.

The public library’s meeting minutes from January, 1994 to February, 1999 were examined for entries pertaining to CamNet, its inception and progress, and resolutions
passed pertaining to the CamNet service. The public library’s Strategic Plan for 1994-1998 was explored for information regarding long term goals for the public library in terms of delivery of information services outreach. The public library’s Annual Report for 1997 (1998 is not available) was studied for evidence of outreach presented.
Chapter 4

The Road to Collaboration

Introduction

When human beings choose to implement a new idea without financial backing or a set organizational structure, the idea, in most instances, remains simply that—an idea with no results.

In the case of CamNet, with its main purpose to provide affordable Internet access to the schools by connecting the public library’s server to the public schools through cable lines, there was no mission statement, no organized entity, no hierarchy, and no funding. The service simply began by utilizing the free time of people in the public library and the public schools interested in creating a service such as CamNet.

The Creation of CamNet

These volunteers, comprised mostly of school administrators in Camden County along with public library automation personnel, were members of the Camden County Board of Education’s technology committee. When this committee was formed in 1993, its main purpose was to “offer more resources to county schools at an affordable cost to taxpayers” (Camden County Library, 1998, paragraph 2).

By January 1994, this technology committee conceptualized the existence of a coalition which would offer “countywide connectivity capable of linking public schools to the Camden County Library.” By this time, the Camden County Library already
possessed a 56K line to the Internet. “The goal was to allow for one to four computers, in each of the 20 schools or libraries expected to join, to access the Internet via Telnet and gopher interfaces (all text based interfaces)” (Camden County Library, 1998, paragraph 2). CamNet was already in the testing phase at a middle school by November 1994.

The capability to receive affordable access to Internet and library databases was presented to Camden County school superintendents at their monthly meetings by members of the technology committee.

As CamNet progressed, automation staff from the Camden County Library as well as technical personnel from the cable company went out to schools to offer technical support. This often resulted in trial and error in implementation. “Cable lines were new to computer people. Computers were new to non-computer people. Connections were made through sweat equity, trial and error, early on” (L. Babli, personal communication, February 23, 1999).

Many schools used in-district computer consultants. Public library automation staff gave schools recommendations as to which hardware was best to use (e.g. personal computers, network routers, etc.) for their systems. Still, as part of the perpetual learning process within a new service, schools and library staff would learn of other equipment that offered better results. Thus CamNet-served schools have ended up with a broad variety of hardware.

In the early stages of the service, public library staff would also implement Internet addresses and assign IP addresses, so that schools would have separate access to CamNet. However, when more intense technological problems arose, school districts utilized in-house computer consultants.

According to public library staff, the cable company kept connectivity fees low at the outset of the service. “They were trying something new, too (new technology, cable
modems) so it was a learning experience for them as well” (L. Babli, personal communication, February 23, 1999).

As such, there was no written agreement between CamNet and the cable company per se. Any agreement by the two organizations was basically “just a handshake” (L. Babli, personal communication, February 23, 1999). There is a written agreement between each school and the cable company which says that no school can sign up with Garden State Cable in Camden County without becoming a member of CamNet.

At the early stages of the CamNet service, the public library assigned one automation person to CamNet operations in addition to that staff person’s regular library duties. When this assignment began to take up 80% of that staff person’s time, a person dedicated solely to CamNet was hired 19 hours a week. This position was funded by CamNet membership fees.

The initial goal of CamNet was to have four computers at every school with a only a text interface (not a graphical interface), encyclopedias and library catalog. But then, the technology committee found that they could acquire a graphical interface through Netscape. By adding graphical capabilities at an affordable price, the service became more attractive to the schools. Soon, schools were acquiring more than the intended four computers per school. Schools began to assign the CamNet service to multi-terminal computer labs, placing computers in classrooms at every grade level, and adding their own web sites.

With the deluge of demand for connectivity, plus the additional data required to accommodate the graphical interface, the CamNet service became overloaded. Even with the upgrade to a T-1 line in 1995 through a contract with an Internet service provider, technologically there was still a lot of down-time for the first year or two of CamNet’s existence.
Much of the bottleneck problem was resolved when Garden State Cable, through a contract with another Internet service provider, added the equivalent of four T-1 lines to the CamNet service.

**On-line Options.** The cost to the school district includes a connectivity fee with the cable company. The Camden County AVA Commission provides a membership fee which originally was $500 annually per district. Currently, the membership fee varies according to district size (number of students) and the fee is on an adjusted pay scale (see Table 1).

<table>
<thead>
<tr>
<th>District Size</th>
<th>Annual membership fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 500 students</td>
<td>$100</td>
</tr>
<tr>
<td>Between 500 and 1000 students</td>
<td>$300</td>
</tr>
<tr>
<td>Over 1000 students</td>
<td>$500</td>
</tr>
</tbody>
</table>

Note. From L. Babli, personal communication, April 8, 1999

**CamNet Moves Forward**

In June 1997, the Technology 2000 program, administrated by the Camden County Board of Freeholders, provided a $1 million grant every year for three years, with the objective to place a computer in every classroom as well as an initiative to provide technology training for teachers within Camden County.

Through a grant from the state of New Jersey, the Educational Technology Training Center (ETTC), housed at the Camden County Technical School, was created in July 1997 as a site for Internet and other technical training workshops for schools. In
early 1999, a resolution was passed by the Camden County Library Commission to turn the management of CamNet over to the ETTC.

The Camden County Library will no longer manage CamNet databases but will turn those duties over to the ETTC before the end of 1999. The Camden County Library electronic catalog will still be part of the CamNet service received by schools. Access to the catalog for CamNet members will be managed by the ETTC.

So with all of this talk of school and public library collaboration, why was there a shift of management to the site of a technical school? According to library staff, the Camden County Library has become a hub library in a state-wide project, through the New Jersey State Library, to provide Internet access to all of the public libraries in Camden County. The Camden County Library has chosen to go more in the direction of managing that project rather than managing both the New Jersey State Library initiative and CamNet.

"The schools were doing things totally unrelated to the public library, specific things that were foreign to us. It’s (CamNet) best managed by schools and teachers because they know what they need. We don’t know what they need" (L. Babli, personal communication, February 23, 1999). Also, CamNet had grown proportionately larger than the Camden County Library originally expected within a short period of time. “By the end of 1995 there were 36 member sites. By the end of 1996 there were 68” (Camden County Library, 1998, paragraph 4). As of July 1998, 145 institutions, including secondary and elementary schools as well as public libraries and community colleges were connected to CamNet (see Table 2).
Table 2

Summary of CamNet Participating Institutions as of July 13, 1998

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>July 1998</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Schools</td>
<td>22</td>
</tr>
<tr>
<td>Middle Schools</td>
<td>29</td>
</tr>
<tr>
<td>Elementary Schools</td>
<td>71</td>
</tr>
<tr>
<td>Private Schools</td>
<td>6</td>
</tr>
<tr>
<td>Public Libraries</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>145</strong></td>
</tr>
</tbody>
</table>

*Note.* From Camden County Library, 1998

The cable company now assigns IP addresses to the schools, taking the burden off the library. The cable company manages the four e-mail addresses offered to each school as well.

Public library and school representatives meet once a month currently at the ETTC. Eventually, however, public library staff plans to discontinue attendance of meetings when the Camden County Library removes itself completely from CamNet.

While feedback regarding the service has been mostly positive, some schools still report instances of down time. Although pricing is affordable, some districts have not signed on with CamNet due to cable restrictions in rural areas. Districts such as the Gloucester Township school district in Camden County have opted not to go with the service and signed on with another service which offers Internet access.
John Glenn School, Pine Hill School District

One of the first school districts to sign on with CamNet in 1995 was the Pine Hill School District in Lower Camden County. Pine Hill is a community with a population of 10,472 people (New Jersey Municipal Data Book, 1998). The median household income for Pine Hill is $33,179 while the median for Camden County is $36,190. The Pine Hill School District has a student enrollment of 1,070 students in two elementary schools.

The Superintendent of the Pine Hill School District, Donald Falato, was a member of the original technology committee which conceived the idea behind CamNet. Staff at the John Glenn Elementary School cite advantages of the service as including access to information at the Camden County Library including delivery of library materials to the school and the Pine Hill Community Library which is open to residents two evenings a week in the John Glenn School media center.

The Evening Librarian, who presides over the Community Library, says that most patrons who come in from the community are children doing research on the Internet. Many order materials directly from the Camden County Library and pick the materials up when they are delivered to the school. According to the Evening Librarian, the Community Library was used more when it first opened but use has dropped somewhat in the past year (B. Vincent, personal communication, February 24, 1999).

The Principal of the Glenn School also includes positive public relations as another advantage to hooking up to CamNet. He cites positive exposure to other municipalities, Camden County Freeholders, peers, and the press resulting in an enhanced image of the Pine Hill school district (M. Durand, personal communication, February 8, 1999).

While each classroom at the John Glenn school has at least one terminal online to the Internet as a result of the service, school administrators hope for more online
terminals per classroom. School administrators also stress that the technology used has to fit in with the curriculum so that teachers are prepared each year to use the same tool.

In the media center at the John Glenn School, staff says technical problems occurred when the service was first used because of problems with wiring and waiting for necessary hardware delivery. Support from the cable company and the public library through regular meetings and technical support and training alleviated some of the problems.

The main problems in the early stages of the service cited by media center staff included the cost to the school of having wiring installed by the cable company, delivery of routers in order for the IBM-based CamNet service to become compatible with the school's Macintosh-based systems, and difficulty in the setting up of IP addresses by the Camden County Library.

Steps in implementing the technology included having wires installed in the media center initially, then throughout the building by the cable company as well as members of the technology committee. “One Christmas holiday,” members of the technology committee (all school administrators) “must have spent the whole holiday here trying to configure the computers” (M. Joseph, personal communication, February 24, 1999).

Currently, media center staff doesn’t correspond as often with CamNet staff as during the time of the service’s initial implementation because the service runs virtually trouble-free. Initially there were monthly meeting with public library staff when the service was new, but that no longer is required.

Since being introduced to the technology offered through the CamNet service, the Pine Hill School District and the John Glenn School have evolved even further technologically. A network, At Ease, has been installed district-wide. This network allows multiple e-mail accounts as well as a server-based file system but still contains CamNet databases.
Each classroom in the district has three computer hookups. The media center has six. The computer lab has twenty. In order to network all of these computers, the school has installed three servers.

Thus, teachers can get CamNet databases in the classroom. Each classroom is hooked up to teach using these tools through a 27 inch television monitor. Databases received in the district include the SIRS Discoverer, Electric Library, and Encyclopedia Britannica. These services, which require an additional fee, were contracted between the media specialist and CamNet. Media center staff find that CamNet has assisted in making teachers more proficient information seekers.

Table 3

Fee services offered through CamNet

<table>
<thead>
<tr>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Britannica Online</td>
</tr>
<tr>
<td>EBSCO-Host Primary Search</td>
</tr>
<tr>
<td>EBSCO-Host MAS Full Text Elite</td>
</tr>
<tr>
<td>EBSCO-Host MasterFILE FullTEXT 350</td>
</tr>
<tr>
<td>Electric Library</td>
</tr>
<tr>
<td>GaleNet's Biography and Genealogy Master Index</td>
</tr>
<tr>
<td>GaleNet's Contemporary Authors</td>
</tr>
<tr>
<td>GaleNet's DISCovering Authors Modules</td>
</tr>
<tr>
<td>GaleNet's DISCovering Multicultural America</td>
</tr>
<tr>
<td>GaleNet's DISCovering Biography</td>
</tr>
<tr>
<td>GaleNet's EXPLORING Poetry</td>
</tr>
<tr>
<td>GaleNet's DISCovering Science</td>
</tr>
<tr>
<td>GaleNet's DISCovering U.S. History</td>
</tr>
<tr>
<td>GaleNet's DISCovering World History</td>
</tr>
<tr>
<td>GaleNet's Exploring Shakespeare</td>
</tr>
<tr>
<td>GaleNet's Peterson's UndergradSearch</td>
</tr>
<tr>
<td>Newslibrary</td>
</tr>
<tr>
<td>Sir's Discoverer</td>
</tr>
<tr>
<td>Sir's Researcher</td>
</tr>
</tbody>
</table>

Note. From Camden County Library, 1998
Other CamNet school districts purchase electronic databases based upon individual needs. These databases vary, with some more appropriate to certain grade levels (see Table 3).

Teachers at the John Glenn School cite the Internet as the major tool found useful to them via the CamNet service. While some, mostly in grades 3-6, utilize Britannica on-line and the Camden County Library catalog; most revolve lesson plans and class-wide research around the Internet. Most say that students use the Internet more in the classroom now, whereas the media center’s Internet terminals received the major usage before the technology was available in classrooms.

Every two months, all Lower Camden County sending districts meet to discuss problems regarding CamNet. Some of those districts are new to CamNet because cabling for the service was just recently available. Media Specialists from that group also meet once a year.

**John Greenleaf Whittier School, Camden City School District**

Another district, different demographically in comparison to the Pine Hill district was also studied for this research. An urban district consisting of 34 schools, Camden City is considered the 5th poorest city in the United States. In Camden City, “almost 82% of the City’s population is dependent upon some form of public assistance” (Swartz, 1999, paragraph 2). The population of Camden City is 84,844 (New Jersey Municipal Data Book, 1998).

Camden City has its own T-1 lines and a different topology than other districts connected to CamNet. Still, administrators from Camden City have chosen to be active participants of CamNet. Camden City is the largest subscriber to CamNet databases in dollars. Databases subscribed to include Britannica Online, SIRS Discoverer, EBSCO-Host, Sirs Researcher and Electric Library.
CamNet users in Camden City are able to access CamNet databases through the district’s home page which offers a hyperlink to the CamNet service. The Camden City Technology Plan includes creating relationships with other schools throughout Camden County and cites CamNet as a resource in helping the district reach that end (Camden City School District Office of Research, Planning and Technology, 1997).

At Whittier Elementary School (K-5) in Camden City, the principal and teachers also say that having Internet access in some classrooms (mostly in grades 2-5) is the major advantage to having the CamNet service. The service is new to the school, however, and wiring difficulties have obstructed its usability in the media center.

The current media specialist (new to the school this year) has never utilized the service due to the wiring complications. She is able to access the service through one single terminal, although more terminals have been ordered and are on the district technology committee’s roster to implement. However, due to lack of training on the one existing terminal as well as the inability to use the library’s printers due to the wiring, she has not used the service at all for herself, teachers or students.

Last year’s media specialist used the service on a limited basis for searches on databases the school couldn’t afford otherwise. Her perception of a service such as CamNet when it was presented to her at a district-wide media specialists’ meeting was positive as it would supplement her library’s research materials. The media specialist felt positively about the service but found it difficult to utilize to its fullest potential due to time constraints and the limitations of having only one terminal in the media center dedicated solely to CamNet. Also, public library materials were not available to the school as Camden City is not a resident community of the Camden County Library (M. Boniscavage, personal communication, March 22, 1999).

Teachers who have Internet access in their classroom at the Whittier School say they do not have access to other CamNet databases. Still, those teachers who do have
Internet access utilize the Internet within lesson plans by displaying key web sites on a 27 inch monitor in support of the curriculum and as a tool in enhancing lesson plans.
Chapter 5

Summary, Conclusions, and Recommendations

Summary

This study observed the transition in library services due to societal changes created by technology. The increasing dominance of electronic reference sources necessitates accessibility to those sources in the public library as well as school libraries.

This investigation of the history, current status and future goals of the CamNet service highlighted the methods involved in creating school library and public library partnerships through technology. This study also observed how such collaboration meets specific goals of the public library as well as of the school districts which participate.

That impact was observed through personal interviews with school library staff, principals, and teachers within two distinct elementary schools which receive the service. The goals of the public library were observed through discussion with public library staff as well as review of public library strategic plans and long-range goal initiatives.

This study observed a case in which a public library that has access to electronic resources (e.g. Internet, electronic databases) succeeded in collaborating with surrounding school districts which otherwise did not have access to those electronic resources. Detailed in this investigation are the specific steps taken toward that collaboration.

This investigation also explored whether technology may act as a catalyst in creating a partnership that otherwise may never have taken place.

A review of the literature relative to school library/public library collaborative initiatives showed that various forms of cooperation between the two entities has been
encouraged since before the information age. Although the literature showed that some technological collaboration has occurred in some communities, examples of successful partnerships appear to be limited.

**Conclusions**

While school library and public library collaboration still has a somewhat uncertain future, based upon past history of unsuccessful attempts at partnerships, the appearance of technology as a conduit to successful results in the sphere of cooperation offers hope as a medium in which the two entities can cooperate.

In the instance of CamNet, the formulae for success were set in place early in the process. Previously mentioned components such as personal initiative by individuals devoted to the project, creation of a need for a service (e.g. Camden County’s goal to put the Internet in every classroom), a public library with outreach to an underserved public incorporated into its strategic plan and a public library with access to technological resources not yet possessed by the schools combined to create an environment in which the network could grow.

Although the Camden County Library will no longer maintain the technological functions of CamNet, its value as a prototype of collaboration is strongly depicted within the data collected during this research. The ability to grasp a concept (a school and public library partnership) and to use existing resources as well as create new resources (through supplemental funding) in creating such a partnership illustrates to other public libraries the potential direction the library can go in reaching its public.

While the research showed that the public library was not able to maintain the network permanently due to other demands inherent to the public library, the research indicated that the collaborative effort might never have begun had the public library not pursued the goals of its strategic plan in the initial phase of setting up the network.
By participating in the county technology committee, the library succeeded in meeting the needs of school districts by facilitating the districts' access to electronic resources such as the Internet and electronic databases otherwise unavailable to them. Had the public library, in this case, not participated, the school districts throughout the county would have needed to discover other resources in order to meet the demands of the county's technology goals. The school districts within Camden County, in fact, may not have become part of a inter-county network for many more years or might not have acquired the electronic resources provided by CamNet as quickly due to the fiscal challenges presented in acquiring databases and online services on an individual district basis. Benefits to the public library, in this case, included acquisition of a T-1 line due to the growth and success of CamNet, expanded knowledge of multi-organizational networking, and increased visibility within the community.

Yet, while the public library studied was able to act as a bridge to the county schools' technology gap, the goals and mission of the public library did not support continued management of that system as the network grew. Therefore, in order to maintain a network such as CamNet on a continuing basis, an organization with a better ability to meet the unique needs of the schools (e.g. compliance with New Jersey Core Curriculum Standards, facilitating teacher technology training, etc.) and which was dedicated solely to management of the network was needed to take over its administration.

**Recommendations**

Had CamNet never grown so large due to the stimulus set in place due to the county's technology goals and explosive growth caused by the graphical interface of the World Wide Web, the question remains whether the network would have continued to be maintained by the Camden County Library.
Another factor which posed a barrier to continued management of the network by the public library included the lack of an organizational structure for CamNet and the separate needs and goals of the area schools and the public library. Had these barriers been overcome through the creation of a CamNet board consisting of educators and public library personnel, financial support of the service by itemizing the cost of the service within yearly public library and school district budgets, and written library policies calling for a continued partnership initiative, perhaps the network might have continued to be maintained by the public library.

However, in the case of the Camden County Library, a decision was made to pursue a project initiated by the New Jersey State Library which focused on services to public libraries. By taking on the role as a hub library for a public library networking project similar to CamNet, the library chose to utilize the methods developed through its experience with CamNet while remaining in the more familiar area of servicing only public libraries.

As technological collaboration continues to increase in acting as a conduit to various types of school and public library collaboration, other research might include the use of survey methodology, either state-wide or nationally, to discern on a broader and more systematic level instances in which technological collaboration occur.

Other areas of study might include case studies of similar services, or a follow up study of the effectiveness of the CamNet service after it has been administered by the ETTC for an extended amount of time.

Also recommended for future study is a comparison between the CamNet service and electronic networks for shared library services in counties where the public library continues to administer the network. Comparisons might include data on management and organizational structures created for implementation of the network, how the public library involved responded to higher rates of usage, and negotiation of the public library's needs and the needs of its surrounding school districts.
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Appendix
Questions for Public Library (CamNet) Staff

- What is CamNet's mission statement...if any?
- How was it funded initially? How is it funded now? (CC-AVA Commission...is it property tax based?)
- How were the schools contacted originally in order to build interest in the service?
- Were there any barriers to collaboration? What were they?
- What technological parameters needed to be worked out between the schools, public library, and cable service provider in order to implement the service before it became operational in 1994?
- What personnel changes or adjustments needed to be made?
- What technical support did public library staff provide at the early stages of set-up?
- What types of technical support does public library staff provide currently? (How does the ETTC come in to play here?)
- What are the long-range goals for the ETTC and CamNet?
- Does public library staff (CamNet) meet regularly with school library staff?
- What are the major strengths of the service?
- What are the major weaknesses of the service?
- What type of feedback or data have you received regarding the success of the service?
- What do you wish had been done differently?
- Do you consider CamNet a success? If so, what makes it successful?
Questions for School Principal

- How has the CamNet service been useful to your school?
- Have you used the service yourself? In what capacity?
- What feedback have you received from parents, teachers, students, the Board of Education and the community regarding the service?
- What have your peers (other school principals) said about the service?
- Would you recommend the service to other schools? Why or why not?
Questions for Media Specialists

- When you first heard about CamNet, what was your opinion of such a service before its implementation?
- Were there any barriers to collaboration with CamNet (technical or otherwise)?
- When did your school go online with CamNet?
- What type of technical support did you receive from them in the early stages?
- Describe the steps involved in implementing the technology into your school. (e.g. technology committee, goals of the committee, technology plan, use of outside consultants, the physical installation of the technology, etc.)
- If you were not at the site for the implementation, who was and how might I reach them?
- Do you correspond regularly with CamNet staff?
- What type of technical support do you receive from CamNet?
- Does public library staff (CamNet) meet regularly with school library staff?
- Have you taken any training courses (ETTC)?
- Describe problems that occur with the service.
- Does your school provide Internet access in every classroom?
- Are other electronic reference services provided in the classroom due to CamNet?
- Name the services (e.g. Internet, magazine indexes, etc.) provided to your media center via CamNet.
- What electronic services provided by CamNet do you find most helpful?
- What electronic services provided by CamNet do teachers find most helpful?
- What electronic services provided by CamNet do students find most helpful?
- How has the CamNet service been useful to your school media center?
- Have you used the service yourself? In what capacity?
- What feedback have you received from parents, teachers, students, the Board of Education and the community regarding the service?
- How many e-mail accounts does your school have through the service and who has them?
- What have your peers (other school media specialists) said about the service?
- Would you recommend the service to other schools? Why or why not?
- What, if anything, would you change about the service?
- May I look at the Galenet, SIRS, Britannica Online, Newslibrary services?
Questions for Teachers

- Do your students use the CamNet service when they visit the media center? (The CamNet service allows your school Internet access, CCL catalog access, SIRS, Encyclopedia Brit., etc.)
- How has the CamNet service affected your classroom?
- Do you have Internet access in your classroom?
- Who has done Internet training for your students?
- What electronic services on CamNet do you find most helpful? (e.g. Internet, EBSCO, CCL catalog, CCCC catalog, Galenet, SIRS, Britannica Online, Newslibrary)
- In what way? (Lesson plans, research, etc.)
- What electronic services on CamNet do your students find most helpful? (e.g. Internet, EBSCO, CCL catalog, CCCC catalog, Galenet, SIRS, Britannica Online, Newslibrary)
Questions for the Evening Librarian

- What CamNet sources do people from the community seem to use most frequently? (e.g. Internet, EBSCO, CCL catalog, CCCC catalog, Galenet, SIRS, Britannica Online, Newslibrary)
- Do you have any data regarding what types of people (e.g. ages, gender, families, teens, etc.) use services at the community library?
- What is your observation regarding the types of people who use the community library?
- How often is the evening library open?
- What support (technical or otherwise) is offered by the public library when the community library is open in the evening?
- Describe the mechanics of materials delivery from the Camden County public library to the community library.
- What, if anything, would you change about the service?